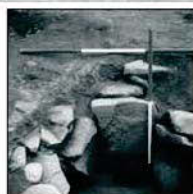
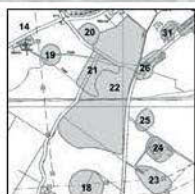


LFBD/06



81–87 HIGH STREET (FORMER BUS DEPOT), LINLITHGOW, WEST LoTHIAN

ARCHAEOLOGICAL WORKS

commissioned by CgMs Consulting
on behalf of McCarthy & Stone Retirement Lifestyles Ltd

0249/FUL/11

June 2016

81–87 HIGH STREET (FORMER BUS DEPOT), LINLITHGOW, WEST LoTHIAN

ARCHAEOLOGICAL WORKS

commissioned by CgMs Consulting
on behalf of McCarthy & Stone Retirement Lifestyles Ltd

0249/FUL/11

June 2016

project info

HA JOB NO. LFBD/06
NGR NT 0024 7709
PARISH Linlithgow
LOCAL AUTHORITY West Lothian Council
OASIS REF. headland1-164325

project team

PROJECT MANAGER Edward Bailey
AUTHOR Laura Bailey, Stephen Cox
FIELDWORK Anthony Taylor, Callum Allsop, Donald Wilson, Julie Lochrie, Laura Bailey, Meaghan Dyer, Richard Tuffin, Stephen Cox, Steven Roe
GRAPHICS Anna Sztromwasser, Caroline Norrman, Mano Kapazoglou
SPECIALISTS Laura Bailey, Tim Holden – Environmental
Julie Franklin – Finds
Catherine Smith – Animal Bone
APPROVED BY Edward Bailey – Project Manager



 **HEADLAND
ARCHAEOLOGY**
© 2016 by Headland Archaeology (UK) Ltd

SCOTLAND

Headland Archaeology
13 Jane Street, Edinburgh EH6 5HE

0131 467 7705

scotland@headlandarchaeology.com

www.headlandarchaeology.com



PROJECT SUMMARY

Headland Archaeology (UK) Ltd undertook a programme of archaeological works, which included an excavation and watching brief, on a development site at 81–87 High Street (formerly occupied by a bus depot), Linlithgow, West Lothian (**ILLUS 1**). The work was required to meet a planning condition (0249/FUL/11) placed on a proposed development. The work followed a Written Scheme of Investigation (WSI) prepared by CgMs and agreed by WoSAS, who advise West Lothian Council on archaeological matters.

The site was recognised as having high archaeological potential due to its location in the centre of the medieval burgh of Linlithgow. The programme of archaeological works also included historic building recording and evaluation, the results of which are detailed elsewhere (Bailey 2013; Holden 2013).

The development area occupied much of two historic burghage plots, including their frontage on the High Street, and part of one other. The evaluation revealed the remains of walls and pits on the frontage, truncated by later, post-medieval and modern, construction. Variable depths of glacio-fluvial deposits were present, rising in the north and south of the site. In the central part of site loam deposits, containing medieval pottery, survived to a depth of up to 1.5m. Several features dating to the medieval period were present beneath the loam, cut into the interface with geological deposits. These included probable quarry pits backfilled with midden material and features possibly associated with industrial or craft processes.

The scope of work for mitigation was set out in an addendum to the WSI. It allowed for the opening of an area of 280m² positioned over the most intense concentration of archaeological remains. The excavation revealed the full extents of many of the features uncovered during the evaluation. Features were concentrated in the northern and southern parts of the area and appeared to respect a boundary line. Features were interpreted as cess pits, quarry pits dug to obtain glacial till or sand used for building material and backfilled with midden material, and pits of possible industrial function. Pottery recovered from the features largely dated from the 12th to 15th century, with the exception of one feature that contained pottery dating to the 1600s. There was no further evidence for intrusive activity dating to the post medieval period. This probably relates to a change in the principle use of the backlands from quarrying and rubbish disposal to cultivation. This change corresponds with a general decline both in the importance, and population, of the burgh in the 1600s, following the Union of the Crowns.

The excavation was completed in October 2013 and monitoring of service connection was undertaken in July 2015.

CONTENTS

1	INTRODUCTION	1
	1.1 SITE LOCATION AND DESCRIPTION	1
	1.2 HISTORICAL AND ARCHAEOLOGICAL BACKGROUND	1
2	AIMS AND OBJECTIVES	3
3	METHODOLOGY	3
	3.1 EXCAVATION	3
	3.2 MONITORING	4
	Recording	4
	Reporting and archives	4
4	RESULTS	6
	4.1 GENERAL STRATIGRAPHY	6
	Excavation area	6
	Service Trenches 1 and 2, High Street	6
	4.2 PHASE 1 – MEDIEVAL FEATURES: 1200–1500	6
	Northern Concentration	7
	Southern Concentration	12
	4.3 PHASE 2 – POST MEDIEVAL FEATURES: 1600S	14
	4.4 PHASE 3 – MODERN FEATURES	14
5	ENVIRONMENTAL REMAINS	15
	5.1 INTRODUCTION	15
	5.2 METHOD	15
	5.3 RESULTS	16
	Wood charcoal	16
	Cereal grain	16
	Wood	16
	Other charred plant remains	16
	Other finds	16
	5.4 DISCUSSION	16
6	ANIMAL BONE	16
	6.1 INTRODUCTION	16
	6.2 METHODS AND MEASUREMENT	17
	Condition scoring	17
	6.3 RESULTS	17
	Species present	17
	6.4 AGE OF ANIMALS AT DEATH	17
	6.5 BUTCHERY	18
	6.6 SIZE AND APPEARANCE OF THE ANIMALS	18
	Discussion	18

7	FINDS	18
	Medieval to post–medieval Pottery	18
	Modern pottery	19
	Glass	19
	Metalwork	19
	Industrial waste	19
	Ceramic and other building materials	19
	Other finds	20
	Context spot dating	20
	7.1 DISCUSSION	20
8	DISCUSSION	20
	8.1 THE MEDIEVAL BURGH (12TH TO 16TH CENTURY)	21
	8.2 POST MEDIEVAL ACTIVITY	22
9	CONCLUSIONS	22
10	REFERENCES	23
	10.1 CARTOGRAPHIC SOURCES	23
11	APPENDICES	24
	APPENDIX 1 SITE REGISTERS	24
	APPENDIX 2 ENVIRONMENTAL ASSESSMENT TABLES	37
	APPENDIX 3 ANIMAL BONE	39
	APPENDIX 4 FINDS CATALOGUE	41
	APPENDIX 5 ADDENDUM TO ARCHAEOLOGICAL WSI	51
	Introduction	51
	Schedule	51
	Personnel	51
	Stages of work and method	51

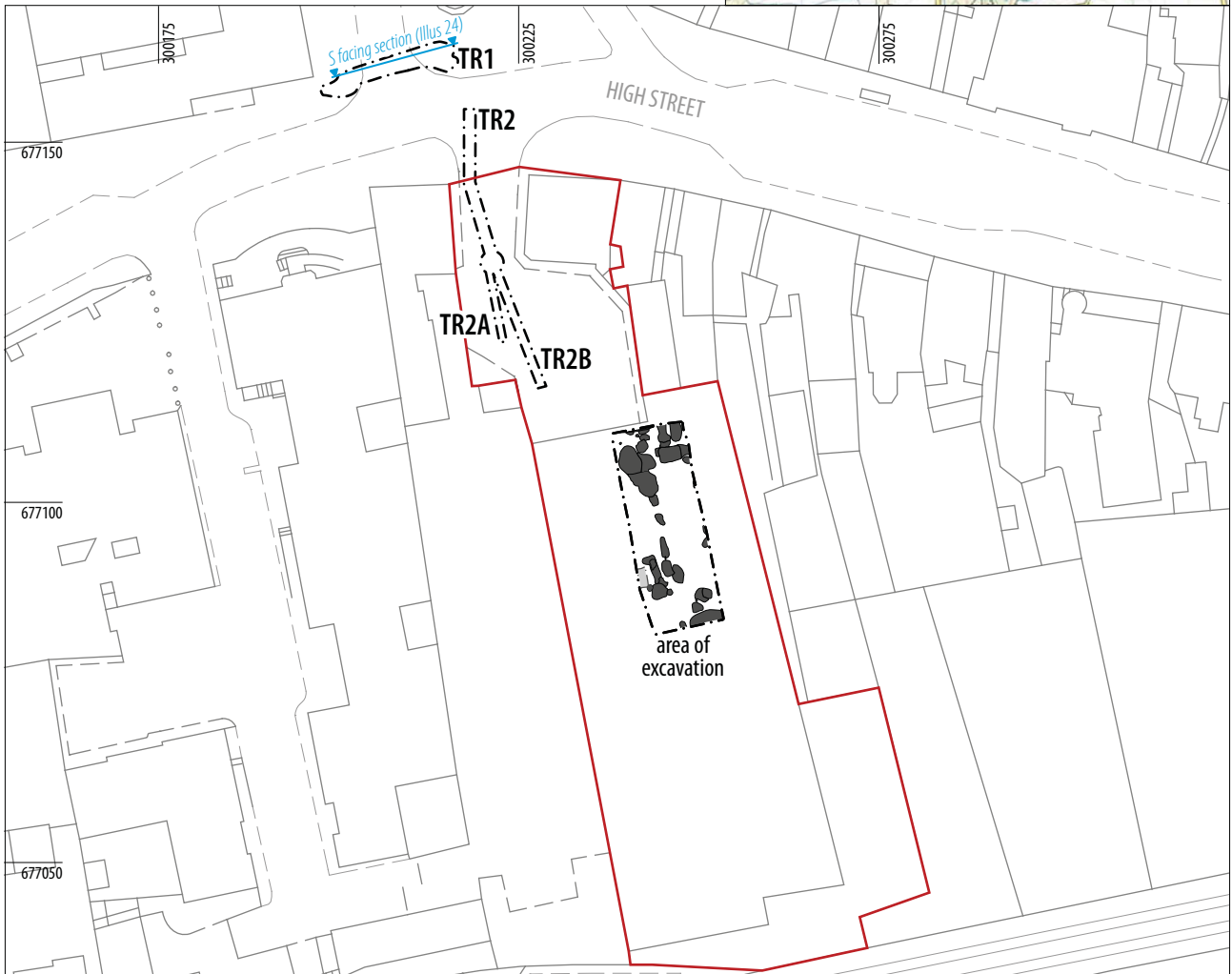
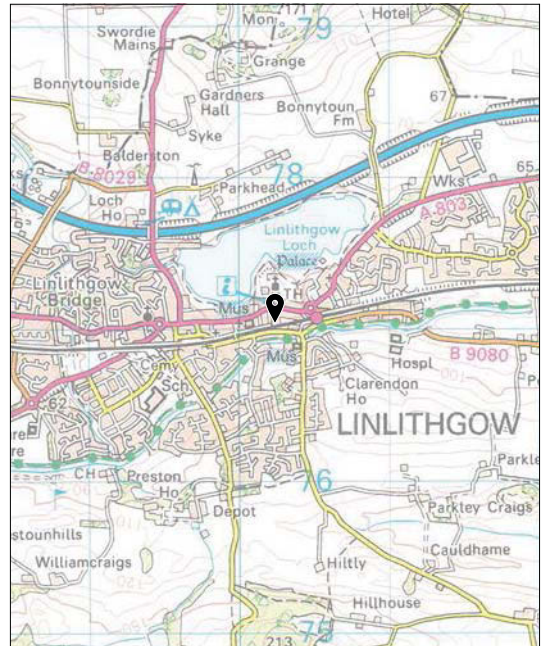
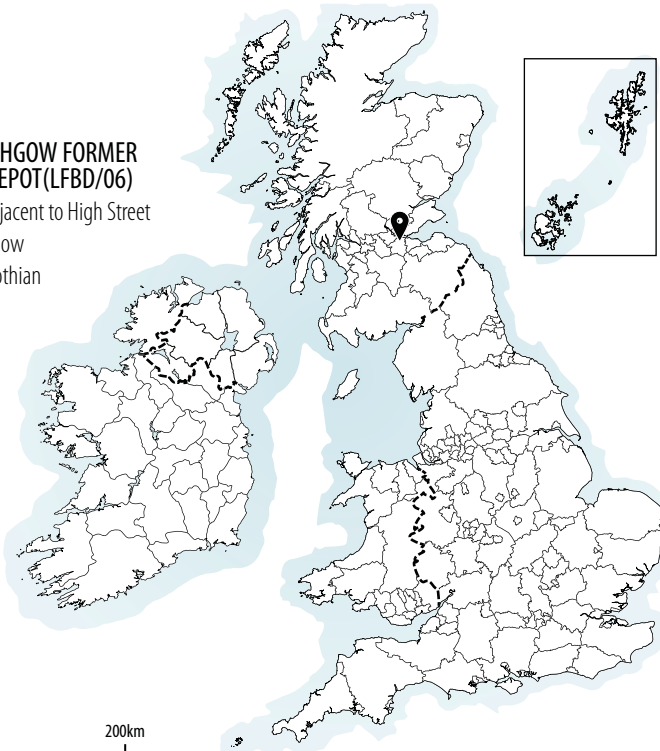
LIST OF ILLUSTRATIONS

ILLUS 1 SITE LOCATION	X
ILLUS 2 WOOD; PLAN OF THE TOWN OF LINLITHGOW (1820)	2
ILLUS 3 OS 25 INCH TO THE MILE, 1ST EDN, LINLITHGOW SHEET V.3 (LINLITHGOW) SURVEY DATE: 1854 PUBLICATION DATE: 1856	2
ILLUS 4 25 INCH, LINLITHGOWSHIRE, SHEET 005.03 PUBLICATION DATE: 1897 REVISED: C. 1985 (ALL MAPS PRESENTED AT 1:1,000 @ A4)	2
ILLUS 5 GENERAL VIEW OF SITE FROM S	4
ILLUS 6 SITE PLAN	5
ILLUS 7 CONCENTRATION OF FEATURES IN NW CORNER OF EXCAVATION AREA	6
ILLUS 8 PIT [041] NE FACING SECTION	7
ILLUS 9 S FACING SECTION THROUGH PITS [147], [048] AND [152]	8
ILLUS 10 N-FACING SECTION THROUGH PIT [075]	9
ILLUS 11 PIT [075] SHOWING WOOD (160) IN SITU, FROM E	10
ILLUS 12 DEPOSIT (145), PIT [075], FROM SW	10
ILLUS 13 S FACING SECTION THROUGH PITS [151], [157] AND [167]	11
ILLUS 14 E FACING SECTION THROUGH PITS [098], [137] AND [187]	11
ILLUS 15 DETAIL OF SOUTHERN AREA PITS [025] AND [056] AND DEPOSITS (113) AND (174)	11
ILLUS 16 N FACING SECTION OF PIT [125]	12
ILLUS 17 S FACING SECTION THROUGH PIT [059]	13
ILLUS 18 N FACING SECTION OF PIT [098]	14
ILLUS 19 S FACING SECTION SHOWING COBBLED SURFACE [117]	15
ILLUS 20 DECORATED COOKING POT FROM THE FILL (023) OF PIT [022]	19
ILLUS 21 S FACING SECTION, WEST END OF TRENCH 1	20
ILLUS 22 E FACING SECTION, NORTH END OF TRENCH 2	20
ILLUS 23 GENERAL VIEW OF TRENCH 2	20
ILLUS 24 S FACING SECTION OF TRENCH 1	21

LIST OF TABLES

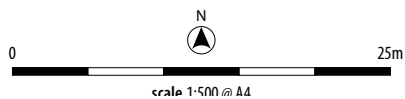
TABLE 1 RETENT SAMPLE RESULTS	37
TABLE 2 FLOTATION SAMPLE RESULTS	38
TABLE 3 TOTAL NUMBERS OF BONE FRAGMENTS, WEIGHTS (IN GRAMS) PER SPECIES AND MINIMUM NUMBERS (MNI) BASED ON MOST FREQUENTLY OCCURRING ELEMENTS ACROSS ALL PERIODS	39
TABLE 4 AGE CATEGORIES OF CATTLE, SHEEP/GOAT AND PIG BASED ON STATE OF EPIPHYSEAL FUSION OF LONG BONES	39
TABLE 5 WEAR STAGES OF SHEEP/GOAT MANDIBLES AFTER GRANT (1982) AND PAYNE (1973)	39
TABLE 6 LONG BONE SIZE RANGE SUMMARY	39
TABLES 7 / 8 ANIMAL BONE CATALOGUES (PROVIDED DIGITALLY)	40
TABLE 9 CONTEXT SPOT DATING	41
TABLE 10 FINDS CATALOGUE	42

LINLITHGOW FORMER BUS DEPOT (LFB/06)
 land adjacent to High Street
 Linlithgow
 West Lothian



Ordnance Survey © Crown copyright 2013. All rights reserved. Licence no. AL 100013329

- KEY**
- development boundary
 - limit of excavation
 - archaeological feature
 - geotechnical test pit



SCOTLAND

13 Jane Street
 Edinburgh EH6 5HE
 0131 467 7705
www.headlandarchaeology.com

81–87 HIGH STREET (FORMER BUS DEPOT), LINLITHGOW, WEST LoTHIAN

ARCHAEOLOGICAL WORKS

1 INTRODUCTION

Headland Archaeology Ltd was commissioned by CgMs Consulting on behalf of McCarthy & Stone Retirement Lifestyles Ltd to undertake a programme of archaeological works in connection with the proposed development at 81–87 High Street, Linlithgow (**ILLUS 1**). The proposed development will comprise two new buildings, founded on vibro-column and concrete strip foundations, with associated services, drainage, car-parking and soft landscaping.

As a condition of the planning consent, McCarthy and Stone Retirement Lifestyles Ltd (the client) was required to undertake a programme of archaeological works. In order to fulfil this condition a Written Scheme of Investigation (WSI) was prepared by CgMs Consulting (June 2013) setting out the strategy for archaeological mitigation. This included a staged approach to the archaeological works. This comprised: protecting, and recording if exposed, any remains that existed on site during demolition, recording any archaeological information provided by site investigation works that followed the demolition, and an intrusive archaeological evaluation (Bailey 2013). The evaluation demonstrated that significant archaeological features survived beneath deep deposits of loam in the centre of the site. Subsequent mitigation works were designed by CgMs and agreed with WoSAS on the basis of the results of the evaluation and finalised development plans. The scope of those works was encapsulated as an addendum to the WSI. The mitigation strategy included a targeted archaeological excavation located over the most sensitive area of archaeological survival and archaeological monitoring during the excavation of service trenches from the excavation area to and across High Street. The excavation covered an area of 280m², amounting to approximately 8% of the development area. The excavation was carried out between the 16th of September and the 4th of October 2013. Archaeological monitoring during the excavation of the service trenches was undertaken in July 2015.

1.1 SITE LOCATION AND DESCRIPTION

The site is located in the centre of Linlithgow, on the south side of High Street (NT 0024 7709). It measures approximately 110m north to south and 30m east to west; it covers an area of 3,440m² or 0.85

acres (**ILLUS 1**). The site is bounded to the east and west by developed properties and to the south by a railway line. The site was formerly occupied by a three storey modern building on the street frontage (north), a tarmac drive and yard to the west and south. A single storey bus garage occupied the southern part of the site.

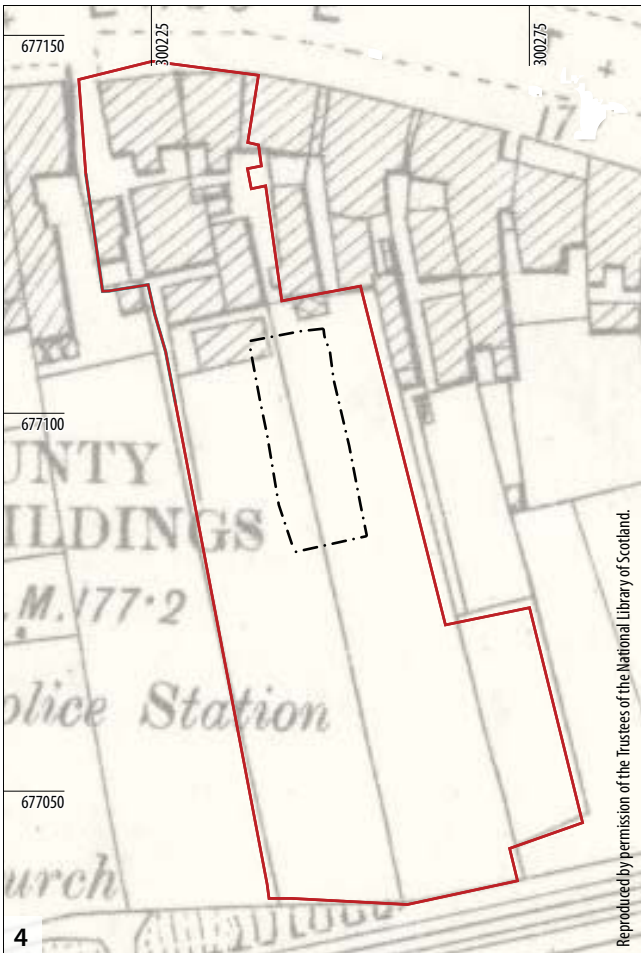
The topography of the site was generally flat, with a gentle slope up to the south (from 54m OD to 54.9m OD). There was a pronounced step up to an overgrown area at the very south of the site adjacent to the railway (up to 57m OD).

Geological deposits comprise sand and silt interpreted as glacio-fluvial deposits.

1.2 HISTORICAL AND ARCHAEOLOGICAL BACKGROUND

An archaeological desk based assessment undertaken in connection with a previous development proposal (CFA 2005), concluded that the site had high archaeological potential due to its location in the centre of the medieval burgh of Linlithgow.

The site lies at the centre of Linlithgow and is thought to have been settled since at least the 12th century when the royal burgh was first documented. The purpose of a royal burgh was to act as a trading centre through which internal and external trade could be controlled, thus maximising the monarch's revenues. The revenues included rents from burgh properties, market tolls, customs on exported goods and fines imposed in the burgh court (Caldwell et al forthcoming). Soon after the settlement received the rights of a burgh, a main street was formally laid out with burgh plots, or tofts running in a herring-bone pattern back from the street frontage (Dennison & Coleman 2000). Linlithgow has some of the best preserved rigs or burgh plots in any Scottish burgh. Each plot on the south side of High Street is thought to have enclosed an area of approximately a ¼ acre (one rood; Dennison & Coleman *ibid*). The plots on the south side of High Street were originally much longer than the north side, and bounded on the south by a continuous stone dyke, maintained by each plot holder, effectively forming a town wall.



ILLUS 2 Wood; Plan of the Town of Linlithgow (1820) **ILLUS 3** OS 25 inch to the mile, 1st edn, Linlithgow Sheet V.3 (Linlithgow) Survey date: 1854 Publication date: 1856 **ILLUS 4** 25 inch, Linlithgowshire, Sheet 005.03 Publication date: 1897 Revised: c. 1985 (All maps presented at 1:1,000 @ A4)

During the 14th century Linlithgow held the sole right of trade along the seventeen miles of coast from Avon to Cramond (Dennison & Coleman *ibid*), and external trade, much of which was based on the export of wool, leather and hides, was conducted through the port of Blackness. Various records showed that Linlithgow prospered in the 14th century. During the fourteenth and fifteenth century the town was destroyed, several times, by fire.

During the 15th century there was a decline in the town's customs. On a number of occasions between 1414 and 1422 the town was taken by force by James of Douglas and Walter of Haliburton (Dennison & Coleman *ibid*). Linlithgow's economic decline in the 15th and 16th centuries reflected the position of the Scottish economy as a whole, with the exception of Edinburgh, which maintained its economic position, coming to dominate Scotland's export markets by the 16th century (McNeil & MacQueen 1996). The burgh's decline as an economic centre was offset by the continuing presence of the royal courts until the Union of the Crowns in 1603 (Caldwell et al *ibid*). Many of the townspeople must have had close contact with the palace through the provision of goods as a significant support system would be required for the maintenance of the royal household and attendant court.

In the 17th century Linlithgow lost much of its status, with the removal of the royal court to London. In 1613 the provost and bailies of the town argued that it was a 'verie poore burgh, without trade or handling, and [had] little or no commoun good quhairby thay may beir out and sustene the commoun burdys of the said toun' (Dennison and Coleman *ibid*). In 1650, Oliver Cromwell installed himself at the palace, with his troops encamped on The Peel. During the Cromwellian occupation flour mills, granaries and storehouses were destroyed. However, Cromwellian forces were credited with bringing advanced tanning techniques which they taught to the Linlithgow cordiners. Leatherworking became Linlithgow's principle industry and by the end of the 18th century there were 17 tanners, eighteen curriers and thirteen tawers as well as services and apprentices (Dobie 1975). Other industries within the town at this time included woollen cloth manufacture, carpet weaving, calico production and breweries.

The application area occupies much of two burgage plots, including their frontage on High Street and part of a third, in the south-eastern corner. The first map that shows the site in any detail is Wood's 1820 plan of Linlithgow (**ILLUS 2**). Although property boundaries are not shown on the map, it indicates that the associated properties belonged to at least four different people. The Ordnance Survey map of 1856 (**ILLUS 3**) clearly depicts garden plots stretching back from the frontage properties. The 1856 Ordnance Survey large scale town plan (not depicted in this report) shows the site in greater detail, with a building with associated courtyard located behind those on the frontage and labelled 'smithy'. The 1897 Ordnance Survey map (**ILLUS 4**) shows slight changes to the buildings' layout, although no change to the garden plots is apparent. The garden plots remained unchanged until the construction of the bus depot in 1954, which occupied the development area until its recent demolition.

Archaeological works in the wider area, many of which are detailed in Dennison & Coleman (2000), highlighted the archaeological potential of the site. A log boat, of unknown date, but presumed to be medieval, was discovered in 1863 during construction work at the Sherriff Court House (Dennison & Coleman 2000), located directly to the west of site. Excavations in Linlithgow High Street between 1966 and 1977 found evidence of an intensive 15th and 16th century tanning industry (Hunter et al forthcoming) and excavations such as at the former Post Office, some 130m east of the development established the survival of medieval remains in Linlithgow despite later development.

An archaeological evaluation of the site was undertaken in August 2013 (Bailey 2013). The works comprised the excavation of six trenches in the southern part of the site and a trench within a former building footprint on the frontage. The trenches covered approximately 6% of the application area. The works revealed varying depths of glacio-fluvial deposits across the site, rising towards the north and south. Archaeological features, including pits and walls, heavily truncated by later post medieval and modern construction, were preserved in the frontage area. These were fully excavated during the evaluation and no further work was required in that area. In the central part of site glacio-fluvial deposits dipped lower than to the south and north; as a result loam deposits up to 1.5m deep and containing medieval pottery were preserved. Several archaeological features were located beneath the loam, visible at the interface with geological sands and gravels. The features included several

large quarry pits backfilled with midden material containing pottery dating from the 12th to 15th century and pits likely to be associated with industrial or craft processes. They were more frequent toward the frontage and petered out towards the south.

2 AIMS AND OBJECTIVES

The main aim of the excavation was to mitigate adverse impacts of the proposed development by providing a record of a representative sample of the archaeologically significant information that would be adversely impacted by the proposed foundation technique associated with that development.

The objectives of the excavation were:

- › to clarify the nature, character and extent of the most sensitive features identified during the evaluation and obtain plans and sections of any additional features identified during the excavation;
- › to identify any structures or activity areas and the date and duration of any remains;
- › to obtain artefactual and environmental evidence for the purposes of dating and interpretation of the site.
- › to provide, as far as possible, given the limitations of the evidence, a synthetic account of the development and character of the site.

3 METHODOLOGY

The work was undertaken as specified in the addendum to the Written Scheme of Investigation (WSI, see Appendix 5; CgMs Consulting 2013) submitted and agreed with WoSAS on behalf of the local planning authority.

3.1 EXCAVATION

An area measuring 28 x 10m at the base was defined for further excavation. This area was defined through consideration of both the potential adverse impacts of the proposed development (i.e. the building footprint and foundation techniques) and the most sensitive area of archaeology as defined by evaluation (**ILLUS 1**). A mechanical excavator equipped with a flat-bladed ditching bucket was used to remove modern overburden, under direct archaeological control, to the surface of underlying loam. Spoil was stored in a single pile at a safe and appropriate distance from surrounding buildings and boundary walls.

The loam was machine excavated in controlled spits of 0.3m allowing for the retrieval of a representative sample of artefacts (by hand-dug shovel pits) at the upper surface of each spit. Machine excavation continued until it was possible to identify underlying archaeological features in the upper surface of the interface with geological deposits.

Further excavation was generally by hand, however, two features were over 2m deep and it was not possible to safely hand excavate them. Upon consultation with CgMs and WoSAS, it was agreed that a mini



ILLUS 5 General view of site from S

digger equipped with a flat-bladed ditching bucket could be used to allow the safe hand excavation and sampling of the lowest fills.

The hand excavated sample of archaeological features typically amounted to 50% of discrete features and 10% of linear features. The level of hand-excitation increased where appropriate, for example, for structural features, features associated with subsidiary features such as post-holes and artefact-rich features. The level of hand excavation was agreed in consultation with CgMs and WoSAS. Excavation proceeded until all available stratigraphic information was recovered. Representative sections of the excavation area were cleaned and recorded.

3.2 MONITORING

The service trenches were excavated under direct archaeological supervision. All deposits were removed in spits using a flat bladed ditching bucket. Archaeological deposits and features exposed during the monitoring were hand cleaned prior to recording.

Recording

All aspects of work were undertaken in accordance with the IfA Standards and Guidance for conducting archaeological excavations. All contexts, small finds and environmental samples were given unique numbers and recording was undertaken on pro forma record cards that conform to accepted archaeological norms.

The photographic record comprises high resolution digital images. A graduated metric scale was clearly visible in record photographs. All

photographs were recorded by individual print number alongside information on the context and direction of view.

An overall site plan was recorded using dGPS. Hand drawn plans, sections and elevations of individual features at scales of 1:10 and 1:20 were drawn where appropriate.

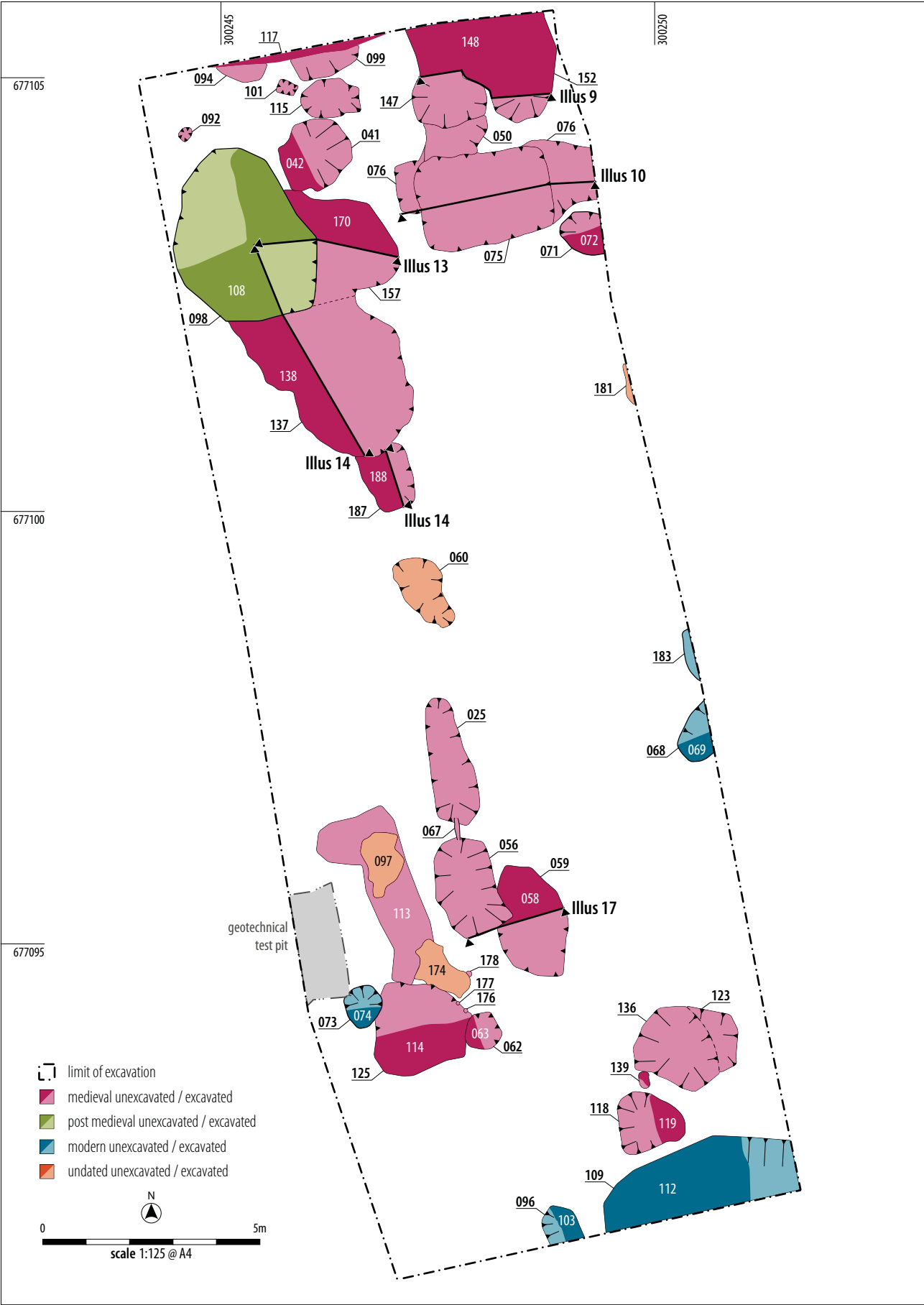
All artefacts retrieved during the excavation have been catalogued and will be subject to standard treasure trove procedures. Bulk finds were collected by context. Finds were stored in appropriate conditions as advised by Headland Archaeology's Finds Manager.

Archaeological deposits were sampled systematically in accordance with Headland Archaeology's standard sampling practice. Bulk samples, a minimum of 10 litres and maximum of 40 litres, were taken for wet sieving and flotation.

Reporting and archives

The results of the works are presented below. A summary report has been prepared for submission to Discovery & Excavation in Scotland (Appendix 5) and the OASIS database (headland 1-164325)

The complete project archive will be deposited with the National Monuments Record of Scotland (NMRS) within six months of the completion of the project. The records (paper and digital) will be archived according to best practice guidelines set out by the Archaeological Archiving Forum (July 2007).





ILLUS 7 Concentration of features in NW corner of excavation area

4 RESULTS

It became apparent during excavation that many of the features sample excavated during evaluation were more stratigraphically complex on full excavation than initially anticipated (for example, what appeared to be one feature was established as part of a group of intercutting features). Where possible features and deposits retained context numbers given during evaluation; some were assigned new numbers where appropriate.

4.1 GENERAL STRATIGRAPHY

Excavation area

The overburden from the demolition of the bus depot consisted variously of crushed concrete, stone, brick and rubble to depths of 0.40m below the post-demolition ground level (54.38m OD). A well developed loam (030), ranging in depth from 0.50m in the south of the excavation area, and up to 1.50m, in the centre, was beneath the overburden. The depth of the loam horizon varied according to the underlying topography (surface of fluvio-glacial deposits) and the effects of later activity (truncation). The loam contained a variety of artefacts including medieval and post medieval pottery and 19th century pottery and glass. Features had been cut into the loam, and were identifiable contained within it and sealed beneath it. Finds provided a terminus post quem for the majority of features. However in many cases the finds did not allow dating of the features to be refined beyond broad ranges, i.e. the medieval, post-medieval

and modern periods. Therefore, although stratigraphic relationships allowed some refinement of this chronology, for the most part, the features are grouped together under these broad periods. Undated features were tentatively dated according to stratigraphic relationships. All of the medieval features were identified beneath the loam and cut into the top of the interface with geological deposits (**ILLUS 5**) at around 52.5m OD.

Service Trenches 1 and 2, High Street

The stratigraphy in two service trenches (1 and 2), located in the High Street (**ILLUS 1**) and entrance to the former bus depot, consisted variously of modern stone setts, paving slabs and tarmac and associated make-up and levelling deposits (**ILLUS 24**) above earlier deposits. The latter comprised a series of loam and midden deposits visible in Trench 1. In many cases it was not possible to establish the relationship between the deposits due to truncation by modern services. Fluvio-glacial deposits were recorded at depths of 0.80m to 1m beneath the existing ground surface in Trench 2 (**ILLUS 22**) and in the north-facing section of Trench 1.

4.2 PHASE 1 – MEDIEVAL FEATURES: 1200–1500

The majority of features uncovered during the excavation dated to the medieval period. These features were cut into the interface with geological deposits. The densest concentration of features was in the north, closest to the frontage, there was also a smaller concentration in the south (**ILLUS 5** and **6**). Although no evidence for a physical



ILLUS 8 Pit [041] NE facing section

boundary was present, the features appeared to be concentrated around the line of plot boundaries visible on the Ordnance Survey map. For ease of discussion, features are described with reference to geographic location starting with the northern concentration and working south.

Northern Concentration

Pit 115

Pit 115 (recorded as 022 during the evaluation) was located in the north-western corner of the excavation area (ILLUS 7). The pit was 1.18m long, 0.9m wide and 0.30m deep. It was filled with mid greyish brown silty sand (023/116), from which barley grain, slag and cinders were recovered. Several fragments of pottery, making up about half a cooking pot decorated with incised lines, dating from the 12th to 14th century, were recovered from the pit during the evaluation. The pit was fully excavated in order to establish if any more pottery was present. No further remains of the cooking pot were retrieved during the excavation.

Pit 041

Pit 041 was located to the south of Pit [115] (ILLUS 7). It was partially excavated during evaluation and the section extended during the excavation. Excavation established that the pit was deeper, up to 1.20m, than previously recorded. A step was visible in the base of the pit, which suggests either that a step was cut to allow the person that excavated the feature access and egress, or that it had been re-cut,

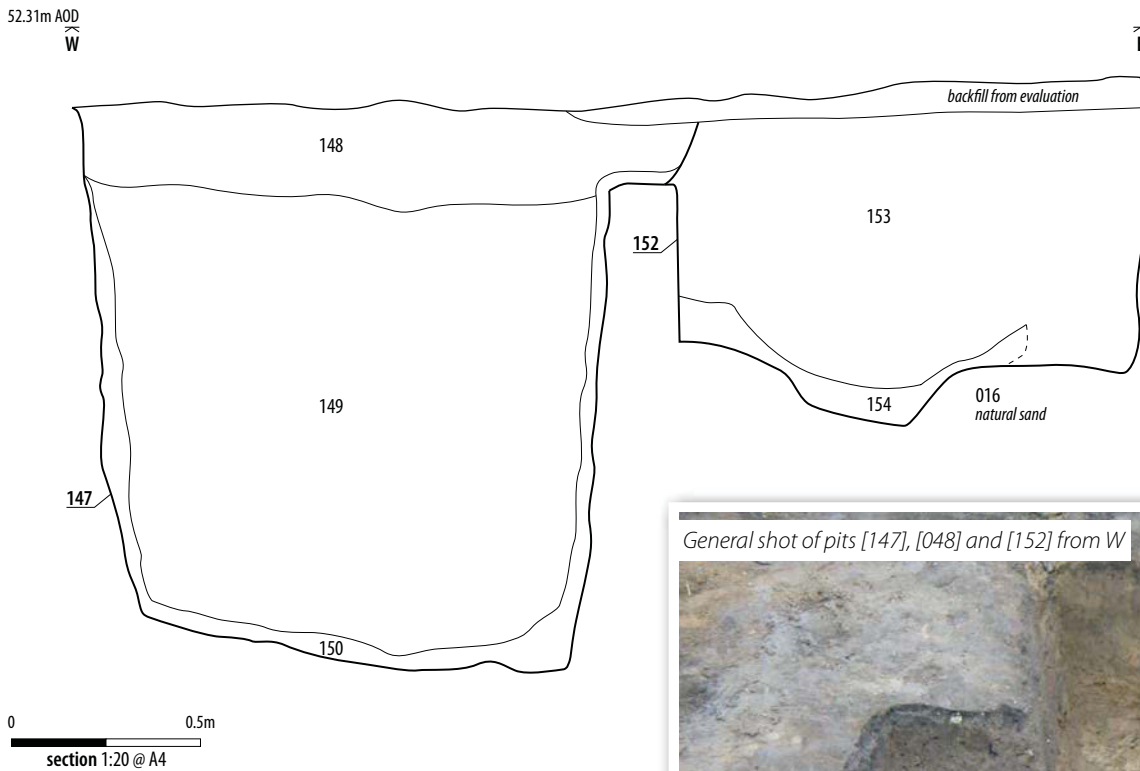
although no evidence was visible in the section to suggest the latter (ILLUS 8). The pit was filled with two deposits (134 and 042). The basal fill (134) contained an iron nail, a possible iron pintle and a fragment of white gritty ware pottery dating from the 12th to 14th century, together with fragments of burnt mammal bone, cinders and oyster shell recovered from the environmental sample. Iron slag, an iron nail, small sherds of pottery dating from the 12th to 15th century and 14th – 16th century were recovered from the upper fill together with bottle glass dating to the 19th – 20th century, suggesting that there had been later disturbance.

Post-holes 092 and 101

Two isolated post-holes [092 and 101] were located in the north-western corner of the excavation area (ILLUS 7). Post-hole 092 was 0.26m in diameter, 0.30m deep and filled with mid greyish brown loam (093); no dating evidence was recovered from the feature. Post-hole 101 was located to the north-east of [092]. It measured 0.36m in diameter and was filled with dark greyish brown sand (102) containing a fragment of pottery dating from the 12th to 15th century.

Deposit 094

Deposit 094 comprised a reddish brown layer of burnt clayey sand measuring 0.95m wide and 0.27m thick. It was located in the north-west of the excavation area, running north into the section. It was located directly beneath the loam (030) and appeared to be redeposited rather than the result of in situ burning. Wheat grains and grass seed were recovered from the environmental sample taken from this deposit.



ILLUS 9 S facing section through pits [147], [048] and [152]

Pit 099

Pit 099 was located to the east of Deposit 094 and north of [115] (**ILLUS 7**). Its full extent was not established as it extended north beyond the limit of excavation. It was 1.5m long and 0.5m deep. It was filled with mid-greyish brown sand (100) containing occasional cobbles, charcoal flecks and two fragments of pottery dating from the 14th–15th century.

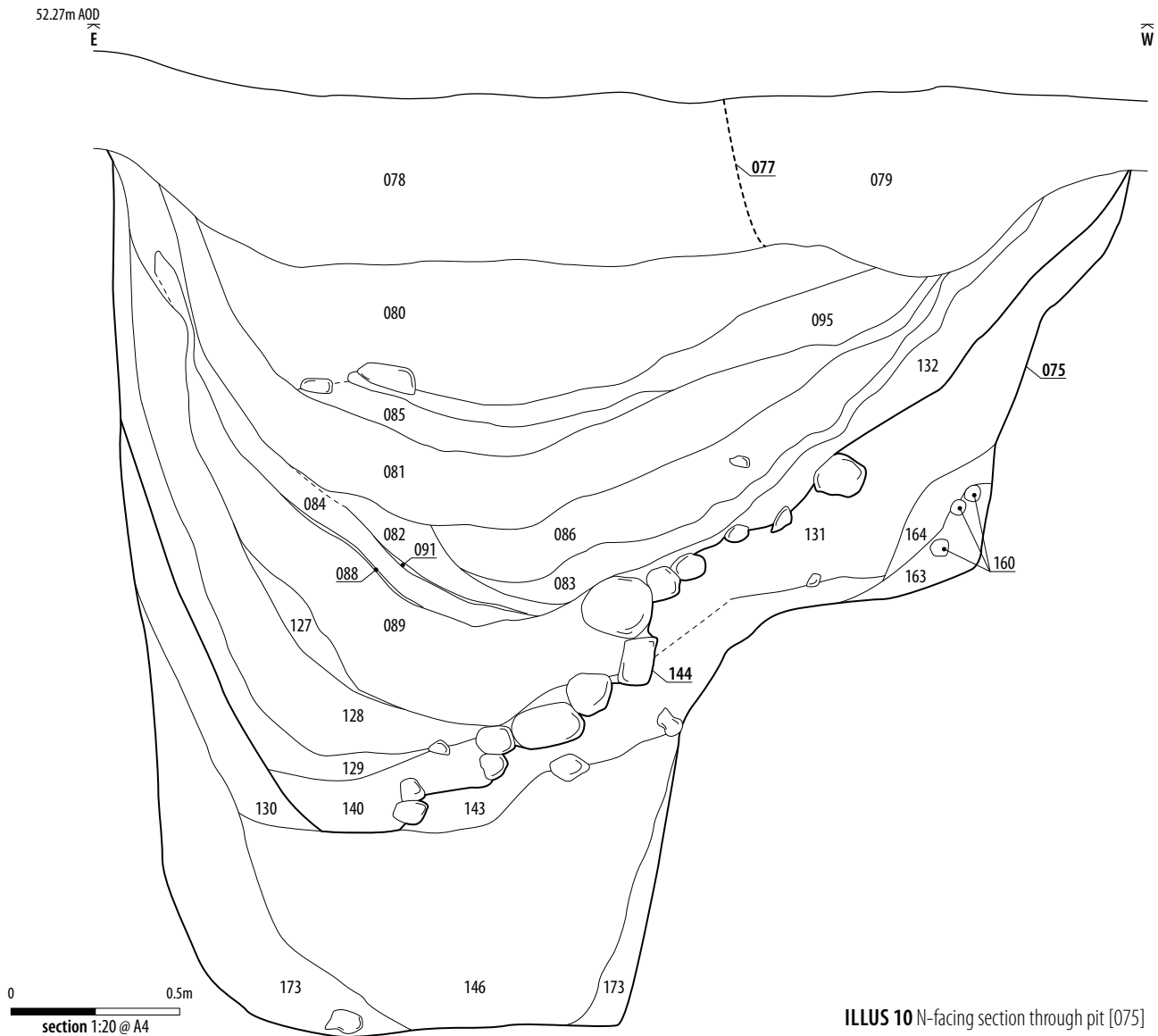
Intercutting pits [050, 147, 152]

A series of intercutting sub-circular pits [050, 147 and 152], recorded as [020, 050 and 054] during the evaluation were located in the north-east corner of the excavation area (**ILLUS 9**).

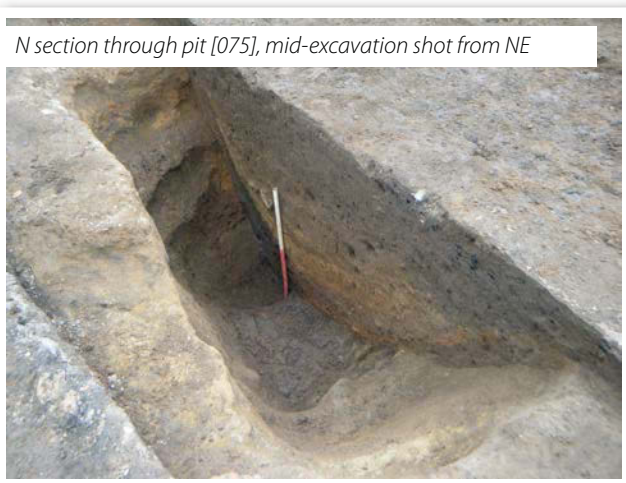
Pit 050 was sub-rectangular in plan, truncated on the southern side by a possible re-cut of Pit 075 (see below), and on the north by Pit 147. It was 0.62m wide and 0.50m deep and filled with a mid brown loam deposit (051) containing pottery dating to the 14th to 15th century, although some modern pottery fragments, possibly intrusive material, were also recovered from the deposit.

Pit 152 was filled with a 0.14m thick deposit of sterile yellow sand (154), interpreted as possible slumped natural sand from the initial cut, suggesting that the feature may have been left open for some time prior to backfilling. The secondary fill (153) comprised a 0.76m thick deposit of dark greyish brown sand containing frequent charcoal flecks.

Pit 147 truncated Pit 152 on the western side. It was backfilled with three deposits (150, 149 and 148). The primary fill comprised a 0.05m thick deposit of bluish grey sandy clay (150), located on the base and sides of the feature, possibly the remains of a decayed lining (**ILLUS 9**). The secondary fill (149) was a 1m thick deposit of mottled, dark brownish yellow slightly clayey sand containing pottery dating from the 12th to 15th century. Fragments of mammal bone, charcoal, cereal grain, weed seeds, hazelnut shell and fish vertebra were recovered from the environmental sample taken from the deposit. The upper fill (148) consisted of a 0.25m thick deposit of dark greyish brown sand containing charcoal flecks and a jug sherd dating from the 12th to 15th century.



ILLUS 10 N-facing section through pit [075]



N section through pit [075], mid-excavation shot from NE

Similarly the deposit of sand around the base of Pit 152 suggests that it had remained open for some time prior to backfilling.

Feature 076

Feature 076 was rectilinear in plan with steep sloping sides and a flat base. It was cut by Pit 075 and filled with brownish grey clayey silt (078), which also formed the upper fill of Pit 075, suggesting that the features were backfilled at the same time.

Pit 075

Pit 075/ 179 was the largest and deepest, up to 3m deep, of all pits excavated (**ILLUS 10**). It contained multiple fills and evidence for two possible functions.

The primary fills comprised a grey clayey, silty sand, deposit (163), located on a step in the western side of the pit, containing three heavily fragmented and degraded round-wood fragments (160), arranged one above the other, each with a diameter of 0.05m (**ILLUS 10** and **11**). The deposit was directly overlain by a lense (164) of sterile yellow sand; interpreted as an accumulation weathered from the surrounding glacial deposits. Sterile sand (173), the result of natural slumping was present on the eastern and western sides at the base of the feature.

Features 147 and 152 were both very regular with straight sides, suggesting that they were not quarry pits. The presence of a possible decayed lining in Pit 147 suggests it was designed to remain open for some time, this may indicate that it functioned as a cess pit.



ILLUS 11 Pit [075] showing wood (160) in situ, from E **ILLUS 12** Deposit (145), pit [075], from SW

A mid-brown silty clay (146) containing a fragment of white gritty ware jug base dating from the 12th to 15th century overlay the primary fill of the feature. Charcoal, nutshell, mammal bone fragments, oats, barley and a small legume were recovered from an environmental sample taken from this deposit. This was overlain by sandy clay (130), located on the eastern side of the pit and mottled mid-brownish grey sandy, silty clay deposit (143) containing charcoal, white gritty pottery fragments with pink and olive glaze dating from the 12th to 15th century. The latter was overlain by yellowish brown sandy clay silt containing charcoal fragments (131).

A re-cut [144] lined with several large, round stones (145) was recorded towards the centre of the pit (**ILLUS 12**). Medieval pottery including two white gritty ware cooking pot rims dating from the 12th to 13th centuries were recovered from a deposit (140) of brownish grey silty clay, at the base of the re-cut. An environmental sample taken from this deposit contained charcoal, hazelnut shell, oat, wheat grains and cinders.

Several, almost vertical tips were present on the eastern side of the pit (129, 128, 127, 089, 088, 084, 091 and 082) indicating that the re-cut had initially been in-filled from the east. Dating evidence was recovered from two of these deposits (128 and 089). Pottery recovered from greyish brown, sandy, clay silt, deposit (128) dated to the 13th to 14th centuries. Deposit (089) consisted of sandy clay silt and contained much charcoal and a possible iron knife blade and flint flake, probably a strike-a-light, together with pottery dating from the 12th to 15th century.

Tipped deposits (132, 083 and 086) were present on the western side of the re-cut. Deposit 132 directly overlay [144] and comprised yellowish

brown sandy clay silt containing occasional charcoal flecks. Deposit 083 consisted of brownish orange slightly sandy clay silt containing charcoal, burnt bone, slag and pottery dating from the 12th to 15th century. Deposit 086 consisted of brownish grey sandy, clay silt.

Many of the deposits forming the upper fills of the pit (081, 085, 095, and 080) comprised natural sands and silts accumulated following the disuse of the feature. Deposit 081 comprised yellowish brown sand. It was overlain by a greyish brown silty clay deposit (085), which in turn was overlain by a yellowish brown and greyish brown silty clay deposits (095 and 080) respectively.

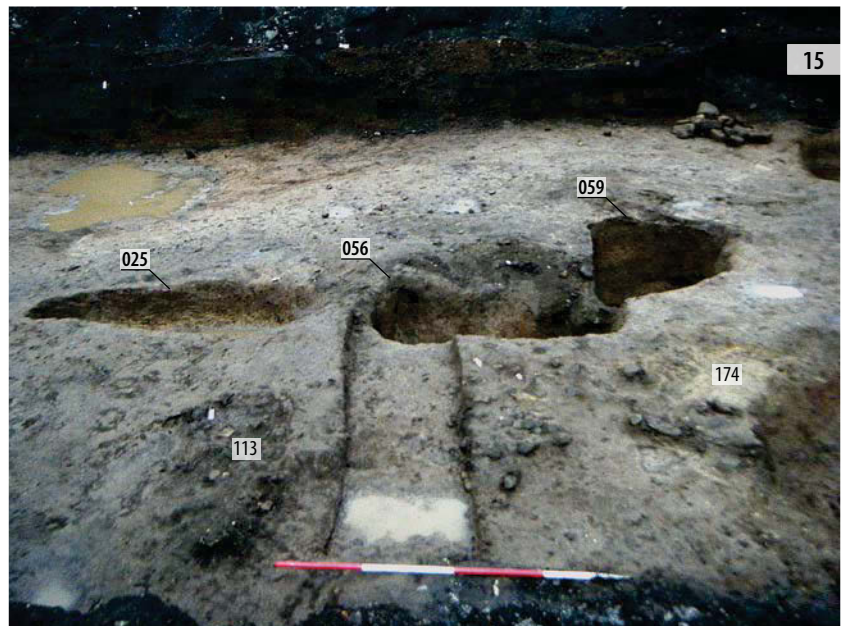
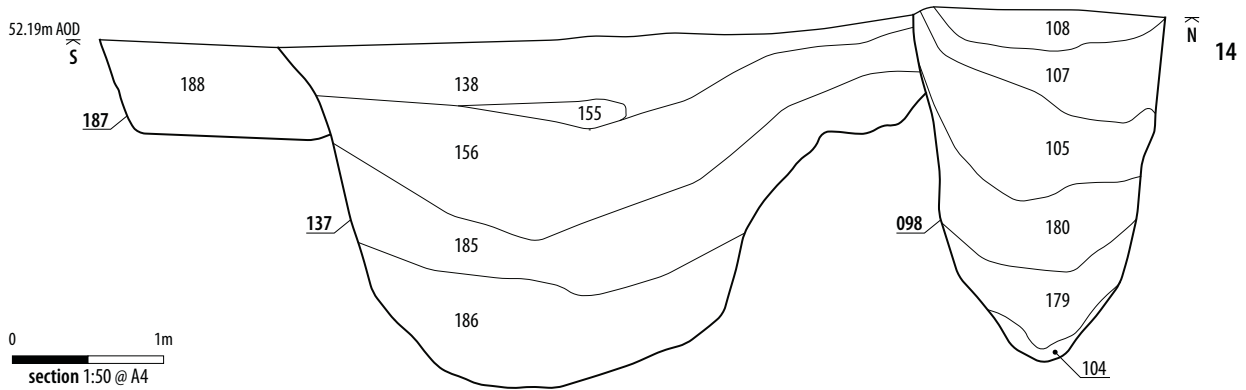
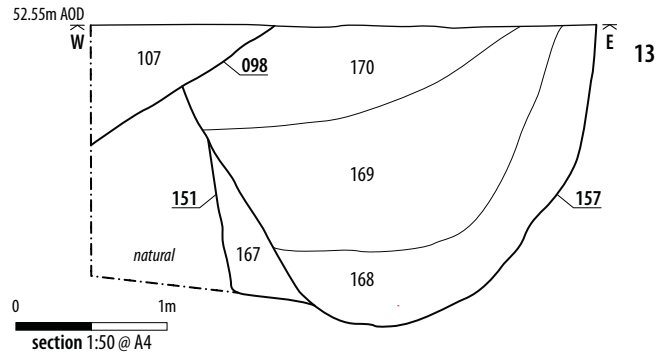
The upper fill (078) comprised brownish grey clay silt containing charcoal. A cut [077] was visible in the upper fill (078) on the western side of the pit, though was not visible in plan. It was filled with brownish grey sandy clay silt containing pottery dating from the 12th to 14th century.

Pit 071

Pit 071 was located to the south-east of Pit 075. It was 0.05m deep and filled with a light-greyish brown loam containing oyster shell and charcoal fragments.

Intercutting pits [137, 151, 157, and 187]

A group of pits [098, 137, 151, 157, and 187] was located in the north-western corner of the excavated area (**ILLUS 6**). It was not possible to establish the relationship between Pits 157 and 137 as both were truncated by later, post-medieval Pit 098 (see below) thus severing any stratigraphic relationship that these pits may once have had. Pit 151 was only visible in a south facing section as it had been truncated by Pit 157 (**ILLUS 13**). It was filled with sterile yellow sand



ILLUS 13 S facing section through pits [151], [157] and [167] **ILLUS 14** E facing section through pits [098], [137] and [187] **ILLUS 15** Detail of southern area pits [025] and [056] and deposits (113) and (174)

(167), probably slumped material from the surrounding geological deposits. Later Pit 157 was filled with three deposits (168, 169 and 170). An environmental sample taken from the basal fill (168) contained oat and barley grains and occasional animal bone and charcoal fragments. Pottery dating to the 13th to 14th century was also recovered from the basal fill. No dating evidence was recovered from the secondary (169) or upper fills (170).

Pit 187 was located on the south of the group (**ILLUS 14**). It was truncated on the north by Pit 137. It was 1.26m wide and 0.63m deep and filled with a greyish brown sandy loam (188) containing white gritty ware cooking pot and jug sherds.

Pit 137 was 2.60m wide and 2.20m deep (**ILLUS 14**), it was truncated on the north by Pit 098. It was filled with five deposits (186, 185, 156, 155 and 138). Charcoal fragments and oat grains were recovered from a sample taken from the basal fill (186). Several fragments of white gritty ware, dating to the 12th to 14th century were recovered from the tertiary fill (156) of the pit. Similarly, fragments of white gritty ware, including cooking ware sherds, dating from the 12th to 14th century were also recovered from the upper (138) fill of the feature.

A single pit [060] was located in the centre of the excavation area and fully excavated during the evaluation (Bailey 2013).



ILLUS 16 N facing section of pit [125]

Southern Concentration

Several features, including deposits and pits, were clustered at the southern end of the excavated area.

Deposits (113, 097 and 174)

Deposit 113 was located toward the south-west of the area. It was L-shaped in plan (**ILLUS 15**), and truncated on the southern side by Pit 125. The deposit was 3.99m long, 1.76m wide and 0.11m thick and formed from extremely stony sandy loam. It contained pottery dating from the 12th–14th century. It was overlain, in the north by a deposit of mid-brownish yellow loamy (097) sand (**ILLUS 6**) containing small charcoal fragments and in the south by an undated deposit of sterile yellow sand (174).

Pit [125] and stake-holes [176, 177 and 178]

Pit 125 truncated Deposits 113 and 174. It was sub-circular in plan, measuring 2.18m long, 2.09m wide and 0.43m deep and filled with deposits (126) and (114) respectively (**ILLUS 16**). The basal fill (126) was a 0.20m thick, dark brownish grey sandy loam (126) containing several large stones and lenses of sand. Slag fragments, were also present in this deposit. The upper fill (114) contained several pottery fragments dating to the 13th–14th centuries, with residual modern pottery.

Two stake-holes [176 and 177], measuring up to 0.10m in diameter, were located on the north-eastern edge of the pit, beneath the upper fill (114) of pit 125, with a third [178] located directly to the north. It is possible that these may have been the remains of a flimsy structure.

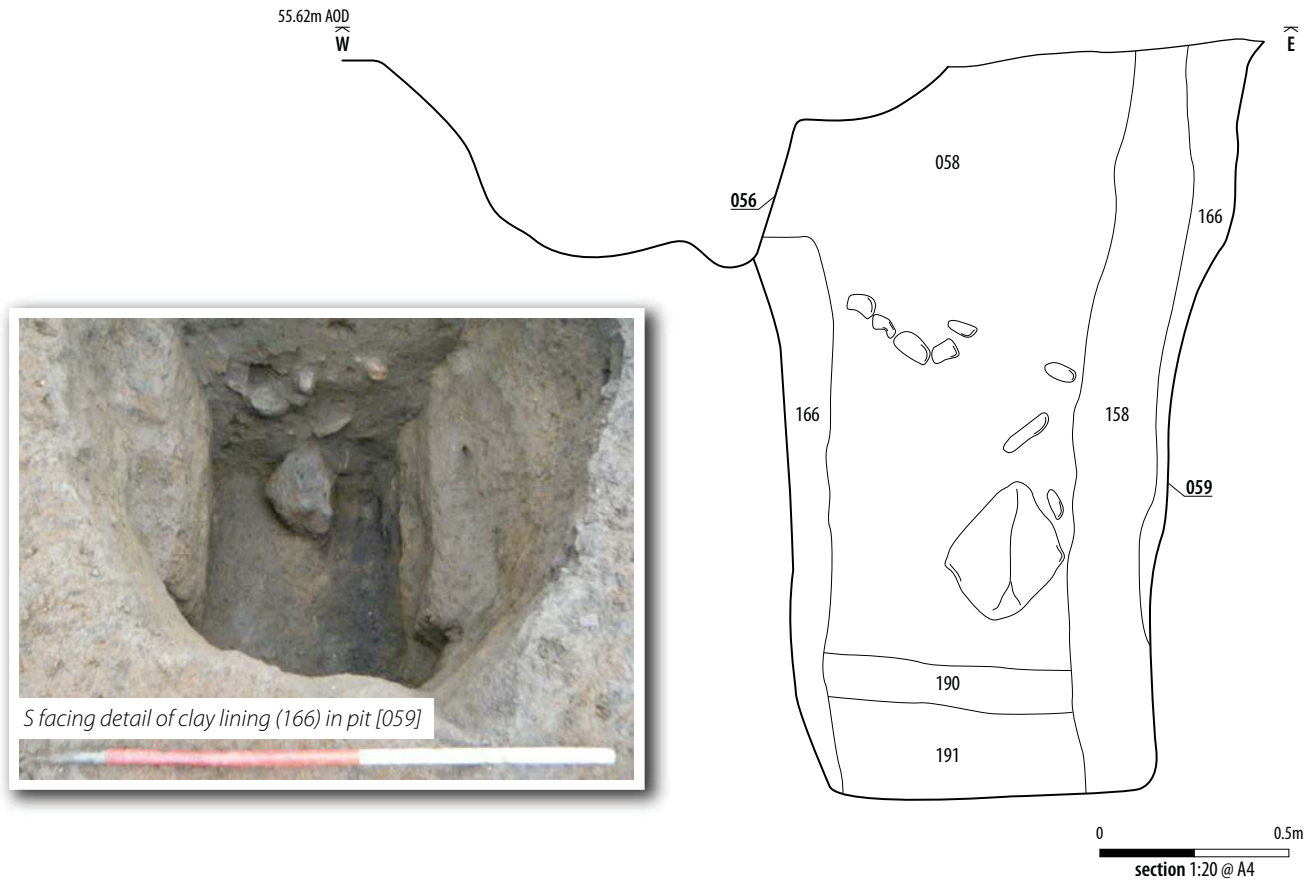
Pit 062

Pit 125 was truncated on the eastern side by Pit 062. It was sub-circular in plan, 1.20m long, 1m wide and 0.08m deep and filled with a light grey loam deposit (063) containing several fragments of medieval pottery, broadly dating from the 14th to 15th century.

Pits [059, 056 and 025]

Pit 059 was sub-circular in plan. It was 1.91m long, 1.46m wide and 2.22m deep (**ILLUS 17**). The eastern and western walls were lined with compact reddish brown clay (166), up to 0.15m thick in places. The clay lining was overlain, on the eastern side, by a sterile sand deposit (175; not illus), possibly a result of natural slumping or weathering. A vertical deposit (158) of dark brown loam containing coarse jug sherds dating from the 12th to 14th century was present on the eastern side of the feature. The basal fill (191) comprised a 0.47m thick bluish grey clay deposit overlain by a 0.15m thick deposit of yellowish red sandy loam (190). Oat, barley and wheat grains were recovered from the secondary fill (190) of the pit together with charcoal fragments. Several white gritty ware pottery sherds and two late medieval redware fragments, dating to the 12th to 13th and 13th to 15th centuries respectively, were also recovered from the deposit. The pit was cut on the western side by Pit 056.

Pit 056 was sub-rectangular in plan with steep sides and a flat base. It was 2.24m long, 1.22m wide and 1.37m deep. A channel [067], created by boring through geological deposits, measuring 0.32m in diameter, 0.71m long and 0.43m deep and filled with loose loamy material (161), ran north from the northern edge of the feature, joining Pits 056 and



ILLUS 17 S facing section through pit [059]

025 together (ILLUS 6). The pit was filled with two deposits (141 and 057). Deposit 141 comprised a 0.30m thick dark brownish grey sandy clay. A white gritty ware jug sherd dating from the 12th to 15th century and animal bone fragments were recovered from the basal fill (141). Several lumps of iron slag were recovered from the upper fill (057) of the pit, together with white gritty ware pottery dating to the 12th to 14th century and sherds from large reduced late medieval redware jugs dating from the 15th to 16th century.

Pit 025 was sub-rectangular in plan, tapering towards the northern end. It was 2.87m long, 1.10m wide and 0.60m deep. Although the evaluation revealed what appeared to be a post-hole in the southern side, full excavation of the feature showed that the 'post-hole' was a 'channel', as described above, joining Pits 025 and 056 together. The pit was filled with greyish brown (026) sandy loam containing iron nails, staple, strip, an L-shaped iron shaft, horseshoe and several lumps of iron slag. Pottery recovered from this feature included late medieval redware pottery dating from the mid 15th to 16th centuries. During excavation it was noted that following heavy rain this pit retained water, despite being cut into sand and gravel.

Features 118, 139, 136, 123 and deposits 201–209

Pit 118 was located in the south-eastern corner of the excavated area. It was 1.20m long, 1.10m wide and 1.10m deep. It was filled with three distinct deposits (121, 120 and 119). The greyish brown clay primary fill (121), contained coarse white gritty ware jug sherds dating from the 12th to 14th century together with several charcoal fragments. The secondary fill (120) comprised a 0.45m thick deposit

of sand and gravel. The upper fill comprised a 0.47m deep deposit of mid brown silty clay (119) containing several jug sherds dating from the 12th to 14th century.

Deposit 139 was located between Pits 118 and 136, and possibly truncated by Pit 136. It comprised a spread of burnt or heat affected sand, measuring 0.40m in diameter and 0.03m deep, directly overlying natural sand. No dating evidence was recovered from this deposit.

Pit 123 was sub-rectangular in plan, aligned east to west and measured 2m long, 1.5m wide and 0.8m deep, it was cut on the western side by Pit 136. It was filled with a mottled, dark brown orange sand (135) containing thin sand lenses. Pit 136 was sub-circular in plan, 1.5m in diameter and 0.04m deep and formed a bowl-shaped re-cut of Pit 123. It was filled with a deposit of dark greyish brown sandy gravel (124) containing sub-rounded stones and fine gravel. White gritty ware jar and jug rims dating from the 12th to 14th century were recovered from the fill. It was noted following heavy rain that this feature retained water.

In the service trenches several deposits (201), (202), (203), (204), (205) and (206) containing pottery dating from the 15th to 16th century together with oyster shell and animal bone were present in Trench 1 (ILLUS 21; ILLUS 24). Although they were heavily truncated by service pipe cuts, the angle of the deposits suggested that they were located within a possible cut feature, probably tipped into the feature from the western side. A Flemish-type floor tile, similar to that present in Pit 098 (discussed below) was present in midden deposit (206).



ILLUS 18 N facing section of pit [098]

Unfortunately the limited nature of the investigation, within narrow service trenches, precluded any interpretation of the possible feature or indeed confirmation that the deposits were within a feature.

Remains of a second possible feature, again truncated by service cuts, were present on the eastern side of Trench 1 (**ILLUS 24**). The feature cut through deposit (201) and contained pottery dating from the 15th to 16th century. An angular rubble deposit (209) measuring 3.90m long and 0.32m deep was located at the base of the feature. No mortar was present in the deposit.

4.3 PHASE 2 – POST MEDIEVAL FEATURES: 1600S

Only one feature, Pit [098] (**ILLUS 18**), contained pottery definitively dating to this period (the 16th Century).

Pit 098

Pit 098 was located in the north–west of the excavated area (**ILLUS 18**). It was sub–circular in plan and ranged in depth from 0.86m in the north to 2.10m in the south. It cut medieval pits [157] and [137] (**ILLUS 6**). It was filled with several deposits (104, 105, 106, 107, 108, 178 and 180) containing a total of 141 pottery fragments dating to the 1600s, iron, industrial waste and a Flemish–type floor tile. Oat and barley grains, charcoal, cinders and oyster shell fragments were also recovered from the environmental samples taken from the basal fill (104) of the pit. Mammal vertebrae, fish and bird bones were also recovered from the upper fill (108) of the pit.

Cobbled Surface [117]

Remains of an isolated cobbled surface (117) were present in the northern section at a depth of 53.19m OD (**ILLUS 19**). The cobbles were 0.10m thick and 2.40m long. They were located beneath a 0.30m thick deposit of dark brown loam and above lighter brown loam (030). The cobbles did not continue into the western section or southwards into the excavation area and appeared to respect the alignment of burgage plots shown on the Ordnance Survey maps. No dating evidence was found in the overlying deposit or in the loam matrix surrounding the cobbles.

4.4 PHASE 3 – MODERN FEATURES

Four pits [068, 073, 183 and 181] were apparent following the removal of demolition rubble (**ILLUS 6**). All were filled with a dark brown loam and could easily be distinguished from the lighter brown loam (030) into which they were cut. Pit 073 was the only modern feature to be fully exposed in plan. Pits [068], [181] and [183] were located on the eastern side of the excavation area, and continued east beyond the limit of excavation.

Two other pits [096 and 109] were located at the southern end of the excavated area. Pit [096] was visible in the southern section, cut through made ground and loam (030), though visible in the interface with geological deposits. Pit [109] was located to the east of [096] and also appeared to be modern.



ILLUS 19 S facing section showing cobbled surface
[117]

Pit 073

Pit 073 was located in the south-west of the excavation area, cut into loam (030) at a height of 53.35m OD. It contained several very large pottery sherds including slip decorated earthenware bowls, clay pipe fragments and complete stoneware blacking bottles dating from the mid to late 19th century.

Pit 068

Pit 068 was located in the eastern section of the excavation area at a height of 53.44m OD. It was 0.80m wide and 0.40m deep. It was filled with dark brown loam (069) containing late 19th to early 20th century pottery, glass, pan tile, a circular wooden object and a fragment from a porcelain doll's head.

Pit 181

Pit 181 was located in the eastern section of the excavation area, cut into loam at a height of 53.55m OD. It was 1.50m wide and 0.45m deep. It was filled with dark greyish black sandy silt (182) and contained occasional charcoal fragments. Although no finds were recovered from the deposit the nature of the fill was very similar to 184 and was therefore tentatively dated to the same period.

Pit 183

Pit 183 was 1.27m wide and 0.66m deep and cut into the loam at a height of 53.24m OD. It was filled with a dark grey sandy silt (184) containing occasional charcoal flecks. A copper alloy pendant crucifix was recovered from the fill of this feature. Its style and condition indicate that it is a modern piece, though there are no associated finds in the feature to confirm its dating.

Pit 096

Pit 096 was located in the south of the excavation area. Its full extent was not established. It was sub-circular in plan and 1.53m deep, cut from above, through the made ground and garden soil on the southern side of site. It was filled with loose loamy sand (103) and contained a residual white gritty ware strap handle dating to the 12th to 15th century.

Pit 109

Pit 109 was located in the south-east of the excavation area and extended south beyond the limit of excavation. It was rectangular in plan, and cut through the made ground, suggesting that it was of recent origin. It corresponded with the location of a pit excavated during the geotechnical investigation works. It was backfilled with a deposit of loose greyish brown loamy clay (112) and contained occasional charcoal fragments and sub-angular stones. Two green glaze pottery fragments dating from the 12th to 15th century were recovered from the fill.

5 ENVIRONMENTAL REMAINS

LAURA BAILEY, TIM HOLDEN

5.1 INTRODUCTION

Twenty samples, ranging in volume from 5 to 30 litres, were processed for recovery of environmental remains. The aims of the environmental analysis were to assess the presence, preservation and abundance of any palaeoenvironmental remains in the samples and to assess the potential of the material for any indication of the function of the features with further analysis undertaken where appropriate to answer this question. The environmental remains are quantified in Tables A2.1 and A2.2 (Appendix 2).

5.2 METHOD

The samples were subjected to flotation and wet sieving in a Siraf-style flotation machine. The floating debris (the flot) was collected in a 250 µm sieve and, once dry, scanned using a binocular microscope. Any material remaining in the flotation tank (retent) was wet-sieved through a 1mm mesh and air-dried. This was then sorted and any material of archaeological significance removed. All plant macrofossil samples were analysed using a stereomicroscope at magnifications of x10 and up to x100 where necessary to aid identification. Identifications,

where provided, were confirmed using modern reference material and seed atlases including Cappers et al. (2006).

Oak charcoal can be readily distinguished from other species of wood by eye so wherever this was identified it has been recorded in **TABLES 1** and **2**.

5.3 RESULTS

Results of the assessment are presented in **TABLES 1** (Retent samples) and **2** (Flot samples). Material suitable for AMS (Accelerated Mass Spectrometry) radiocarbon dating is shown in the tables.

Wood charcoal

Charcoal was present in varying quantities in the flots of all samples (**TABLE 2**). The size of charcoal fragments ranged from 1mm to 0.02m. Charcoal was also present in the retents of ten of the samples from the fills (080, 121, 135, 140, 146, 149, 161, 168, 186 and 190) of pits [087, 121, 135, 140, 146, 149, 161, 168, 186 and 190]. Both oak and non-oak charcoal was identified in the samples.

Cereal grain

Cereal grain was present in the flots of all the samples with the exception of samples 44 and 47 taken from the basal fills (121 and 134) of Pits 118 and 041 respectively. Oat (*Avena* sp.) was the most frequently encountered grain, although barley grains (*Hordeum vulgare*) were also recovered from many of the samples. A small amount of bread wheat was present in samples (70 and 30) from the fill (063) of Pit 062 and deposit 094. Cereal grain preservation was generally poor, with many grains distorted and abraded.

No waste products from cereal processing eg chaff or rachis fragments were recovered in any of the samples, suggesting that the grains were probably small-scale losses from a domestic (consumer) context.

Wood

Wood fragments recovered from a sample (075) from deposit 160 were extremely fragmented and degraded it was therefore not possible to identify to species level.

Other charred plant remains

Small fragments of hazel (*Corylus avellana*) nutshell were recovered from the retents of three samples (52, 74 and 63) taken from the basal fill (140) of Pit 075, the fill (146) of Pit 172 and the fill (161) of Channel 067.

A number of samples contained common seeds/fruits of wild species such as dock (*Rumex* sp.), sedges (*Carex* sp.), fat hen (*Chenopodium album*), chickweed (*Stellaria media*), corn marigold (*Chrysanthemum segetum*), *Polygonum* sp (knotgrasses), common hemp nettle (*Galaeopsis tetrahet*), grass species (*Bromus* sp) and cleavers (*Galium aparine*). Generally, these would be consistent with weeds of cereal fields or waste ground. The corn marigold is a very typical weed of cultivation and was present in a sample (033) taken from the fill (104) of Pit 098, which also contained several oat and barley grains, suggesting that it was incidentally harvested with the cereals.

Other finds

Small fragments of oyster shell were present in samples taken from the fills (104, 134 and 141) of three pits [098, 041 and 142]. Deposit 104 also contained daub, glass, slag and magnetic residue together with cinders and fragments of animal bone, and will be discussed within the relevant specialist reports below. Similarly, the retents of deposits 134 and 141 also contained cinders, coal and small fragments of bone.

5.4 DISCUSSION

The cereal grain assemblage, dominated by oat and hulled barley, is similar to other medieval assemblages across Scotland (Boyd 1988). Oats, a common cultivar in the medieval period, were the most common grain in the assemblage, although barley and a small amount of bread wheat were also present.

No evidence was found for the processing of the cereals (eg threshing and winnowing) suggesting that only small-scale (domestic) processing was taking place. The presence of corn spurrey and chickweed, can give some insight into the harvesting techniques. These plants would generally have been a lower stature than the cereal crop, suggesting that the crops were harvested low on the straw rather than the ears and straw being harvested separately (Robinson 1995).

Cereal grain preservation was generally poor in samples containing coal. Many of the grains were distorted suggesting either that they were burned at very high temperatures or when they were still green.

All the plant macrofossils in the assemblage appear to be the result of secondary deposition, with the exception of the roundwood present in context 160, and do not relate to the original function of the features. In many cases pottery, animal bone, coal and cinders were recovered from the same retents suggesting that the grains may have been incorporated into the assemblage, perhaps incidentally, through food processing, preparation, fuel and perhaps even building materials (charcoal) and discarded with other domestic waste. Unfortunately, due to the degraded, fragmentary nature of the wood, recovered from context (160), and interpreted as possible lining remnant, it was not possible to identify to species level.

The presence of charred hazel nutshell suggests either that wild food resources were being utilised or that they were incidentally collected with the fuel wood.

6 ANIMAL BONE

CATHERINE SMITH

6.1 INTRODUCTION

Animal bones were recovered from the site both by hand-excavation and sieving of soil samples. This report is concerned mainly with the hand-excavated material, since few well-preserved identifiable fragments were recovered from the sieved component.

With analysis of the material recovered focused on providing information relevant to the function of the features recorded during the excavation.

6.2 METHODS AND MEASUREMENT

The mammal and bird bones were identified by direct comparison with modern comparative material and were allocated to particular bone and species where possible. Where it was not possible to identify bones as far as species, the terms large ungulate, small ungulate and indeterminate mammal were used: thus all large vertebrae other than the atlas and axis were described as large ungulate, while small vertebrae were described as small ungulate. Ribs were similarly allocated depending on their size. Large ungulate bones were most likely to have come from cattle, but could also have come from horse or red deer. Similarly, small ungulate bones were most likely to have come from sheep, but could possibly have originated from goat, pig or roe deer. All other mammalian fragments for which neither species nor bone could be ascertained were described as indeterminate mammal.

Measurements were made in accordance with the scheme of von den Driesch (1976) and are expressed in millimetres. Additional measurements on the humerus follow Legge and Rowley-Conwy (1988). Mandibular tooth wear and eruption patterns were assessed using Grant's (1982) scheme for cattle, sheep/goats and pigs, as well as Payne's (1973) scheme for sheep/goats. Dobney and Rielly's (1988) diagnostic zones were noted in order to help determine minimum numbers of animals present.

Condition scoring

Assessment of the animal bones determined that although the identification rate is high, the fragments were friable, readily broken and light in weight, possibly due to a high degree of leaching of their organic components. Each hand-excavated fragment has therefore been given a numerical condition score in order to allow comparisons to be made. The following attributes are scored:

General: provides a general short-hand description of the overall condition of the bone. May be one of the following (numerical score in brackets): very poor (1), poor (2), fair (3), good (4). 'Good' would be applicable to fresh bone.

Surface abrasion: describes the degree of erosion of the surface caused by taphonomic factors such as weathering, soil conditions, etc. Abrasion is scored as heavy (1), moderate (2) or slight (3).

Density: describes the 'heaviness' of the bone. In general, the more well-preserved a bone is, the heavier and denser it appears to be, whether through retention of organic material or re-mineralisation from the soil. Density is scored from 1 to 5, where 1 is the least dense.

Friability: describes the degree of crumbliness. Scored from 1 to 5, where 1 is the most crumbly and 5 is the least crumbly.

Total score for poorly preserved bone is therefore lower than that for well-preserved bone. The most poorly preserved would score only 4 points while the best could potentially score 17 points.

6.3 RESULTS

Identifications, measurements and condition scores are set out in the accompanying catalogue (Appendix 3, Tables A3.7–9). Where an identified bone element has fragmented into more than one conjoining fragment, it has only been counted once in order to avoid inflating the total number of fragments identified (NISP).

Species present

TABLE 3 (Appendix 3) summarises the numbers of fragments from each species, the total weight of bone from each species and the estimated minimum number of individuals (MNI) present across the whole site.

Based on numbers of fragments and weights, the most frequently occurring mammals are cattle and sheep/goats. Cattle account for 178 fragments, weighing 3.639kg, representing a minimum number of four individuals. Sheep/goats account for 126 fragments weighing 0.713kg, representing five individuals. There are far fewer fragments from pig, totalling 17 fragments weighing 0.14kg, representing two individuals. Compared with these figures for meat-producing mammals, there are the remains of three horses from pits [024] and [056] (15 fragments) and one from loam deposit 030. The remains of cats and dogs were also recovered. The remains of four cats were recovered from pits (056) and (098) and three dogs, from pits (025) and (056).

The MNI for cattle and sheep/goats is therefore very much underestimated when compared to horse, dog and cat since the latter group is based on partial skeletons while that of cattle and sheep/goats is based on the incidences of individual bones. This difference reflects the varying uses and disposal patterns of the different species. In particular, since the preparation of cattle and sheep/goat carcasses involves disjuncting, the joints of meat so formed may be widely dispersed before being used as food. Their bones may be disposed of at the point of butchery, or the point of consumption resulting in the mixing of bones from many different carcasses. By contrast, the carcasses of horses, dogs and cats were probably disposed of in a semi-articulated state, without being dispersed across a wide area and tend to be found in association with other parts of the same skeleton rather than as individual elements.

In addition to the domestic mammals, a few bones of birds and fish were retrieved. The bird bones were predominantly from domestic fowl (*Gallus gallus*) although greylag/domestic goose (*Anser anser*), mallard/domestic duck (*Anas platyrhynchos*) and gull sp (*Larus* sp) were also present in small quantities. A single bone from a galliform bird was most likely from a small turkey (*Meleagris gallopavo*), confirming a modern date for the feature in which it was found (Pit [068]). Similarly two bones of rabbit (*Oryctolagus cuniculus*), a species introduced in the medieval period but which remained rare in Scotland until relatively modern times, came from a post-medieval deposit (Pit 098).

6.4 AGE OF ANIMALS AT DEATH

Age at death is best estimated from the mandibular teeth but as there was very poor survival of mandibles at this site, epiphyseal fusion evidence has been also used. **TABLE 4** (Appendix 3) presents

the numbers of cattle, sheep/goat and pig bones by age category, based on the state of fusion of the long bones. As is often the case at Scottish medieval sites, more sheep/goats than cattle appear to have been killed at a relatively young age. However, there is also a good survival rate for both cattle and sheep/goats, as shown by the fully fused long bones attributed to adults. Reference to **TABLE 5** (Appendix 3), showing the wear stages of several sheep/goat mandibles, also indicates the presence of older sheep. One individual may have lived for as long as eight years. Pigs appear to have been killed at a young age but the sample size is small and does not fully represent the age structure of the population.

There was little evidence for the age of death of the dogs, but most of the cats appear to have died before full bone fusion was achieved.

6.5 BUTCHERY

In the light of the presence of relatively high numbers of horse, dog and cat bones and Linlithgow's reputation as a town where leather was manufactured, the bones of these species were carefully scrutinised for evidence of knife cuts. Since the surface of the bones was in most cases affected by erosion or abrasion, evidence has unavoidably been lost. However one horse phalange, recovered from Pit 056 bore evidence of a deep hack across the anterior surface, perhaps indicating that the hoof was removed. A dog atlas (first cervical) vertebra, also recovered from Pit 056 had a deep knife cut placed ventrally on the caudal aspect of the bone, where it articulated with the axis (second cervical) vertebra. This would likely have occurred during rather vigorous skinning out of the head, or indeed removal of the head entirely.

6.6 SIZE AND APPEARANCE OF THE ANIMALS

Anatomical measurements indicate that the sheep were of a typically small stature (**TABLE 6**, Appendix 3), and most were probably horned. All of the caprovid skull fragments with traces of the horn core were from sheep and several of the juveniles bore short, stumpy horns. Since the conditions of preservation meant that the bones were highly fragmented it was difficult to determine much about the adult horn type, save that the horn bases were fairly large. It is likely that both males and females were horned. No naturally hornless (polled) skull fragments were observed.

Few measurements were available for the cattle (**TABLE 7**, Appendix 3) but a few larger bones may have been present within Pit 098, perhaps indicating a post-medieval date for the contents. However, none were of the large size of modern breeds and the lack of saw cuts confirms a date prior to the late 19th century.

Discussion

Previous excavations at 332–336 High Street, Linlithgow in 1973 uncovered evidence of pre-17th century structures and intercutting pits thought to be related to tanning. The faunal evidence from this site revealed the largest assemblage of antler waste recovered from a Scottish urban excavation (Hunter et al, forthcoming). Animal-based industries were thus of great importance to the burgh of Linlithgow and the assemblage from the former Bus Depot, found within pits which may have some association with the process of tanning, confirms this finding.

The Statistical Account of Scotland details the numbers of workers in the leather trade in Linlithgow in the 18th century. These included tanners, tawyers, curriers and shoemakers who between them processed up to 60,000 skins and hides a year (Dobie 1975, Hunter et al forthcoming). The evidence from the current excavation probably indicates that as well as cattle hides and sheep fells; horse hides and cat and dog skins were also prepared. This was the norm in the medieval period. At the High Street in Perth, the number of young cats was equal to that of adults, as it was at Linlithgow Bus Depot, indicating that the pelts of young cats were attractive to the skinners (Hodgson et al 2011, 30). Trade records show that dog and cat fur, as well as contributing to the internal market, continued to be exported from Scotland in the 17th century (Smith 1998, 877). It is only in the modern period that they have ceased to be a home produced commodity.

7 FINDS

JULIE FRANKLIN

This report covers all phases of work undertaken for this project: evaluation, excavation and watching brief.

Medieval to post-medieval Pottery

Pottery made up the vast majority of the assemblage of this period. It amounted to 1061 sherds, weighing approx 23.45kg (Appendix 4, **TABLE 10**). It includes some very large sherds, with several vessels represented by large proportions of, or complete profiles.

The assemblage ranges from as early as the 12th century until the 16th century but the majority of material appears to date to the period between the 13th and 15th centuries. Early sherds include some pieces of thin walled, wheel rilled and coarse gritted vessels, a feature of the early White Gritty industry from the mid 12th century onwards (Haggarty 1984). There are also a number of jar sherds, many sooted from use as cooking pots. These were only made until the mid 14th century. Later markers include frilled bases in the style of Rhenish stoneware of the 15th and early 16th centuries and a jug sherd decorated with a thumb rose design, popular in the 16th century. However with the exception of a few early jars, almost the entire assemblage appears to be made up of jugs. The lack of handled jars which only appear in pit [024] and skillets, only in buried soil (002), both common products of the Scottish pottery industry in the later 16th and 17th centuries, implies there is little or no material of this date. Certainly were deposition to continue past the 1630's there would be associated clay pipes. Hence it seems deposition was largely over by the mid 16th century.

The fabrics are generally typical of south-east Scotland during this period. Early deposits are characterised by Scottish White Gritty Wares (WGW). Later medieval deposits are mixed white and redwares (LMR), the latter developing into the post-medieval reduced & oxidised wares (PMR/PMO) of the 16th century and later (Jones et al 2003; Haggarty et al 2011).

Imported vessels are represented by only 16 sherds, that is 1.5% of the overall assemblage. This reflects the distance of the town from



ILLUS 20 Decorated cooking pot from the fill (023) of pit [022]

major ports, though its proximity to the Forth would provide a route by which foreign goods would have come to Linlithgow. Sherds are of commonly imported types for the period, including Rhenish stoneware, Low Countries grey and redwares, French Saintonge wares and Yorkshire wares.

Modern pottery

Modern pottery amounted to 140 sherds. The majority was found in two pits: [068] and [073], particularly the latter which contained several very large sherds from slip decorated earthenware bowls and complete stoneware blacking bottles. The assemblage from Pit [068] was smaller but did include an unusual sherd from a porcelain doll's head. Other sherds were found in modern deposits (001), (003), (030), topsoil (029) and, in one case, apparently intrusive in an otherwise medieval feature, Pit [125].

Glass

The glass amounts to 67 pieces, all of recent date. None of the sherds predate the second quarter of the 19th century and it is likely that most are in fact late 19th or early 20th century. Their distribution is much the same as that for the modern pottery with Pit [068] providing a number of complete bottles of various types, many with embossed marks from local merchants and retailers.

Metalwork

The metalwork assemblage amounts to 62 pieces of iron, five of copper alloy and two of lead. The most notable of the copper alloy finds is a pendant crucifix recovered from pit [183]. Its style and condition indicate it is a modern piece, though there are no associated finds in this feature to confirm the dating. The only other recognisable find is a possible strap mount in Pit [137]. It is likely to be of medieval date though it is abraded and in poor condition. The lead finds are largely unidentifiable.

The most notable of the finds is a piece of cast iron shot, though this was unfortunately unstratified and in poor condition. It may nonetheless relate to some of the military action seen in Linlithgow in the 17th or 18th centuries.

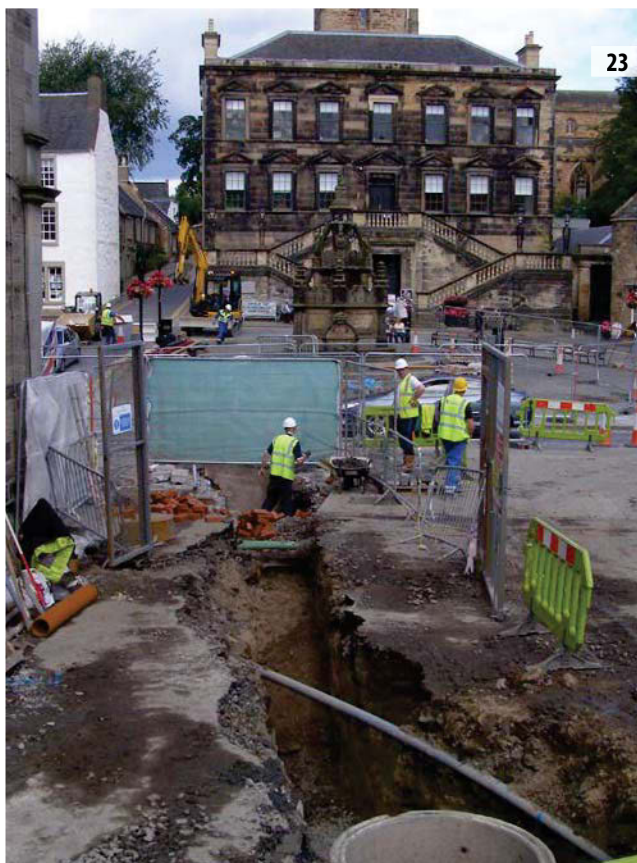
Twenty five objects were subjected to x-ray. The x-rays allowed three objects to be identified, unfortunately the majority of objects remained unrecognisable. The identified objects included a horseshoe nail from Deposit 030 which was identified as having a fiddle key head and dates from the 11th to mid 14th century. Also identified was a horseshoe fragment from Deposit 026 and a possible buckle, with metal alloy plate, from Deposit 047. Further cleaning and conservation of the 'buckle' revealed it to be a tin-plated hinge consisting of two flat plates attached by a barrel hinge. The larger plate had a rivet in it for attaching it to something else, perhaps the lid for a small box.

Industrial waste

A total of 4.459 kg of industrial waste was recovered, mostly in the form of lumps of iron slag, with Pit 056 containing over 1kg of it. Typically these remains are associated with late medieval pottery and it is likely that ironworking was being undertaken in the vicinity at this point.

Ceramic and other building materials

There were 17 sherds of ceramic building material and one sandstone architectural fragment. The most notable of these were two near complete ceramic floor tiles. Both were of Flemish type, 105–108mm square and 24–25mm thick, one glazed yellow over a white slip, the other dark mottled green directly over the red body of the tile. Tiles of this type were imported from the Low Countries in large numbers between the late 14th and early 16th centuries (Norton 1994, 151) and were used to form simple patterned floors, particularly in ecclesiastical settings. A floor of this type was laid in Linlithgow Palace (ibid) and it is possible that this tile was part of that floor. One was found in Pit 098 which seems to have been backfilled



ILLUS 21 S facing section, west end of Trench 1 **ILLUS 22** E facing section, north end of Trench 2 **ILLUS 23** General view of Trench 2

in the 16th century, the other more abraded example was found in a midden deposit (206) with a single associated pot sherd suggesting a 15th or 16th century date for deposition.

A piece of moulded stone was probably also part of a substantial stone building. There are few finds associated with it by which to date it but they suggest a post-medieval date, possibly the 17th century (002), though a later date is possible.

Other finds amount to fragments of pan tile and brick and are of modern date.

Other finds

Other finds are of little interest. A single flint flake was found in a medieval pit [075] and may have been used as a strike-a-light. A wooden object, leather shoe, fragment of porcelain doll's head and the base of a ceramic figurine were all found in the fill (069) of modern pit [068]. Two fragments of modern clay pipe stem were also found in this pit, with a further fragment in modern pit [073].

Context spot dating

TABLE 9 (Appendix 4) outlines all the dating evidence for each feature. Individual layers in multi-fill pits have been grouped together, but where there appears to be a difference in dating between lower and upper layers, this has been noted. Dates should be considered as a terminus post quem for the infilling of features.

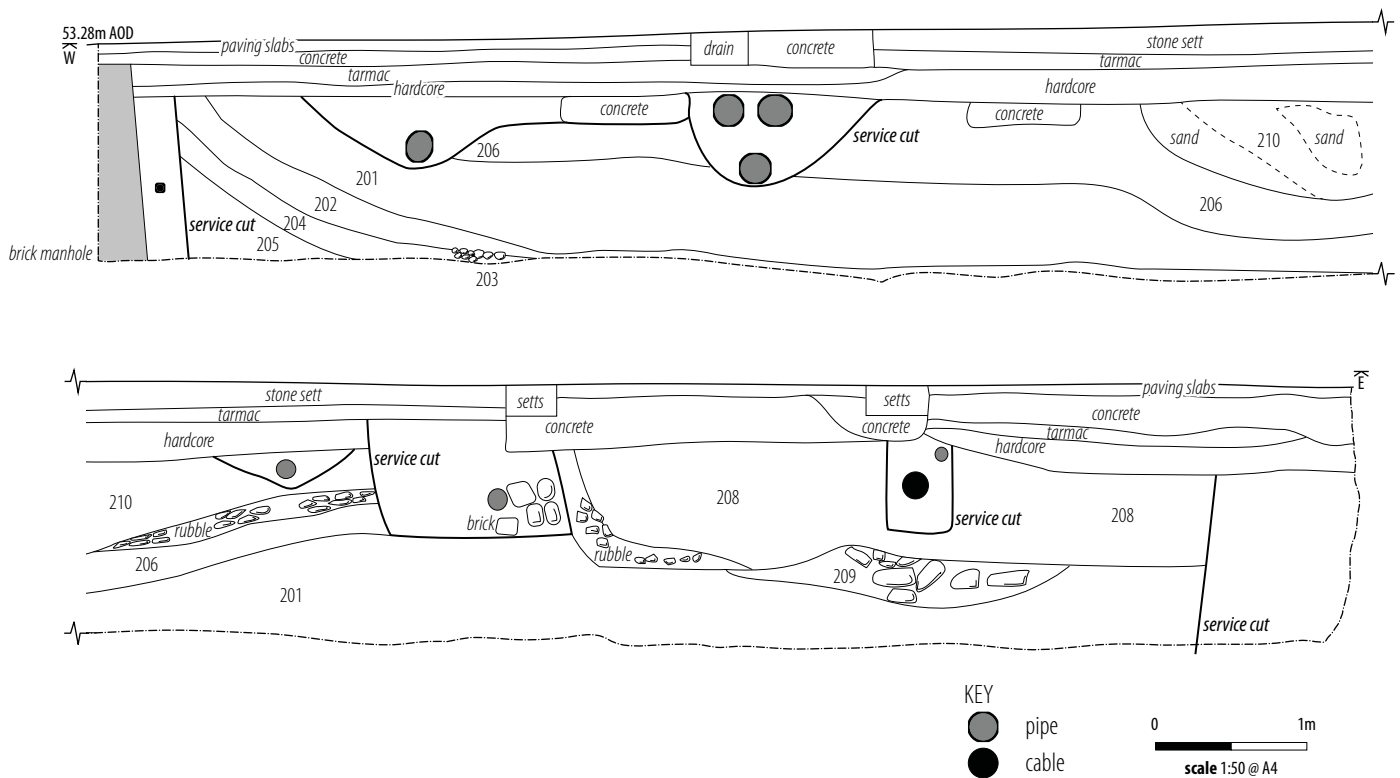
7.1 DISCUSSION

The main area of interest in the assemblage is the medieval pottery. This covers several centuries of pottery use in Linlithgow, from the 13th century and possibly earlier, to the 16th century. While the assemblage fits broadly within the pattern for medieval sites in south-east Scotland, the pottery itself can contribute little to the interpretation of the function of the features recorded beyond the secondary use of the features for deposition of domestic waste.

Many vessels seem to have been deposited in pits whole (**ILLUS 20**) or in large pieces and the deposits appear to have been largely undisturbed since. Hence the assemblage contains some very large sherds and some good vessel profiles. The pottery has been catalogued to minimum standards outlined by the Medieval Pottery Research Group (MPRG 2001).

8 DISCUSSION

The excavations at 81–87 High Street, Linlithgow, have produced evidence for the development of Linlithgow from its medieval origins into the nineteenth century. The earliest deposits encountered on site were geological fluvio-glacial sediments. These were underlain by glacial till. The deposits were variable across the site, with coarse gravels forming a slope upward to the south at the southern end, a sand-filled channel to the north of this; till was exposed as gravels thinned northwards and with layered sand and gravel on the frontage (S Carter pers comm).



ILLUS 24 S facing section of Trench 1

The concentration and distribution of the archaeological features, appears to be primarily related to the depth and character of these natural sediments. The large deep pits were located in the north, where there were fine sands. There was a paucity of features in the central area, with a single pit [060] located here, where the loam deposits were the deepest, and thus, the depth to natural sands and gravels greatest. It may be that the central pit [060] was the result of a prospective 'mining' attempt, for the extraction of sands and gravels or glacial till, perhaps abandoned as it was realised that the natural geology was deeper in this area. It is also possible that the lack of activity in the central area was related to the sub-division of plots or there may have been an upstanding timber structure or workshop in this area, which has not left visible traces. Alternatively the area may have been used for 'non-intrusive' purposes, for example for crop growing or stock rearing. At the south there was a change to more gravelly sand in underlying deposits and there were fewer deep pits and many of the pits appeared to have been related to industrial or craft activities. Perhaps this area was better drained and therefore more suitable for these activities. Or perhaps the geological deposits were of less interest.

However, it must also be noted that the concentration of features was most dense in the north of the excavated area, which was closest to the frontage, the occupied area, where most activity took place in medieval burghs.

8.1 THE MEDIEVAL BURGH (12TH TO 16TH CENTURY)

These early features were overlain by a well developed soil horizon containing 12th to 15th century pottery and fragments of coal, charcoal and animal bone, and deepest in the centre of the excavated area. The depths of the soil horizon varied according to

the underlying topography and the effects of later activity, but in places it was as deep as 1.50m.

The deposit appears to reflect continual human activity on the site, with frequent mixing of the horizon resulting in the formation of a homogenised soil. The origin of the deposit is likely to have been from a combination of natural soil development and the deposition of midden material, either in pits or spread over the ground. Cultivation and associated activities would have mixed these deposits and broken down many former distinct stratigraphic relationships. Homogenised soils are a common feature in medieval backlands for example in Perth (Coleman 1996), St Andrews (Hall 1985) and Edinburgh (Holyrood Archaeology Project Team 1998).

The pits were concentrated behind the frontage, located in what would have been the less developed backlands. Although no remains of a physical boundary, such as walls, banks, or post-holes, were observed during the excavation the features did appear to be grouped in two distinct areas on the east and west sides of the area. Many of the pits, particularly those in the north-eastern and north-western corners may have been dug to obtain glacial till or sand for use as building or surfacing material, and backfilled with domestic refuse including coal, charcoal, charred cereal grains, oyster shell and pottery. These types of pits are characteristic of backlands in Scottish medieval burghs (Coleman *ibid*).

There was also evidence for probable industrial or craft activities in the south-west of the area and possible cess-pits.

Pit 059 was clay lined, an impermeable barrier, suggesting that it was constructed to retain liquid. Although, no definitive evidence was

recovered from the pit to confirm its function, a horse phalange, and dog atlas, both with evidence of butchery were recovered from the fill of adjacent Pit 056, which truncated the feature on the north–western side.

Pits 025 and 056 were joined by an enclosed channel [067]. Pit 025 was much shallower than [056] and the channel joining the pits sloped slightly towards the south. During the excavation it was noted that Pit 025 retained water following heavy rain, suggesting either that it may have been waterproofed in some way, or the natural deposits into which it was cut were clay rich. It is possible that Pit 056 may have been some kind of soak–away for Pit 025, with the channel carrying liquid away from the feature, [025] and into pit [056], once a certain level was reached. The forms of the features do not offer much insight into their function. However, Pit 056 contained a significant amount of animal bone, including fragments with evidence for skinning together with iron slag and iron objects. The pits were located towards the rear of the plot, suggesting that they may have functioned as tanning pits. The various processes involved in tanning, such as soaking (to wash and soften the hides), liming (to remove hair), deliming, baiting (where lime was neutralised and skin plumped up ready for tanning) drenching and pickling meant that multiple pits were required. Animal–based industries were of great importance to the burgh of Linlithgow, with pre 17th–century tanning structures excavated at 332 High Street (Hunter et al forthcoming) and the largest assemblage of antler waste ever found in a Scottish burgh (Smith in Hunter et al forthcoming) at 326–332 High Street. Tanneries were situated on the north side of the High Street, where the loch provided a ready water supply for the works (Hunter et al forthcoming). The nature of the pits together with the recovery of the animal bone is consistent with, though not conclusive of, some kind of animal processing. The ironworking waste within the feature is the result of secondary deposition; however, its presence suggests that other processes and activities were undertaken in close proximity.

The L-shaped deposit (113) in the south–western corner may have been associated with the foundations of a heavily truncated structure. Pit 125 to the south may also have been used for industrial or craft activities. The presence of stake–holes around the northern edge of the pit is also suggestive of flimsy structures. The pit fill contained several large stones and sand lenses. However, the function of the feature remains unclear.

In the northern part of the excavated area Pit 075 appears to have been used for more than one function, although what those functions were is unclear. The fact that the pit was possibly re–used suggests either that space was limited or that re–using an existing pit was more expedient than digging a new one. The pit may have been primarily excavated to extract sand and latterly used for another function as it had a rectangular, regular shape that suggests some element of deliberate design. The sides were uneven towards the base possibly as a result of water or liquid erosion, which had caused the sand to peel and flake off. It is unlikely that the feature was a well as it did not reach the water table and unlikely that it held liquid associated with tanning processes due to the proximity of the feature to the frontage. It is therefore possible that it functioned as a cess pit. The backfill deposits of the feature contained midden material and were not particularly diagnostic as to function. Remains of wattle lining were located on the western side of the feature, and may represent an attempt to

prevent sides from collapsing, which indicates a requirement for the pit to remain open for long periods to fulfil its primary function. The pit was re–used in the 13th to 14th century, with the construction of a crude clay and stone lining, again, it is unclear as to what the function of this was; examples of stone–lined pits, confirmed by botanical remains to be cess pits, were found in Mill Street Perth (Bowler et al 1995) and Meal Vennel Perth (Cox et al 1996). It was suggested that the stone lined cess pit in Mill Street, Perth represented the relative prosperity of the users, which was confirmed by evidence of their diet from the botanical analysis. Although limited botanical evidence was recovered from the pits on this site, it is possible that plant macrofossils may not have survived in the freely draining sand and gravel. It is also possible that the pits directly to the north (147 and 152) may also have functioned as cess pits.

The pits on this site are much larger than the comparative examples of cess pits in other burghs noted above; if they are indeed cess pits, their size suggests intensive use and perhaps dense occupancy on the nearby frontage. This may have related to the proximity to Linlithgow palace, as there would have been a requirement for nearby accommodation for visitors to the Royal Court, and their retinues. The location of these features to the rear of the frontage, and the proximity of site to Linlithgow palace, provides some support to an interpretation of these features as cess pits, but the lack of botanical evidence means another function should not be discounted. Following their disuse the pits were backfilled with midden material.

8.2 POST MEDIEVAL ACTIVITY

Pit [098] was the only feature dated to the post medieval period, with 16th century pottery recovered from it. The fill of the pit was more organic–rich than the others noted above and contained frequent animal bone and oyster shell; suggesting that it may have been deliberately excavated for rubbish disposal, perhaps as midden disposal became more difficult because of a lack of space and open, cultivated areas in the town.

No further evidence for intrusive activity dating to the post medieval period was recovered in the excavation area. This suggests that there was a change in the principal use of the backlands from quarrying, rubbish disposal, craft and industry to small–scale but intensive cultivation, evidenced by the depth of loam. Whether soil was introduced to the site or simply developed within it is unclear. The lack of evidence for activity on the site during the post medieval period corresponds with a decline in the burgh’s customs and economic position from the 1600s following the Union of the Crowns.

9 CONCLUSIONS

The excavation at 81–87 High Street has provided an opportunity to study medieval burgh plots: their development, layout, nature and extent of backland activity. Evidence was uncovered for sand extraction, possible craft and industrial activities and cess pits. Although no physical boundaries were present, the pits appear to respect a boundary. Dating evidence was relatively broad and features were often isolated, therefore evidence of plot amalgamation, sub–division or boundary change was limited. However, a tentative correlation between the level of natural sands and gravels and focus of activity was established, with

sand extraction taking place on the north–western and north–eastern parts of the excavated area and possibly craft/industrial activity in the south–western. There was a paucity of features in the central area suggesting that it was reserved for non–intrusive activities like stock rearing, vegetable growing or perhaps was occupied by a structure.

It was not possible in many cases to establish the function of the features from their form, and often they were backfilled with midden material, which offered little or no insight into their original function. However, evidence for skinning was present on horse and dog bone recovered from Pit [056] located towards the rear of the plot, suggesting that the site may have some association with the tanning process. Animal–based industries were of great importance to the burgh of Linlithgow, with pre 17th–century tanning structures excavated at 332 High street (Hunter et al forthcoming) and the largest assemblage of antler waste ever found in a Scottish burgh (Smith in Hunter et al forthcoming) at 326–332 High Street.

The finds assemblage also demonstrated that metal working was taking place in the vicinity. However, no features could be definitively associated with the process, so it remains unclear where the focus of this activity was.

There was a marked change in the principal use of the backlands from the medieval to post medieval period where quarrying, rubbish disposal, craft and industry was replaced by small–scale but intensive cultivation evidenced by the depth of loam. The archaeological evidence corresponds with a decline in the importance and economic prosperity of the burgh from the 1600s.

10 REFERENCES

- Bowler, D, Cox, A & Smith, C (eds) 1995 'Four excavations in Perth 1979–84' *Proc Soc Antiq Scot* 125.
- Boyd, WE 1988 'Cereals in Scottish Antiquity', *Circaea* 5 (2), 101–110.
- Cappers RTJ, Bekker RM & Jans JEA 2006 *Digital seed atlas of the Netherlands*, Barkhuis Publishing and Groningen University Library, Groningen.
- CFA Archaeology 2005 *First Bus Garage, Linlithgow: Archaeological Desk-based Assessment*.
- CgMs Consulting 2013 *Written Scheme of Investigation, 81–87 High Street (former First Group Bus Depot), Linlithgow, West Lothian*, Unpublished report.
- Clark, J 1995 *Medieval finds from excavations in London, 5: The Medieval Horse and its Equipment*, HMSO, London.
- Coleman, RJ 1996 'Burgage plots of medieval Perth: the evidence from excavations at Canal Street' *Proceedings of the Society of Antiquaries of Scotland* 126:689–732.
- Cox, A 1996 'Backland activities in medieval Perth: excavations at Meal Vennel and Scott Street' *Proceedings of the Society of Antiquaries of Scotland* 126:733–821.

Crossfield Consulting Ltd 2010 *81–87 High Street Linlithgow; Site Investigation Report*.

Dennison, EP & Coleman R 2000 *Historic Linlithgow the archaeological implications of development, the Scottish burgh survey*, Historic Scotland.

Dobbie, Rev J 1975 'Parish of Linlithgow' in Withrington, DJ & Grant, IR (eds) *The Statistical Account of Scotland*, vol II, The Lothians, 756–83. Wakefield.

Haggarty, G, Hall, D & Chenery, S 2011 *Sourcing Scottish redwares*, Medieval Pottery Research Group Occasional Paper 5

Haggarty 1984 'Observations on the Ceramic Material from Phase 1 Pits BY and AQ' in Tabraham, CJ, 1984 'Excavations at Kelso Abbey', *Proceedings of the Society of Antiquaries of Scotland* 114, 395–397.

Hall, DW 1985 *Excavations at Market Street, St Andrews*, Unpublished archive report. Scottish Urban Archaeological Trust Ltd Perth.

Holyrood Archaeology Project Team 2008 *Scotland's Parliament Site and the Canongate: archaeology and history* Edinburgh: Society of Antiquaries of Scotland.

Hunter, D, Brooks, C, Caldwell, D, Stell, G & Middleton, M (forthcoming) 'Three excavations in Linlithgow High Street, 1966–77'.

IfA 2008 *Standards & Guidance for Archaeological Field Evaluation*.

Jones, R, Will, R, Haggarty, G & Hall, D 2003 'Sourcing Scottish White Gritty Ware' in *Medieval Ceramics* 26/7 (2002/3), 45–84.

McNeil, PGB and MacQueen, H L (eds) 1996 *Atlas of Scottish History to 1707*. Edinburgh.

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

Norton, C 1994 'Medieval Floor Tiles in Scotland', Higgit, J (ed) *Medieval Art and Architecture in the Diocese of St Andrews, British Archaeology Association Conference Transactions* 1986:137–173.

Robinson, D 1995 'The Botanical Remains: Mill Street and King Edward Street' in Bowler, D, Cox, A & Smith, C (eds) 'Four excavations in Perth 1979–84' *Proc Soc Antiq Scot* 125.

10.1 CARTOGRAPHIC SOURCES

Wood J 1820 *Plan of the Town of Linlithgow*.

Ordnance Survey 1856 *25 Inch, Linlithgowshire, Sheet V.3 Surveyed*. 1854.

Ordnance Survey *1856 1:1056 Linlithgow, Town Plan Sheet 1*

Ordnance Survey 1897 *25 Inch, Linlithgowshire, Sheet 005.03*. Revised 1895.

11 APPENDICES

APPENDIX 1 SITE REGISTERS

Appendix 1.1 Context register

CONTEXT	DESCRIPTION
001	Very dark brownish grey silt 0.5m thick containing modern rubble. Located in SE area of site.
002	Dark greyish brown, slightly clayey silt containing occasional charcoal fragments, stones and rubble. Buried soil
003	Light–mid orangey brown sandy silt deposit up to 1.4m deep, containing charcoal flecks and pottery–Buried soil.
004	Sandstone wall–Running N–S at the south–east corner of site to the E of the retaining wall. 1 course high and unbonded. Stones generally measure c.0.3m x 0.25m x 0.2m.
005	Fill of pit [006], 0.50m deep, comprises dark brownish grey sandy silt containing medium stones, bone and occasional pottery fragments.
006	Pit– 1.6m long, 0.6m wide and 0.5m deep. Oval in plan, vertical sides and flat base. Located in SE area of site.
007	Cobbled surface abutting wall 004 and overlying 002. Formed from sub–rounded, stones. Located in SE corner.
008	Fill of Pit [009], 0.9m + deep (not bottomed during watching brief). Mid greyish brown clayey silt containing coal, charcoal and stone. Cut through (002).
009	Sub– circular pit, with vertical sides. 1.5m long, 1.1m wide and 0.9m + deep. Located in SE area of site. Heavily disturbed by burrows on north and west sides.
010	Sandstone wall 1.6m long and 0.5m wide–Running E–W at the north of the site. Abuts wall [011]. Located in Test Pit 2.
011	Sandstone wall–Running N–S at north of site, abutted by wall [010] and cobbles (012) on western side. Located in Test Pit 2.
012	Cobbled surface abutting walls 010 and 011. Formed from sub–angular and sub–rounded medium to large cobbles. 1.5m long and 0.70m wide. Located in Test Pit 2.
013	Rubble deposit, comprising medium to large sub–rectangular and sub–rounded boulders, located to N of wall 010 and W of cobbles 012. Located in Test Pit 2. Similar to deposit 015. Demolition rubble.
014	Dark brownish black sandy silt containing frequent charcoal, post–medieval bottle glass and modern ceramics. Located to the south of walls 010 and 011 in Test Pit 2.
015	Rubble deposit– 0.6–0.8m thick containing bricks and stones, covering southern area of site– similar to 013. Demolition rubble.
016	Natural alluvial sand– located at depths of 0.50– 1.20 m + beneath existing ground level. Several gravel and sand bars are apparent in it. Natural sands rise towards the north, south and east of site. Directly overlying glacial tills.
017	Dark brown, moderately compact, sandy silt–loam, containing charcoal fragments, pottery and animal bone. Ranges in depth from 0.60–1.2m. Well developed soil profile of variable thickness possibly due to pockets in the underlying alluvial sands.
018	Oval pit located at the eastern end of trench 6, aligned north to south. 1.2m long, 0.90m wide and 0.20m deep.
019	Mid greyish brown loamy sand containing pottery and coal fragments. 0.20m deep. Fill of Pit [018].

CONTEXT	DESCRIPTION
020	Pit– 1.8m + long, 0.63m wide and 0.80m deep. Truncated on the western side by Pit [048]. Eastern most of a series of intercutting pits [020], [048], [054] and [050].
021	Fill of Pit [020]. Dark greyish brown loam, containing charcoal, pottery and animal bone.
022	Circular pit (Same as 115), with concave sides and rounded base. 0.70m long, 0.7m wide and 0.2m deep.
023	Fill of Pit [022/ 115]– Same as 116. Dark, mid–brown sandy silt, containing occasional charcoal fragments and a large percentage of a single, medieval pottery vessel.
024	Oval pit, 1.18m long, 0.90m wide and 0.52m deep. The pit has concave sides and an uneven base.
025	Sub– rectangular pit. Southern end (1.10m wide) tapers towards the Northern end (0.38m wide). 2.87m long, 1.10m wide and 0.60m deep. Connected to pit [056] by channel [067]. The pit retained water during heavy rain despite being cut into sand and gravel (016).
026	Fill of Pit [024]. Greyish brown sandy loam containing charcoal flecks, pottery, animal bone, Fe objects and slag.
027	Dark greyish brown loam containing pottery fragments and coal– up to 1.40m deep located within Trench 6– Same as (030 and 028).
028	Dark brown sandy silt located in Trench 3– containing pottery fragments ranges in depth from 0.6–1.1m. Deeper at W. end of Trench 3. Buried garden soil– same as (030, 027 and 028)
029	Rubble containing brick and sandstone fragments covering entire site. Same as (013 and 015).
030	Dark brown loam deposit containing frequent pottery fragments and animal bone. Ranges in depth from 0.60m to 1.20m. Well developed soil profile containing medieval and post–medieval pottery. Same as (027), (036) and (028).
031	–
032	Sub–rectangular pit, aligned north to south. 1.30m long, 0.63m wide and 0.30m deep. Truncated on the Eastern side by wall [052]
033	Fill of Pit [032]. Dark brown, organic, sandy loam containing occasional animal bone and charcoal fragments.
034	Reddish brown gravelly sand– present in the W end of Tr 1– slopes up towards the S, E and N of the site, overlain by alluvial sand (016) encountered at depths of 54.5m aOD in Tr 5.
035	Rubble, clay, red brick, clinker and ash– 10m + long, 1.8m wide and 2m deep. Possibly filling cut– truncation for bus depot, but extent of cut not seen on E side as truncated by geo–technical pit.
036	Dark brown loam located in E end of Trench 1, 0.25m thick.
037	Oval pit 1.60m long, 0.90m wide and 0.40m deep. Located at the E end of Trench 4.
038	Fill of Pit [037]. Light greyish brown loam containing charcoal and pottery.
039	Geo–technical pit containing rubble and brick backfill.
040	Fill of pit [044] contains oyster shell, iron fragments and animal bone. A band of oyster rich organic material was present in the upper fill.
041	Pit– Oval in Plan, concave sides and square base. 1.50m long, 1.40m wide and 1.20m deep.
042	Fill of Pit [041]. Dark brown sandy silt containing frequent charcoal, animal bone, pottery and oyster shell fragments.

CONTEXT	DESCRIPTION
043	—
044	—
045	—
046	Same as pit [056]
047	Same as (057)
048	Sub—rectangular pit, with concave sides and rounded base. 2.3m long, 0.65m wide and 0.30m deep. Edge on W side very diffuse. Located on north—east area of site. Truncates pit [020] on west side.
049	Fill of Pit [048]. Mid greyish brown loam containing occasional coal fragments.
050	Sub—rectangular pit with concave sides and round base. 1.80m +, 0.62m wide and 0.50m + deep. Possibly re—cut by [054]. Cut by pit [054] and [075].
051	Fill of Pit [050]. Mid brown loam containing charcoal fragments. Very similar in nature to (020), (048) and (055).
052	Sandstone wall, 4.80m + long, 0.50m wide and 0.35m high, aligned north—south in northern area of site (Frontage). Abuts concrete and re—bar foundation for existing building. Constructed from randomly coursed sandstone blocks and bonded with lime mortar containing charcoal flecks. Wall has a rubble core and is faced on the E side. A possible entrance was observed 2.50m from the northern end, where a square sandstone threshold measuring 0.43m x 0.32m x 0.06m was located. Basement wall.
053	Wall foundations— corner of building located in northern area of site (Frontage). Directly overlying natural sand. Composed from unbonded sandstone blocks generally measuring 0.50m x 0.30m x 0.25m. The wall is 2 courses high on the southern side. The wall is truncated on the west side by a foundation cut for a concrete and brick wall of an existing building.
054	Sub—rectangular pit with concave sides and round base. 1.80m long, 1.20m wide and 0.30m deep. Truncates pit [050].
055	Fill of Pit [054]. Greyish brown loam containing coal fragments and pottery.
056	Sub—rectangular pit, 2.24m long, 1.22m wide and ranging from 1.10m to 1.37m deep. There is a channel in the northern face, 0.74m from the bottom, connecting [056] to the S end of [025]. Truncates [059]. A thin clay layer (141) coats the sides of the pit.
057	Upper fill of pit [056] 0.80m deep. Two large stones measuring 0.33m x 0.31m x 0.23m and 0.34m x 0.38m x 0.10m respectively were recovered from the fill of the pit which also contained animal bone, pottery, slag, Fe and 2 burnt oyster shell fragments.
058	Fill of pit [059]. Greyish brown loam containing charcoal, pottery and animal bone. A large stone measuring 0.5m x 0.30m x 0.15m was present in the fill— but no obvious function was apparent. Fill is homogenous and very similar to overlying garden soil suggesting that it was infilled in a single event.
059	Sub—rectangular pit— 1.91m long, 1.46m wide and 2.22m deep. Truncated on the NW side by pit [056] The sides are lined with compact, reddish brown clay (166). There is evidence of a possible timber lining on the E side, represented by a possible beam slot aligned N—S on the base and a vertical deposit (158) on the E edge.
060	Pit— sub—oval in plan with concave sides and a round base. 1.30m long, 0.90m wide and 0.25m deep. Located on the N side of Trench 5.
061	Fill of Pit [060]. Dark brownish black loam containing frequent large pottery fragments and charcoal.
062	Sub circular pit located on the SW edge of Trench 5, aligned N—S. 1.20m long, 1m wide and 0.08m deep. Truncated on W side by pit [125].
063	Fill of Pit [062]. Light grey loam containing 2 pottery fragments.

CONTEXT	DESCRIPTION
064	Pit— Sub—oval in plan. 0.85m long, 0.30m wide and 0.35m deep. Located on NW side of site (Frontage). Truncated by wall (Aligned N—S) on western side. Possible cess pit.
065	Fill of Pit [064]. Mid brown organic deposit containing occasional charcoal fragments— very similar in nature to the fill (033) of Pit [032]. Possibly cess.
067	Sub—surface, sub—circular channel. 0.71m long, 0.32m in diameter and 0.43m deep. Channel cut through natural and deposit (171) placed on top to make circular channel.
068	Sub—circular pit 0.90m long, 0.80m wide and 0.40m deep, extends east beyond the limit of excavation. Cut into garden soil (030) and filled by (069).
069	Fill of Pit [068]. Dark brown loam containing frequent pottery fragments, bottles, iron fragments and a shoe.
070	Dark brownish black loam 0.20m thick containing frequent fish bone fragments, occasional pottery fragments and animal bone. Only visible in E section of excavation. Isolated deposit— but no cut visible.
071	Shallow, circular pit, 0.05m deep, orientated E—W, with gently sloping sides and an un—even base. Located to the S. of Pit [075].
072	Fill of Pit [071]. Mid greyish brown, slightly stony loam containing occasional charcoal fragments and oyster shell.
073	Circular pit— 0.80m in diameter and 0.30m deep. Cut through buried soil (030) and filled with pottery and bottle glass.
074	Fill of Pit [073]. Dark brown loam containing frequent bottle glass and pottery fragments and several stoneware jar fragments.
075	Sub oval/ rectangular cut with vertical sides and rounded base. It is associated with 3 other cuts [077, 087 and [172], two of which appear to have been made after it [077] and [087]. It appears to have been excavated before pit [172] which was cut into its base. Possible cess pit latterly re—used for another function.
076	Rectilinear cut on east and west sides of Pit [075]. Appears to have been cut by [075]. The fill (078) of both features is homogenous suggesting that they were backfilled at the same time.
077	Linear cut with vertical sides and flat base. 4.35m long and 0.5—0.54m wide. Possibly cut by [075] though both back—filled with the same deposit (078) so the relationship is unclear.
078	Fill of [075]. Brownish grey clay silt containing animal bone and pottery. The deposit is more friable at its western end, with an increased amount of sand lenses. The fill appears to be an imported garden soil which has been used to level out the ground after the use of the feature ended.
079	Fill of feature [077]. Brownish grey, firm, clay silt, similar to deposit (078), but contains more sand lenses.
080	Greyish brown clay silt— deposit accumulated within [087] prior to the deposition of (078).
081	Yellowish brown sandy clay silt containing occasional charcoal fragments. Located within cut [087]. Lense probably formed when the pits formed by [075], [076] and [087] were left open— resulting in the in—washing of natural sand.
082	Fill of pit [075]. Brownish grey sandy clay silt, 0.05—0.08m thick containing occasional charcoal fragments and pottery.
083	Brownish orange slightly sandy clay silt containing charcoal, burnt bone and pottery fragments. Lense within pit [075]. Possibly marks a deposit that has been heat affected either through the direct application of burning or through indirect heating.
084	Same as (082).

CONTEXT	DESCRIPTION
085	Greyish brown clay silt with occasional stones containing charcoal fragments. Similar to deposit (080).
086	Brownish grey slightly sandy clay silt. Similar to deposit (082)— slope wash accumulated after the feature went out of use.
087	—
088	Brownish orange slightly sandy clay silt containing charcoal. Lense within pit [075]. Possibly marks a deposit that has been heat affected either through the direct application of burning or through indirect heating. Below (084) and above (089). Heat affected deposit— appears to be the result of dumping rather than in situ burning— same as (083).
089	Fill of Pit [075]. Grey sandy clay silt 0.30m deep. Underlying 088. Contains Fe and chert fragment.
090	Stepped profile of deposit (084) possible impression of structure within deposit (084).
091	Fill of feature [075]. Brownish orange, Slightly sandy, clay silt 0.01–0.02m thick— same as 083 and 088. Contains fragments of burnt bone.
092	Circular cut— possible post-hole 0.26m in diameter and 0.30m deep.
093	Fill of post-hole [092]. Mid—grey sand.
094	Deposit of mixed burnt clay and stone recorded 1.6m below the buried soil (030) and over natural sand and gravel. 0.26m thick and 0.95m wide, extends north beyond the limit of excavation.
095	Light yellowish brown clay silt, containing charcoal fragments. 0.20m thick. Deposit similar to 085 but contains more sand.
096	Sub—circular pit 1.53m deep— visible in southern section of excavation area. Cut through natural sands and gravels— possibly related to bus depot building. Filled with greyish brown loam material.
097	Mid brownish yellow loamy sand deposit containing burnt bone fragments and charcoal. Sub—circular in plan 1.46m long, 1.07m wide and ranging in depth from 0.05– 0.09m. Overlies deposit 113 and underlies buried soil (030).
098	Sub—circular pit, 3.5m in diameter, 3.40m wide and 0.86– 2.10m deep. Steep sides and flat rounded base. Deeper on southern side than north. Pit cuts [137] to the south and the re—cut [157] of Pit [151].
099	Large circular/ oval pit. Extends north beyond the limit of excavation. Cuts natural sand.
100	Fill of pit [099]. Mid greyish brown sand— very similar in nature to the overlying garden soil.
101	Post-hole— Circular in plan 0.36 m in diameter and 0.20m deep.
102	Fill of post-hole [101] Dark greyish brown sand— contains occasional charcoal fragments.
103	Fill of [096]. Mid greyish brown loamy sand containing small and medium sized stones, charcoal, bone fragments and pottery.
104	Basal fill of [098]. Mid dark grey clayey silt containing charcoal fragments, oyster shell, pottery and animal bone fragments. Located beneath deposit 105.
105	Secondary fill of Pit [098]. Dark brown organic, silty sand, 0.60m thick, containing animal bone, charcoal, oyster shell and pottery fragments. Overlying deposit (104). A lense of sand has built up between this deposit and overlying deposit 104 suggesting that the pit may have been left open allowing the accumulation of sand prior to the deposition of 105.
106	Tertiary fill of Pit [098]. Light brown silty sand, 0.50m thick, located above deposit 105 and below 107. Contains occasional charcoal and oyster shell fragments.

CONTEXT	DESCRIPTION
107	Quaternary fill of Pit [098]. Located above deposit 106 and below 108. Dark brownish black mixed organic deposit and sandy silt contains animal bone fragments, oyster shell and charcoal.
108	Upper fill of Pit [098]. Located above deposit 107. 0.23m deep. Lighter in colour than fills 105 and 107 and contains frequent charcoal, animal bone and oyster shell fragments.
109	Square cut located in south—east area of site— very regular. Possible geotechnical pit, cut/ disturbance for bus depot.
110	Basal fill of Pit [109] Mid brown silty loam containing several charcoal fragments.
111	Fill of Pit [109] Yellowish brown gravelly silt— redeposited sands and gravels. Overlies 112.
112	Fill of Pit [109] Greyish brown loamy clay containing occasional charcoal fragments
113	Fill of cut [122]. L—shaped deposit of rocks within a dark greyish brown sandy loam matrix. Located on the W side of the excavation area. The longer axis runs N—S and dog—legs to run E—W at the northern end. 3.99m long, 1.76m wide and 0.11m deep.
114	Upper fill of Pit [125]. Dark grey sandy loam 0.22m thick, containing pottery fragments and bone.
115	Pit cut— Same as 022 from evaluation.
116	Same as (023) from evaluation.
117	Layer of cobbles— recorded in the northern section of the excavation area. The deposit is 0.10m thick and 2.40m wide. They directly overlie buried garden soil (030) and below the topsoil. The cobbles are isolated and do not appear in the western of eastern section, their alignment respects the line of the existing building.
118	Circular pit— 1.20m in diameter and 1.10m deep. Steep sides and flat base.
119	Upper fill of Pit [118]. 0.47m thick mid— brown silty clay containing charcoal and pottery fragments.
120	Secondary fill of Pit [119]— Mid orangey brown sandy gravel.
121	Basal fill of Pit [118]/ Greyish brown clay containing occasional charcoal fragments.
122	L— shaped 'cut' for deposit 113. 3.99m long, 1.76m wide and 0.11m deep.
123	Large sub—square pit with vertical sides and flat base. 2m long, 1.5m wide and 0.80m deep. Aligned E—W and 0.80m deep. Filled by 124 and 135
124	Fill of cut [136]. Dark greyish brown sand containing medium and large sub—rounded stones and lenses of gravel. 0.80m thick.
125	Circular pit. 2.18m long, 2.09m wide and 0.43m deep. Cuts deposit (113) on the N side. 2 stake—holes were located on the northern edge of the feature.
126	Fill of Pit [125]. Dark brownish grey sandy loam with sand lenses ranging in depth from 0.04 to 0.20m deep containing large sub—rounded stones, pottery and slag.
127	Reddish brown clayey silt— heat affected material within Pit [075].
128	Greyish brown sandy clay silt— deposit within the bowl of Pit [075] above deposit 129 and below 127.
129	Fill of [075]. Reddish brown clayey silt containing charcoal, limestone and burnt bone. Located above 140 and below 128. Heat affected/ burnt deposit.
130	Fill of [075]. Greyish brown sandy silt containing charcoal flecks. Overlies 146 and underlies deposit 189.
131	Fill of [075]. Mottled grey/ yellowish orange sandy silty clay containing charcoal fragments. Above deposit 143 and beneath 133. 0.1 to 0.2m thick.

CONTEXT	DESCRIPTION
132	Fill of [075]. Yellowish brown sandy clay silt containing occasional small charcoal fragments. Overlies 133 and underlies 085.
133	Same as 131
134	Basal fill of Pit [041]. Dark brown sandy silt with sand lense. Contains angular stones and lenses of sand.
135	Primary fill of pit [123] mottled orange brown/ greyish brown sand with charcoal flecks.
136	Re-cut of Pit cut 123. Forms a bowl shaped cut— probably later bowl shaped pit above pit cut [123].
137	Oval pit— aligned NW—SE. Cut on northern side by Pit [098] and on the southern side by [187].
138	Upper fill of Pit [137]. Mid brown sandy loam containing occasional small charcoal flecks. 0.20m thick.
139	Dark orange to black spread of burnt sand. 0.40m in diameter and 0.03m deep. Heat affected sand located between pits 123 and 118.
140	Fill of Pit [075]. Brownish grey silty clay containing charcoal and coal fragments. Deposit within the base of bowl [144].
141	Dark brownish grey sandy clay. 0.30 m thick. Located on the base of Pit 142/ 056.
142	Fill of Pit [056]. Mid yellowish grey loamy sand containing a single pottery fragment.
143	Fill of Pit 075 and 144. Mid brownish grey sandy silty clay containing occasional small charcoal fragments. Forms matrix around stones [145].
144	Stone lining— sub—circular in plan with steep sides. Located towards the base of [075], may sit within a cut.
145	Stones lining pit 144. Possibly structural. 1.5m long, 1m wide and up to 0.60m deep.
146	Mid brown silty clay containing charcoal and pottery fragments. Marking the base of [144]. Forms the main fill of Pit [172]. Directly overlies the accumulated slopewash on the pits sides and base.
147	Square cut with vertical sides and flat base. 2m + long, 1.7m wide and 1.4m deep. (Same as 054 from evaluation) Contains 3 fills (148, 149 and 150).
148	Upper fill of Pit [147]. Dark greyish brown sand containing small charcoal flecks.
149	Mottled dark brown/yellow clayey sand. Contains occasional animal bone fragments and charcoal flecks. Secondary fill of Pit [147] below 148 and above 150, 1.10m thick.
150	Primary fill of [147]. Dark yellowish brown sandy clay containing occasional charcoal flecks and animal bone fragments, 0.10m thick.
151	Sub—rectangular pit with steep sides and flat base. 2.10m long, 2.08m wide and 2.10m deep. Cut by pit [157] and possibly pit [098]. Only seen in South facing section as recut [157].
152	Sub—rectangular pit measuring 2m long, 1.4m wide and 0.85m deep (Recorded as pit [020] during evaluation). Vertical sides and rounded base with a small bowl measuring 0.5m in diameter. Truncated on W side by Pit [147].
153	Fill of Pit [152] (0.52m deep). Dark greyish brown sand containing frequent charcoal flecks and occasional stones. Very similar in nature to overlying garden soil. Also similar to the upper fill (148) in pit 147 suggesting that they may have been backfilled at the same time.
154	Primary fill of Pit [152]. Yellowish grey sand 0.14m thick. Possible slumping from the initial cut located on the western edge of the feature and peters out towards the eastern side where it appears as a lense.

CONTEXT	DESCRIPTION
155	Fill of Pit [137]. Located above deposit 156 and beneath deposit 138. Comprises reddish brown sandy clay containing occasional small charcoal flecks. Heat affected clay lense— dumped material rather than in situ burning.
156	Tertiary fill of Pit [137]. Light brown sandy silt containing occasional small charcoal flecks. Slightly lighter in colour than overlying soil (155) and not such a high charcoal content. Slopes towards the south—and appears to be dumped/ infilled from N side.
157	Pit— re—cut of 151. Cut on the western side by 098. 2.10m long N—S, 2.10m long E—W and approximately 2.10m deep. Filled by 168, 169 and 170.
158	Fill of [059]. Dark brown, compact organic deposit located on the eastern side of Pit [059]. Overlies 190 and contains several pottery fragments.
159	Cut of Pit.
160	Three round—wood fragments located within deposit 163. Possibly the remains of lining around the edge of Pit [075].
161	Fill of circular channel to the south of Pit [025]. Dark greyish brown loamy sand containing small stones. 0.71m long, 0.32m wide and 0.30m deep.
162	Charcoal rich greyish black, clayey silt deposit, situated on the western bench between the base of Pit [075] and top of [172].
163	Fill of Pit [075]. Grey sandy silt deposit located around the western periphery of Pit [075]. Overlies the sandy slopewash which covers the western pit edge. Possibly slopewash that has accumulated when the pit was open— covering the lining (160).
164	Yellow sand lense located on the western edge of pit [075]. Probably slopewash.
165	—
166	Reddish brown clay lining pit [059] on E and W sides. The clay on the E side is 0.85m high and 0.15m thick, located 0.80m down from the top of the pit. The clay on the W side is 0.15m thick and 0.90m high and located 0.40m down from the top of the pit. Deposit 158 abuts the lining on the eastern side.
167	Fill of Pit [151], sterile mid—brown silty sand 0.18m thick, cut by [157].
168	Primary fill of Pit [157]. Mid brown silty sand, 0.20—0.30m deep. Contains pottery fragments.
169	Secondary fill of Pit [157]. Light brownish yellow sand 1.20m deep, containing occasional small stones located between fills 168 and 170.
170	Tertiary fill of Pit [157]. Mid— dark brownish grey sandy silt containing occasional charcoal fragments. Truncated on western side by Pit [098].
171	Upper fill of Pit [067]. Dark greyish brown sandy clay loam 0.13m thick.
172	Sub—rectangular pit, 1.75m long, 1.5m wide and 1.2m deep. The pit appears to have been excavated after the initial cutting of Pit [075], but does not appear to be a re—cut after [075] was infilled. The two pits appear to have been cut simultaneously.
173	Primary fill of Pit [172]. Greyish brown clayey sand 0.1—0.25m deep containing manganese and charcoal fragments. A lense of sand extends from the eastern edge and into the bowl of pit [172]. The deposit may represent slopewash or perhaps the accumulation of sands brought about by the presence of water/ liquid in the pit.
174	Isolated sand deposit 1.40m long, 1m wide and 0.03m deep located to the north of Pit [125] and truncated by it. Overlain by cobbled surface (113). Overlies 3 stake—holes (178, 176 and 177).
175	Yellowish brown sand deposit within pit [059]. Possibly slumping of natural sand following installation of clay lining (166).
176	Stake—hole— 0.05m in diameter located on the northern edge of Pit [125] beneath sand deposit (174). Filled with a mid brown sandy loam deposit containing occasional charcoal fragments.

CONTEXT	DESCRIPTION
177	Stake–hole– 0.08m in diameter located on the northern edge of pit [125] to the west of stake–hole 176 and beneath sand deposit (174).
178	Stake–hole– 0.10m in diameter located between pits 125 and 059 possibly related to stake–holes 176 and 177. Filled with a mid brown sandy loam containing occasional charcoal fragments.
179	Primary fill of Pit [098]. Only visible in the Eastern section. Mid– dark brown sandy silt containing occasional charcoal fragments and frequent large pottery sherds. The fill is similar to (180) in colour and consistency.
180	Fill of 098. Mid dark–brown sandy silt containing occasional charcoal fragments, bone and abundant pottery. Second lowest fill of eastern section through Pit [098].
181	Pit– aligned E–W, only seen in eastern section of excavation area. 1.5m wide and 0.45m deep. Gently sloping sides and flat base. Full extent of pit unseen .
182	Fill of pit [182]. Dark greyish black clayey silt containing fish and animal bone fragments.
183	Pit– Only seen in the eastern section of the excavation area. Length not established as extends beyond limit of excavation. 1.27m wide and 0.66m deep. Located to the north of Pit 181. Cut into garden soil (030).
184	Fill of Pit [183]. Dark greyish black sandy silt containing occasional charcoal fragments.
185	Secondary fill of Pit [137]. Compact mid brown loam, containing occasional charcoal fragments. Slopes from N–S suggesting that it may have been tipped in from the northern side.
186	Basal fill of Pit [137]. Dark brown loam containing occasional charcoal fragments.
187	Pit– Sub–circular in plan 1.48m long and 1.26m wide, with shallow sides and concave base. Truncated on the northern side by pit [137] and filled by 188.
188	Fill of Pit [187]. Greyish brown sandy loam containing occasional small charcoal and burnt bone fragments. Truncated by pit [137].
189	Fill of Pit [075]. Light yellowish grey sandy clay silt containing occasional charcoal flecks. Located between deposits 143 and 146. Possible slope wash.
190	Secondary fill of Pit [059]. Overlies 191 and underlies 058. Orange–red sandy loam containing occasional sub–rounded stones.
191	Basal fill of Pit [059]. Bluish grey clay deposit, 0.10m thick, containing frequent charcoal fragments.
200	–
201	Greyish brown loam, 0.75m thick. Located in S facing section of service Trench 1. Overlies midden deposit (202) and contains coal, oyster shell and pottery fragments.
202	Dark brownish black, midden deposit, 0.20m thick, located in the south facing section of service Trench 1. Underlies deposit (201) and overlies deposit (204). Contains frequent oyster shell, animal bone and occasional pottery fragments.
203	Rubble deposit, 0.10m thick, located beneath midden material (202)– visible in the south facing section of Trench 1.
204	Greyish brown loam deposit 0.20m thick, containing occasional animal bone and oyster shell. Visible at the west end of Trench 1, south facing section.
205	Greyish brown sandy loam, 0.20m thick, similar in composition to deposits 201 and 204. Visible in the west end of Trench 1, south facing section.
206	Dark brown loam containing occasional oyster shell, animal bone, a tile and charcoal. Visible in the north facing section of Trench 1, possibly the same as deposit (202). Midden deposit

CONTEXT	DESCRIPTION
207	Greyish brown loam, 1m thick, located 11m from the west end of Trench 1. Contains oyster shell, pottery and charcoal. Truncated on the East and western sides by service pipes.
208	Greyish brown loam containing pottery and oyster shell. Visible in the south facing section in centre of Trench 1, Similar to deposit (206). Contains pottery, rubble and shell.
209	Rubble deposit, 0.25m comprising sub angular stones. Located beneath deposit 208 in Trench 1.
210	Dark greyish brown organic sandy clay located 7–10m from the west end of Trench 1. 1.2m thick. Overlies deposit (206). Contains sand lenses, frequent charcoal, occasional animal bone and oyster shell.
211	Dark grey, stony sandy silt. 0.65m thick. Located in the east facing section of Trench 2. Contains frequent brick and sandstone fragments.
212	Dark brownish grey, stony sandy silt, deposit containing bone, oyster shell and pottery fragments. 0.90m thick. Truncated by service trench in west facing section.

Appendix 1.2 Photographic register

PHOTO	DIRECTION	DESCRIPTION
297	E	Pre-excavation shot
298	SE	Pre-excavation shot
299	SE	Pre-excavation shot
300	S	General shot
301	S	General shot
302	S	General shot
303	S	General shot – NE Corner of excavation area
304	S	General shot – NE Corner of excavation area
305	N	Pit [068]
306	W	Pit [068]
307	S	Pit [068] half sectioned
308	E	Pit [068] half sectioned
309	W	Pit [068] half sectioned
310	W	Pre-ex shot of two pits
311	W	Pre-ex shot of linear feature (east half)
312	W	Pre-ex shot of linear feature (west half)
313	W	Pre-ex shot of linear feature (whole)
314	W	Post-ex shot of two pits [071] (072)
315	S	Post-ex shot of section in northern pit [071](072)
316	W	Pre-ex shot of pit
317	S	Working shot
318	W	Mid-ex pits [075]–[077], (078) and (079) deposits
319	E	Mid-ex pits [075]–[077], (078) and (079) deposits
320	S	N facing section pit [073]
321	W	Half section pit [073]
322	S	Post-ex pit [073]
323	S	General site shot – pre-ex
324	SE	General site shot – pre-ex
325	SE	General working shot – NE corner
326	W	W. section – showing disturbance in ramp area
327	E	Pits [075]–[077], (078) removed, (080) revealed
328	W	Pits [075]–[077], (078) removed, (080) revealed
329	SE	Pits [075]–[077], (078) removed, (080) revealed
330	E	Pits [075]–[077], (080) removed, (085) revealed
331	W	Pits [075]–[077], (080) removed, (085) revealed
332	SE	Pits [075]–[077], (080) removed, (085) revealed
333	SE	Pits [075]–[077], (085) removed, (081) revealed
334	SE	Pits [075]–[077], (081) removed, (082) revealed
335	E	N Area of site – following clean, pre-ex
336	E	N Area of site – following clean, pre-ex
337	S	N Area of site – following clean, pre-ex
338	NW	N Area of site – following clean, pre-ex
339	N	Detail in situ burning N area of site, pre-ex
340	N	Detail in situ burning N area of site, pre-ex
341	E	N area, Pits [075]/[076]/[077]/[087], shows (083), (086), (082), mid-ex
342	W	N area, Pits [075]/[076]/[077]/[087], shows (083), (086), (082), mid-ex
343	NE	N area, Pits [075]/[076]/[077]/[087], shows (083), (086), (082), mid-ex
344	W	N area, pits [075]/[087]. Detail of (083)
345	E	N area, pits [075]/[087]. Detail of (083)
346	SE	N area, pits [075]–[077]/[087] N-facing section
347	S	N area, pits [075]–[077]/[087] N-facing section (detail W)
348	S	N area, pits [075]–[077]/[087] N-facing section (detail E)
349	N	Pre-ex shot of SE area of excavation
350	S	Pre-ex shot of SE area of excavation
351	SW	Pre-ex shot of SE area of excavation (oblique)
352	E	Pits [075]–[077]/[087]
353	W	Pits [075]–[077]/[087]
354	SE	Pits [075]–[077]/[087]
355	SE	Pits [075]–[077]/[087], (083) removed (mid-ex)
356	E	Pit [071]
357	S	Pit [071] post-ex
358	E	Pits [075]–[077]/[087], (082) removed, (088) & (089) visible (mid-ex E)
359	E	Pits [075]–[077]/[087], (089) removed, [090] 'steps' in (084)
360	SE	Pits [075]–[077]/[087] mid-ex, N-facing section
361	S	Pits [075]–[077]/[087] mid-ex, N-facing section
362	S	Pits [075]–[077]/[087] mid-ex, N-facing section
363	SE	Pits [075]–[077]/[087] mid-ex, N-facing section (detail)
364	W	Pits [075]–[077]/[087] mid-ex, N-facing section
365	S	Pre-ex shot of SW area of excavation
366	SW	Pre-ex shot of SW area of excavation (oblique)
367	W	Pre-ex shot of SW area of excavation
368	W	Shot of truncation via Geo-Tech pit
369	S	General site shot – pre-ex

PHOTO	DIRECTION	DESCRIPTION	PHOTO	DIRECTION	DESCRIPTION
370	SE	Working shot – next to pit [024]	408	W	Close up of pit and iron stained rock
371	NW	Working shot – cleaning NW corner	409	E	Section of pit [096] showing fill (103)
372	NE	Working shot – of pit [075]	410	S	Overview of pit and S–section [096]
373	SW	Working shot – pit [075] in foreground	411	E	E–section of pit [096] and fill (103)
374	S	Working shot E side of site	412	S	Close up of pit [096]
375	N	Detail of post hole cote [092]	413	W	Pit [075], south half excavated, mid–ex
376	N	Detail of post hole cote [092] – S facing section	414	SE	Pit [075], south half excavated, mid–ex
377	W	Location shot of post hole [092]	415	E	Section of backfill from bus depot [109](110)(111)(112)
378	N	West view of layer (094)	416	N	N–section of [097]
379	N	Detail of layer (094)	417	N	N–section of [097]
380	W	Detail of E–facing section of layer (094)	418	SE	General site shot
381	E	Detail of W–facing section of layer (094)	419	NE	Working shot
382	W	Overview of middle W–side showing (044), stones, pits	420	S	General site shot
383	W	Overview of middle W–side showing (044), stones, pits	421	E	Pre–ex shot of pit SE corner
384	S	Overview of SW area showing (044), stones, pits	422	–	VOID
385	N	Overview of SW area showing (044), stones, pits	423	N	Working shot SE corner
386	E	Overview of SW area showing (044), stones, pits	424	N	Pre–ex shot of pit SE corner
387	W	Overview of SW area showing (044), stones, pits	425	E	Pre–ex shot of pit SE corner and burnt patch
388	W	Overview of surface (044)	426	E	Pre–ex shot of pit SE corner and burnt patch
389	S	Overview of surface (044)	427	N	Pre–ex shot of pit SE corner and burnt patch
390	W	View of stones near SW corner	428	N	Pre–ex shot burnt deposit SE corner
391	N	View of stones near SW corner	429	W	Pre–ex shot features SE corner
392	S	Pit [096] and S bulk	430	S	Deposit (113) close up
393	S	Detail of pit [096]	431	W	(114) Detail
394	N	S–facing section of layer (094)	432	E	(113) overview of 'L–shaped' rocks
395	N	S–facing section of layer (094)	433	E	(114) overview of rock jumble
396	W	Pit [075], mid–ex of south half	434	W	Overview of (113) and (114) rock formations
397	S	North facing section of quad of pit [098]	435	N	View of PH cut [101]
398	E	West facing section of quad of pit [098]	436	N	View of PH cut [101]
399	N	General shot of pit [098] 1st quad removed	437	E	Pre–ex of intercutting pits/features at north of site
400	N	View of pit cut [099]	438	N	Post–ex of PH [101]
401	N	View of pit cut [099], S–facing section	439	N	Post–ex of PH [101] and [099]
402	N	View of pit cut [099], location	440	N	Pre–ex shot of [115]
403	W	Detail of PH cote [101]	441	W	E–facing section of {115}
404	W	Location shot of PH cut [101]	442	W	E–facing section of {115}
405	S	Close up of pit [096]	443	NW	S–facing section of excavation area showing cobble layer (117)
406	S	Overview of pit [096]	444	N	S–facing section of excavation area showing cobble layer (117)
407	W	Close up of pit and iron stained rock	445	N	S–facing section of excavation area showing cobble layer (117)

PHOTO	DIRECTION	DESCRIPTION
446	NE	S-facing section of excavation area showing cobble layer (117)
447	S	S section of slot through rock feature (113)
448	N	Overview of rock feature (113) and slot
449	E	Overview of rock feature (113) and slot
450	E	Close up of slot through (113)
451	W	Overview of (114) before excavation
452	E	W-facing section of pit [118](119)(120)(121)
453	E	W-facing section of pit [118](119)(120)(121)
454	W	View of upper fill stones (124) in pit cut [123]
455	NW	General site shot
456	W	Post-ex shot of pit [115] (Med 13thC)
457	W	Location shot of pit [115] showing [099] and [101] in background
458	W	Pit [075], mid-ex (N half)
459	W	Pit [125] overview
460	W	Close up of excavated half of [125]
461	S	S section of pit [125] showing [123] in foreground
462	E	Overview of pit [125] cutting rock feature [123]
463	E	Overview of pit [125] cutting rock feature [123]
464	W	Pit [075], mid-ex, SE half
465	E	Working shot pit [075]
466	E	Working shot pit [075]
467	W	Working shot
467a	E	Working shot
468	W	Working shot
469	W	Section of pit [041] (E facing)
470	W	General shot of pit [041]
471	E	Pit [025] fully excavated
472	E	Pit [025] fully excavated
473	S	Pit [025] close up
474	NW	Pit [025] overview
474b	—	Working shot
474c	—	Working shot
475	W	Pit [075], mid-ex, SW quadrant (083), (132), (133) visible
476	E	Pit [075], mid-ex, eastern half (089) visible
477	W	View of pit cut [123]
478	W	E-facing section of cut [123]
479	N	View of pit cut [123] (1/2 section)
480	N	View of pit cut [123] (1/2 section)

PHOTO	DIRECTION	DESCRIPTION
481	E	Pre-ex of pit [137]
482	N	Pre-ex of pit [137]
483	NE	Pit [075], mid-ex
484	SE	Pit [075], mid-ex
485	SW	Pit [075], mid-ex
487	N	1/4 section of cut [136] in pit [123]
488	W	Post-ex of pit cut [136]
489	W	Overview of pit [056]
490	E	Overview of pit [056]
491	S	S section of pit [056] showing fill (057)
492	W	Post-ex of cuts [123] and [136]
493	E	Post-ex of cuts [123] and [136]
494	N	Spread of burnt sand (139)
495	N	Working shot — S. side
496	N	Working shot
497	N	Working shot
498	S	Working shot — N. side
499	S	Working shot — S. side
500	W	Working shot — N. side
501	SE	Pit [075], mid-ex, (129) removed from bowl
502	SE	Pit [075], mid-ex, (140) removed from bowl
503	NE	Pit [075], mid-ex, (140) removed from bowl (plan)
504	SE	Pit [075], mid-ex (143) removed, (146) exposed
505	NW	Pit [075], mid-ex (143) removed, (146) exposed
506	N	View of fill (150) at base of pit [147]
507	E	Mid-ex shot of pit [137]
508	N	Mid-ex shot of pit [137]
509	N	Mid-ex shot pit [151]
510	N	S-facing section of cut [147]
511	N	S-facing section of cut [147]
512	E	Plan of cut [147]
513	E	Pit cut [147] continued to L.O.E.
514	N	Mid-ex shot Pit [059]
515	N	Mid-ex shot Pit [059]
516	E	Working shot
517	E	Working shot
518	NE	Working shot
519	N	S. facing section of pit cut [152]

PHOTO	DIRECTION	DESCRIPTION
520	N	general shot of pit [152]
521	W	general shot of pit [152]
522	S	general shot of pit [152]
523	—	VOID
524	N	Mid–ex shot, pit [059] showing relation with [056]
525	S	Pits [075]/[147]/[152] general shot
526	SW	Pits [075]/[147]/[152] general shot
527	W	Pits [075]/[147]/[152] general shot
528	N	Pits [075]/[147]/[152] general shot
529	N	General shot
530	W	General shot
531	W	General shot
532	N	General shot
533	N	General shot
534	S	General shot
535	S	General shot
536	E	General shot
537	N	General shot
538	SE	General shot
539	SE	General shot
540	E	General shot
541	E	General shot
542	E	General shot
543	N	General shot
544	N	General shot
545	W	General shot
546	S	General shot
547	S	General shot
548	E	General shot
549	E	General shot
550	S	General shot
551	N	General shot
552	N	General shot
553	E	General shot
554	E	General shot
555	E	General shot
556	N	General shot
557	N	General shot

PHOTO	DIRECTION	DESCRIPTION
558	W	Pit [075], E–facing section
559	W	Pit [075], E–facing section
560	NW	Pit [075], E–facing section
561	N	Working shot
562	N	Pit [058] plan of base/ (158)
563	E	Pit [058] plan of base/ (158)
564	W	Pit [058] plan of base/ (158)
565	S	Pit [058] plan of base/ (158)
566	S	View of channel [067] from pit [025] to pit [056]
567	S	View of pit [056] and [058]
568	S	View of channel [067], pit [056], pit [058]
569	W	Pit [056] showing clay on walls
570	E	Pit [056] and fill of [058] in SE corner
571	N	Pit [056] and channel [067]
572	N	Channel [067] from Pit [056] to pit [025]
573	S	Pit [137]
574	S	Pit [075], (160), (162)–(164) visible
575	E	Pit [075], (162) charcoal patch
576	S	Pit [075], N–facing section
577	SW	Pit [075], timber (160) in (163)
578	W	Pit [075], timber (160) in (163)
579	E	Overview of channel [067]
580	N	N–section of channel [067]
581	S	Pit [125] and [062]
582	S	Pit [125] and [062]
583	W	East facing section pit [098] post machining
584	W	East facing section pit [137] post machining
585	W	East facing section pit [137] post machining
586	S	Cobbled surface (113) and sand (174)
587	S	Cobbled surface (113) and sand (174) detail
588	W	Pit [125] and sand (174)
589	N	Pit [125] and sand (174)
590	N	Sand (174) and stake holes 176–178
591	N	Stake–holes 178 post–ex and 176 and 177 pre–ex
592	NW	Stake–holes 176–178 and pit [125] and sand (174)
593	W	Pit [125] and stake–holes 176–178
594	NE	Stake–holes 176–178 detail
595a	N	North section shot (west to east)

PHOTO	DIRECTION	DESCRIPTION
595b	N	North section shot (west to east)
595c	N	North section shot (west to east)
595d	N	North section shot (west to east)
595e	N	North section shot (west to east)
596	E	East section shot
597a	S	South section shot (east to west)
597b	S	South section shot (east to west)
597c	S	South section shot (east to west)
597d	S	South section shot (east to west)
597e	S	South section shot (east to west)
598a	W	West section shot (south to north)
598b	W	West section shot (south to north)
598c	W	West section shot (south to north)
598d	W	West section shot (south to north)
598e	W	West section shot (south to north)
599a	E	General shot of east section
599b	E	General shot of east section
600	S	General shot of south section
601a	N	General shot of north section
601b	N	General shot of north section
601c	N	General shot of north section
602a	W	General shot of west section
602b	W	General shot of west section
603	NE	General site shot
604	SE	General site shot
605	N	General site shot
606	W	General site shot
607	N	General site shot
608	W	General site shot
609	SE	General site shot
610	SE	General site shot
611	S	Post ex of [125] pit and stake holes
612	W	Post ex of [125] pit and stake holes
613	W	Post ex of [125] pit and stake holes
614	N	Pits [076]/[172]
615	E	Pits [076]/[172]
616	NE	Pits [076]/[172]
617	SW	Pits [076]/[172]

PHOTO	DIRECTION	DESCRIPTION
618	W	Pits [076]/[172] (showing (160) timbers)
619	W	Pits [076]/[172] (showing (160) timbers)
620	W	Pits [076]/[172] (showing (160) timbers)
621	SW	Pits [076]/[172]
622	SW	Pits [076]/[172]
623	W	Pits [076]/[172] (detail of (160) timbers)
624	E	West facing section of pit [181]
625	E	West facing section of pit [183]
626	W	East facing section of pit [187] (post-ex)
627	N	Post-ex shot of pit [187]
628	N	Post-ex shot of pit [059]
629	E	Overview of pit [109] and stake hole
630	E	Overview of pit [109] and stake hole
631	E	Overview of pit [109] and stake hole
632	S	Overview of pit [109] and stake hole
633	N	Post-ex shot of pit [059]
634	N	Post-ex shot of pit [059]
635	W	General Trench shot— Trench 1 (Monitoring)
636	N	S facing section— Trench 1, west— end
637	N	South facing section service Trench 1— West end
638	W	General shot of service Trench 1 — western end
639	W	N facing section, West end of Trench 1
640	N	Service trench 1 south facing section
641	S	Service trench 1 south facing section
642	N	Service trench 1 south facing section
643	N	Service trench 1 south facing section (W-E)
644	N	Service trench 1 south facing section (W-E)
645	N	Service trench 1 south facing section (W-E)
646	N	Service trench 1 south facing section (W-E)
647	N	Service trench 1 south facing section (W-E)
648	N	Service trench 1 south facing section (W-E)
649	N	Service trench 1 south facing section (W-E)
650	N	Service trench 1 south facing section (W-E)
651	N	Service trench 1 south facing section (W-E)
652	N	Service trench 1 south facing section (W-E)
653	E	Eastern end of trench 1— Working shot
654	S	SE corner of Trench 1 with intended service location
655	W	General trench shot

PHOTO	DIRECTION	DESCRIPTION
656	N	Trench 1 showing (010) after sample taken
657	N	Trench 1 showing (010) after sample taken
658	N	Trench 1 at eastern end
659	W	General shot showing new pipe location
660	E	Eastern end of trench 1 before final machining
661	NE	Eastern end of trench 1 after final machining
662	E	General trench shot
663	S	View of site entrance and Square
664	S	View of site entrance, fountain and Square
665	SW	View of site entrance
666	NW	Working shot of Scott and Pat digging Trench 2
667	W	Services in Trench 2
668	W	View of modern ditch in section Trench 2
669	S	View of Trench 2 extending south
670	W	Section of Trench 2
671	W	Sand, ditch and plastic pipe
672	W	Plastic pipe crossing trench
673	W	View of modern ditch and natural sand
674	E	View of deposit (012)
675	E	View of deposit (011)
676	N	Trench 2 and manhole
677	N	Trench 2 and Burgh Hall
678	—	Gravel
679	N	General view of trench 2
680	N	Van and entrance to Linlithgow Palace
681	W	East facing section of Trench 2
682	SE	Pat troweling

PHOTO	DIRECTION	DESCRIPTION
683	W	East facing section (012) – thin layer under modern pipecut
684	S	Modern pipe cutting western edge of trench 2
685	E	View of services running east – west trench 2A
686	E	View of Brick inspection chamber – trench 2A
687	—	Overhead view of brick inspection chamber
688	E	West facing section of trench 2A
689	—	View brick from inspection chamber
690	S	Pre–excavation view of trench 2B
691	S	View of stones from deposit (012)
692	W	East facing section showing (012) truncated to the south
693	W	Southern end of (012) showing truncation
694	E	Trench 2B prior to manhole being inserted
695	SE	West facing section trench 2B
696	S	Working shot southern end of Trench 2B
697	E	Working shot southern end of Trench 2B
698	S	Working shot southern end of Trench 2B
699	E	West facing section – modern made ground overlying sterile mid brown sand
700	E	West facing section – modern brick structure
701	S	View of trench 2B southern extent
702	S	General view of site
703	E	West facing section modern deposit overlying natural yellow sand
704	E	West Facing section mid brown deposit overlying natural yellow sand
705	E	Modern pipe and made ground overlying natural yellow sand
706	NE	View of trench 2B – north end of southern extension
707	NE	View of trench 2B – north end of southern extension
708	S	View of trench 2B – north end of southern extension

Appendix 1.3 Sample register

SAMPLE	CONTEXT	QTY (L)	DESCRIPTION
001	005	–	Fill of rubbish pit
002	017	40	Buried soil—Trench 2
003	026	20	Fill of Pit [025]
004	033	20	Fill of Pit [032]
005	038	20	Fill of Pit [037]
006	042	20	Fill of Pit [024]
007	040	20	Fill of Pit [041]
008	047	20	Fill of Pit [046]
009	023	20	Fill of Pit [022]
010	051	20	Fill of Pit [050]
011	049	20	Fill of Pit [048]
012	021	20	Fill of Pit [020] (Same as 153)
013	059	20	Fill of Pit [058]
014	061	20	Fill of Pit [060]
015	065	30	Fill of Pit [064]
016	070	30	Midden deposit
017	072	30	Fill of Pit [071]
018	078	30	Fill of Pit [075]
019	079	30	Fill of Pit [077]
020	080	30	Brown silty clay below (078)
021	085	30	Grey clay silt between 080/ 081
022	081	30	Yellow sand below (085) and above (082).
023	082	30	Grey clay silt between 081/ 083
024	086	30	Brown silty clay below (081) and above (083)
025	083	30	Brownish orange silty clay in pits [087]/ [075]
026	088	10	Second layer of burnt deposit in Pit [075]
027	089	40	Grey clay silt, fill of [075]
028	097	22	Clay deposit
029	093	2	Fill of post-hole
030	094	2	Burnt layer
031	100	5	Upper fill of cut [099]
032	103	30	Fill of Pit [096]
033	104	30	Fill of Pit [098]
034	105	50	Fill of Pit [098]
035	106	2	Fill of Pit [098]
036	107	30	Fill of Pit [098]
037	108	32	Fill of Pit [098]

SAMPLE	CONTEXT	QTY (L)	DESCRIPTION
038	–	–	Void
039	110	30	Fill of Pit [109]
040	112	30	Fill of Pit [109]
041	102	10	Fill of Post-hole [101]
042	116	10	Fill of Pit [115]
043	119	30	Upper fill of Pit [118]
044	121	30	Basal fill of Pit [118]
045	124	20	Upper fill of Pit [123]
046	114	30	Upper fill of Pit [125]
047	134	10	Basal fill of Pit [041]
048	135	20	Lower fill of Pit [123]
049	138	30	Upper fill of Pit [137]
050	128	30	Pit [075] fill in bowl
051	129	20	Pit [075] fill in bowl
052	140	10	Pit [075] fill in bowl
053	143	30	Pit [075] fill in bowl
054	149	30	Fill of Pit [147]
055	150	10	Primary fill of Pit [147]
056	155	30	Secondary fill of Pit [137]
057	156	20	Tertiary fill of Pit [137]
058	57	30	Upper fill of [056]
059	141	30	Secondary fill of Pit [056]
060	142	11	Primary fill of pit [056]
061	58	30	Fill of Pit [059]
062	158	6	Fill of Pit [059]
063	161	10	Primary fill of channel [067]
064	171	10	Secondary fill of channel [067]
065	167	20	Basal fill of Pit [151]
066	168	30	Primary fill of Pit [157]
067	176	2	Fill of stakehole (176)
068	177	2	Fill of stakehole (177)
069	174	10	Deposit 174
070	63	10	Fill of Pit [062]
071	180	10	Fill of Pit [098]
072	158	30	Charcoal rich fill of Pit [059]
073	166	30	Clay lining of Pit [059]
074	146	40	Charcoal rich deposit— Fill of [172]
075	162	10	Clay within Pit [172]

SAMPLE	CONTEXT	QTY (L)	DESCRIPTION
076	182	10	Fill of Pit [181]
077	155	10	Fill of Pit [137]
078	186	10	Primary fill of Pit [137]
079	184	10	Fill of Pit [183] in E section
080	188	20	Fill of Pit [187] in E section
081	30	10	Upper deposit of topsoil 1.20–0.90m
082	30	10	Garden soil 0.90m–0.60m
083	30	10	Garden soil 0.60m–0.30m
084	30	10	Lowest layer of garden soil 0.30m–0.0m
085	190	20	Basal fill of Pit [059]
086	160	10	Timber and silt

APPENDIX 2 ENVIRONMENTAL ASSESSMENT TABLES

TABLE 1 Retent sample results

CONTEXT	SAMPLE	FEATURE	SAMPLE VOL (L)	BURNT BONE		UNBURNT BONE		SHELL	CHARRED PLANT	CHARCOAL		MATERIAL AVAILABLE FOR AMS DATING	CINDERS	COAL	COMMENTS
				MAMMAL	FISH	MAMMAL	FISH	MARINE		QTY	MAX SIZE (CM)				
063	70	Fill of Pit [062]	10	++	-	-	-	-	-	-	-	-	-	-	Charcoal oak
080	20	Fill of [087]	30	++	-	-	-	-	-	+	1.3	Charcoal +	+++	-	Charcoal oak and non-oak
094	30	Deposit of mixed burnt clay	5	-	-	-	-	-	-	-	-	-	-	-	Sterile
104	33	Basal fill of [098]	30	++	+	+++	+	+++	-	-	-	-	+++	++	-
108	37	Upper fill of Pit [098]	30	++	-	++++	+	-	-	-	-	-	+++	++	-
116	42	Fill of Pit [022/ 115]	10	++	-	-	-	-	-	-	-	-	-	-	-
121	44	Basal fill of Pit [118]	30	+	-	-	-	-	-	++	2	Charcoal+	-	-	Charcoal oak and non-oak
134	47	Basal fill of Pit [041]	10	+	-	+++	-	+	-	-	-	-	++	+	-
135	48	Primary fill of Pit [123]	30	+	-	-	-	-	-	++	3	Charcoal+	-	-	Charcoal oak and non-oak
140	52	Basal fill of Pit [075]	10	+	-	+	-	-	+nutshell	++	1.2	Charcoal+ and nutshell +	+++	++	Charcoal oak and non-oak
141	59	Basal fill of Pit [142/ 056]	30	+++	-	++	+	+	-	-	-	-	++	+	-
142	60	Fill of Pit [056]	20	+	-	++	-	-	-	-	-	-	+	++++	-
146	74	Fill of Pit [172]	30	++	-	+	-	-	+ nutshell	+++	1.5	Charcoal +	-	-	Charcoal oak
149	54	Secondary fill of Pit [147]	30	-	-	+++	-	-	-	+++	2	Charcoal +	-	-	Charcoal oak
161	63	Fill of Channel [067]	10	+	-	+	-	-	+nutshell	+	<1	-	++	++++	-
167	65	Fill of Pit [151]	20	-	-	-	-	-	-	-	-	-	-	-	Charcoal oak
168	66	Primary fill of Pit [157]	30	+	-	-	-	-	-	+	1.4	Charcoal +	-	+	Charcoal oak
180	71	Fill of Pit [098]	10	-	-	+	+	-	-	-	-	-	-	++++	-
186	78	Basal fill of Pit [137]	10	+	-	-	-	-	-	++	3	Charcoal +	-	-	Charcoal oak and non-oak
190	85	Secondary fill of Pit [059]	20	++	-	+	-	-	-	+++	1.5	Charcoal +	-	-	-

KEY:
 + = rare (0-5), ++ = occasional (6-15), +++ = common (15-50) and ++++ = abundant (>50)
 NB charcoal over 1cm is suitable for identification and AMS dating

TABLE 2 Flotation sample results

CONTEXT	SAMPLE	FEATURE	TOTAL FLOTVOL (ML)	AVENA SP. (OAT)	HORDEUM VULGARE (BARLEY)	TRITICUM SP. (WHEAT)	OTHER CHARRED PLANT REMAINS	CHARCOAL			COMMENTS
								QTY	MAX SIZE (CM)	MATERIAL AVAILABLE FOR AMS	
063	70	Fill of Pit [062]	5	+	+	+	–	++	<0.5	Cereal +	–
080	20	Fill of Pit [087]	75	++	+	–	Chenopodium album +	+	1.02	–	Contains cinders +++, cereals are very degraded
094	30	Deposit of mixed burnt clay	10	–	–	+	Bromus sp.+	++	<0.5	–	–
104	33	Basal fill of Pit [098]	200	++	++	–	Chrysanthemum sedgetum +	+	<0.5	Charcoal +	Cinders +++++
108	37	Upper fill of Pit [098]	200	++	+	–	Rumex sp +	++	<0.1	Cereal +, Charcoal +	Charcoal non–oak, Contains cinders +++++, coal + and small mammal bone +
116	42	Fill of Pit [115/ 022] same as (023) from evaluation)	5	–	+	–	Stellaria media +	++	<0.5	–	Also contains cinders + and slag +, cereals are very heavily degraded
121	44	Basal fill of Pit [118]	100	–	–	–	–	++++	2	Charcoal	Charcoal non–oak
134	47	Basal fill of Pit [041]	25	–	–	–	–	–	–	–	Contains cinders +++++
135	48	Primary fill of Pit [123]	25	++	++	–	–	+++	2	Charcoal and cereal +	–
140	52	Basal fill of Pit [075]	10	+	+	–	Carex sp +	+++	1.5	Cereal + and Charcoal +	Also contains cinders +
141	59	Basal fill of Pit [142/ 056]	200	+	+	–	–	+	<0.5	Cereal +	Contains cinders +++++ and small mammal bone fragments +
142	60	Fill of Pit [056]	200	+	+	–	–	+++	1.5	Charcoal +	Charcoal oak and non–oak. Contains cinders +++++
146	74	Fill of Pit [172]	25	++	++	–	Small legume +, Galaeopsis tetrahet +	+++	<0.5	Cereal +	Cereal grains are very highly abraded
149	54	Secondary fill of Pit [147]	50	++	+	–	Galium aparine +, Hazelnut shell fragments +, Rumex sp.+, Chenopodium album +, Spargula arvensis + Polygonum sp +	+++	1.4	Cereal + and Charcoal +	Cereal grains are very heavily abraded. Also contains fish vertebra
161	63	Fill of Channel [067]	100	+	+	–	Carex sp +	++	1	Charcoal +	Contains cinders ++, Charcoal oak and non–oak
167	65	Fill of Pit [151]	30	+	+	–	–	+++	0.5	Charcoal +	–
168	66	Primary fill of Pit [157]	25	+	+	–	–	++	<0.5	Cereal +	–
180	71	Fill of Pit [098]	200	–	+	–	–	+	<0.5	–	Cinders +++++
186	78	Basal fill of Pit [137]	50	+	–	–	Galium aparine +	++	2.5	Charcoal +	Charcoal oak and non–oak
190	85	Secondary fill of Pit [059]	30	++	++	+	–	+++	1	Cereal +	Charcoal oak

APPENDIX 3 ANIMAL BONE

TABLE 3 Total numbers of bone fragments, weights (in grams) per species and minimum numbers (MNI) based on most frequently occurring elements across all periods

SPECIES	N (NO OF FRAGS)	WGT (G)	MNI (WHOLE SITE)	MNI BASED ON:
cattle	178	3639	4	R maxilla
sheep/goat	126	713	5	L humerus (distal)
pig	17	140	2	L maxilla
horse	15	381	3*	partial skeleton*
dog	29	89	3	partial skeleton
cat	23	20	4	partial skeleton
dog/cat	2	2	—	—
rabbit	3	3	1	R tibia (proximal)
LU	55	723	—	—
SU	15	49	—	—
IM	765	987	—	—
goose	2	11	1	R tibio—tarsus
duck	1	1	1	R coracoid
domestic fowl	9	30	2	L coracoid
Galliformes	1	7	1	R tibio—tarsus
gull sp	1	1	1	L humerus
indeterminate bird	1	3	—	—
Total	1240	6799		

NOTE:

Conjoining fragments counted as one fragment.

Approximately 6g fish bone excluded.

*excludes 1 partial horse skeleton in Context 030

TABLE 4 Age categories of cattle, sheep/goat and pig based on state of epiphyseal fusion of long bones

AGE CATEGORY	CATTLE		SHEEP/GOAT		PIG	
	N	%	N	%	N	%
J	—	—	5	11.6	—	—
J/I	9	15.3	8	18.6	5	71.4
I	2	3.4	9	20.9	2	28.6
I/A	25	42.4	10	23.2	—	—
A	23	39.0	11	25.6	—	—
TOTAL	59	100.1	43	100.0	7	100.0

KEY:

J juvenile / J/I juvenile or immature / I immature / I/A immature or adult / A adult

TABLE 5 Wear stages of sheep/goat mandibles after Grant (1982) and Payne (1973)

FEATURE	CONTEXT	GRANT (1982)		PAYNE (1973)	
		TOOTH WEAR STAGE (TWS)	MANDIBLE WEAR STAGE (MWS)	WEAR STAGE	AGE INFERENCE
pit 056	047	ggc	32	F	3–4 years
pit 056	057	gfc	31	E	2–3 years
pit 098	107	gd—	28–30	DE	1–3 years
pit 098	107	ghm	42	H	6–8 years
pit 098	107	—gd	33–34	E	2–3 years

TABLE 6 Long bone size range summary

Measurements follow the scheme of von den Driesch (1976) and are expressed in millimetres (mm). Additional measurements on the distal humerus follow Legge and Rowley—Conwy (1988).

CATTLE	BONE	MEASUREMENT	RANGE	N
		HTC	24.0	1
	metacarpal	Bp	50.4–58.8	2
	unciform (carpal)	GB	35.4–39.5	2
	astragalus	GLI	62.4	1
		Bd	40.4	1
	metatarsal	Bp	42.0–48.4	3
		Dp	40.6–47.0	3
	1st phalange	GLpe	49.0–51.2	3
		Bp	26.8	1
		Bd	24.8–26.5	2
		SD	22.8–23.8	2
	2nd phalange	GL	38.0–39.6	3
		Bp	29.6–32.4	3
		Bd	23.8–26.8	3
		SD	23.1–25.0	2
	3rd phalange	DLS	71.0	1
		Ld	56.0	1

SHEEP/GOAT	BONE	MEASUREMENT	RANGE	N
	SHEEP/GOAT	humerus	Bd	28.2–31.2
BT			26.8–29.5	4
HT			16.6–18.0	4
HTC			13.2–14.8	4
radius		Bd	26.2	1
innominate		LAR	23.6	1
femur		Bd	34.5–35.0	2
tibia		Bd	23.6–26.9	4
astragalus		GLI	28.2	1
		Bd	18.0	1
metatarsal		Bp	19.8	1
		Dp	20.0	1
1st phalange		GLpe	28.2–36.5	3
		Bp	11.8–12.0	2
	Bd	10.2–11.6	2	
	SD	9.0–10.0	3	
PIG	BONE	MEASUREMENT	RANGE	N
	radius	Bp	27.8	1
DOG	BONE	MEASUREMENT	RANGE	N
	atlas	BFcr	34.6	1
		BFcd	24.5	1
	axis	BFcr	23.6	1
	humerus	Dp	25.0	1
		Bd	26.8	1
		BT	18.7	1
		HT	16.0	1
	radius	HTC	9.8	1
		Bd	19.8	1

TABLES 7 / 8 Animal bone catalogues (provided digitally)

APPENDIX 4 FINDS CATALOGUE

ABBREVIATIONS:

LMR = Late Medieval Redware; PMR = Post-Medieval Reduced Ware; GWG = White Gritty Ware

TABLE 9 Context spot dating

CONTEXT	FEATURE	DATING	PERIOD
001	modern silt & rubble in SE	—	Mod
002	buried soil	17th+	PM/Mod
003	buried soil	18th/20th?	Mod
005	pit [006]	Medi/Mod	Medi/Mod
008	pit [009]	14th/15th	Medi
017	buried soil	12th/14th	Medi
019	pit [018]	14th/15th	Medi
021	pit [020]	13th/15th	Medi
023	pit [022]	12th/14th	Medi
026	pit [024] or [025]	15th	Medi
027	buried soil	15th	Medi
028	buried soil	14th/16th	Medi
029	topsoil	19th/e.20th	Mod
030	buried soil	19th with residual Medi	Mod
033, 038	pit [032]	12th/14th	Medi
040	pit [024]	16th	PM
042, 134	pit [041]	15th with mod disturbance	Medi
043	buried soil	12th/14th	Medi
047	pit [046]	14th/15th	Medi
049	pit [048]	12th/14th	Medi
051	pit [050]	14th/15th with mod disturbance?	Medi
055	pit [054]	12th/14th with intrusive late Medi?	Medi
057, 142	pit [056]	15th with residual earlier	Medi
058, 158, 190	pit [059]	13th	Medi
063	pit [062]	14th/15th	Medi
065	pit [064]	12th/15th	Medi
069	pit [068]	L. 19th/e.20th	Mod
074	pit [073]	M/L. 19th	Mod
078, 080, 082, 083, 086, 089, 128, 140	pit [075]	13th/15th with lower fills (128) & (140) possibly earlier than upper	Medi
079	linear [077]	12th/14th	Medi
100	pit [099]	14th/15th	Medi

CONTEXT	FEATURE	DATING	PERIOD
102	post-hole [101]	12th/15th	Medi
103	pit [096]	12th/15th	Medi
104, 105, 107, 108, 179, 180	pit [098]	16th	Medi/PM
110, 112	pit [109]	12th/14th	Medi
113	L-shaped cut [122]	12th/14th with intrusive Mod?	Medi
114	pit [125], (fills 114+126)	13th/14th with mod disturbance?	Medi
119, 121	pit [118]	12th/14th	Medi
124	pit [136]	12th/14th	Medi
126	pit [125]	?	?
135	pit [123]	12th/14th	Medi
138, 156	pit [137]	12th/14th	Medi
141	pit [142/056]	12th/15th	Medi
143	pit [075] & [144]	12th/15th	Medi
146	pit [172]	12th/15th	Medi
148, 149	pit [147]	12th/15th	Medi
168	pit [157]	13th/14th	Medi
184	pit [183]	Mod	Mod
188	pit [187]	12th/14th	Medi
201	deposit	15th/16th	Medi/PM
203	poss pit dump	15th/16th	Medi/PM
206	midden deposit	15th/16th	Medi/PM
207	make-up	15th/16th	Medi/PM
208	pit fill	15th/16th	Medi/PM
211	deposit	19th	Mod
212	midden deposit	16th	PM

TABLE 10 Finds catalogue

ABBREVIATIONS:

LCG/R = Low Countries Greyware/Redware; LMR = Late Medieval Redware; PMR = Post-Medieval Reduced Ware; RSW = Rhenish Stoneware; WGW = White Gritty Ware

CONTEXT	NOTES	SAMPLE	QTY	WGT (G)	MATERIAL	OBJECT	DESCRIPTION	SPOT DATE	PERIOD
–	U/S	–	1	792	Iron	Shot	Cast iron shot. Solid, round. Surface damaged and some missing. Diam 78–90	17th/19th	PM/Mod
–	U/S	–	5	113	Pottery	LMR	jug handle and sherds	13th–15th	Medi
–	U/S	–	9	106	Pottery	WGW	cooking pot rim and various other sherds	12th–14th	Medi
–	U/S	–	2	–	Pottery (Mod)	Whiteware	blue trans printed bowl	19th/e.20th	Mod
001	modern silt & rubble in SE	–	1	–	Copper Alloy	Fitting	small piece of copper alloy associated with glass soda siphon (see glass), possibly part of mechanism	–	Mod
001	modern silt & rubble in SE	–	4	–	Glass	Bottle	large colourless bottles, part of soda siphon, small vial	L.19th/20th	Mod
001	modern silt & rubble in SE	–	6	46	Pottery	WGW	various sherds, some jugs	12th–15th	Medi
001	modern silt & rubble in SE	–	3	–	Pottery (Mod)	Various	including complete stoneware jar & rockingham teapot lid	19th/20th	Mod
002	buried soil	–	1	50	CBM	Pan Tile	small sherd	17th/20th	Mod
002	buried soil, associated with wall [004]	–	2	180	Pottery	PMO/PMR	skillet handle and jug base	16th–17th	PM
002	buried soil	–	1	–	Stone	Architectural Fragment	cylindrical piece of stone, with collar. Grey sandstone. Max diam 110, length 137.	–	–
003	buried soil	–	1	17	Pottery	PMR	jug rim	15th–16th	Medi
003	buried soil	–	1	15	Pottery	WGW	late type fabric	14th–15th	Medi
003	buried soil	–	1	–	Pottery (Mod)	Red Earthenware	unglazed flower pot rim	18th/20th	Mod
005	fill of pit [006]	–	1	273	CBM	Brick	fragment of mortared brick	18th/20th	Mod
005	fill of pit [006]	–	1	8	Pottery	WGW	small base sherd	12th–15th	Medi
008	fill of pit [009]	–	1	11	Pottery	LMR	base sherd, sooted	13th–15th	Medi
008	fill of pit [009]	–	2	35	Pottery	WGW	hard fired sherds	14th–15th	Medi
017	buried soil	–	3	59	Pottery	Saintonge?	fine whiteware, apple green external glaze	12th–14th	Medi
017	buried soil	–	21	133	Pottery	WGW	various CP & jug sherds, including rims, base, decorated sherds	12th–14th	Medi
019	fill of pit [018]	–	5	92	Pottery	WGW	various jug & poss jar sherds	14th–15th	Medi
021	fill of pit [020]	–	1	4	Pottery	LMR	copper green glazed jug sherd	13th–15th	Medi
021	fill of pit [020]	–	1	10	Pottery	WGW	jug sherd	13th–15th	Medi
023	fill of pit [022]	–	63	1104	Pottery	WGW	all but one representing same jar, with horizontal incised line decoration, beaded rim, no trace of sooting, about half of vessel represented. Pale red exterior, reduced core, pale buff interior	12th–14th	Medi
025	pit cut	3	–	4	Industrial Waste	Mag Res	–	–	–
025	pit cut	3	2	9	Pottery	LMR	small jug sherds	13th–16th	Medi/PM
025	pit cut	3	2	2	Pottery	WGW	unglazed fragments	12th–15th	Medi
026	fill of pit [024] or [025]	–	–	596	Industrial Waste	Iron Slag	–	–	–

CONTEXT	NOTES	SAMPLE	QTY	WGT (G)	MATERIAL	OBJECT	DESCRIPTION	SPOT DATE	PERIOD
026	fill of pit [024] or [025]	—	2	—	Iron	Horseshoe fragments	Horseshoe fragments revealed by x-ray	—	—
026	fill of pit [024] or [025]	—	1	—	Iron	Lump	shape unclear	—	—
026	fill of pit [024] or [025]	—	5	—	Iron	Nails	—	—	—
026	fill of pit [024] or [025]	—	1	—	Iron	Object	L-shaped shaft	—	—
026	fill of pit [024] or [025]	—	1	—	Iron	Staple	—	—	—
026	fill of pit [024] or [025]	—	1	—	Iron	Strip	—	—	—
026	fill of pit [024] or [025]	—	34	1430	Pottery	LMR	large jug base & body sherds, including frilled jug base, strap handle with applied thumbled strip	15th–m.16th	Medi
026	fill of pit [024] or [025]	—	1	7	Pottery	Saintonge	sherd of possible Saintonge whiteware, green glaze spots	13th–15th	Medi
026	fill of pit [024] or [025]	—	25	395	Pottery	WGW	large jug base and body sherds, crudely made, late, various small residual sherds, jug & CP	12th–15th	Medi
027	buried soil 027=028=030	—	3	23	Pottery	LMR	jug sherds, applied fingernailed strip	13th–15th	Medi
027	buried soil 027=028=030	—	1	3	Pottery	RSW	small sherd, purple/grey salt glaze	15th–16th	Medi/PM
027	buried soil 027=028=030	—	2	105	Pottery	WGW	jug sherds, late	14th–15th	Medi
028	buried soil 027=028=030	—	2	19	Pottery	LMR	small jug sherds	14th–16th	Medi
029	topsoil	—	3	—	Pottery (Mod)	various	blacking bottle base, whiteware & brownware	19th/e.20th	Mod
030	buried soil 027=028=030	—	1	16	CBM	Brick	coarse fragment	18th/20th	Mod
030	buried soil 027=028=030	—	1	68	CBM	Pan Tile	small sherd	17th/20th	Mod
030	buried soil 027=028=030	—	1	—	Glass	Bottle	green sherd	18th/20th	Mod
030	buried soil 027=028=030	—	—	444	Industrial Waste	Iron Slag	—	—	—
030	buried soil 027=028=030	—	1	—	Iron	Horseshoe Nail?	covered in thick corrosion products	—	—
030	buried soil 027=028=030	—	3	—	Iron	Nails	one complete	—	—
030	buried soil 027=028=030	—	1	—	Iron	Object	shape obscured by corrosion	—	—
030	buried soil 027=028=030	—	1	3	Pottery	LCR	small body sherd, glazed both sides	16th–17th	PM
030	buried soil 027=028=030	—	31	796	Pottery	LMR/PMR	various jug sherds, including grooved strap handle, incised wavy jug decoration, internally white slipped CP sherds	14th–16th	Medi/PM
030	buried soil 027=028=030	—	90	924	Pottery	WGW	jug sherds, including large late jug handle, two finely decorated jug sherds, barley sugar twist handle, jug rim with tube spout, cooking pot rims	13th–14th	Medi

CONTEXT	NOTES	SAMPLE	QTY	WGT (G)	MATERIAL	OBJECT	DESCRIPTION	SPOT DATE	PERIOD
030	buried soil 027=028=030	—	1	17	Pottery	Yorks	jug rim, green glazed	13th–m.14th	Medi
030	buried soil 027=028=030	—	10	—	Pottery (Mod)	Whiteware	small sherds including spongeware, blue & brown trans printed	m.19th/e.20th	Mod
033	fill of pit [032]	4	—	2	Industrial Waste	Iron Slag	—	—	—
033	fill of pit [032]	4	—	2	Industrial Waste	Mag Res	—	—	—
033	fill of pit [032]	4	—	5	Mortar	fragments	—	—	—
033	fill of pit [032]	—	1	8	Pottery	Saintonge?	incised strap handle sherd, white fabric, apple green glaze	12th–14th	Medi
033	fill of pit [032]	—	4	33	Pottery	WGW	Cp & jug sherds	12th–14th	Medi
033	fill of pit [032]	4	4	3	Pottery	WGW	fragments	12th–15th	Medi
038	fill of pit [032]	—	3	26	Pottery	WGW	Cp & jug sherds	12th–14th	Medi
040	fill of pit [024]	—	1	—	Copper Alloy	Sheet	small fragment	—	—
040	fill of pit [024]	—	2	—	Iron	Nails	—	—	—
040	fill of pit [024]	—	11	303	Pottery	PMR/PMO	various large jar and jug sherds including rims & handles	16th–16th	PM
040	fill of pit [024]	—	2	11	Pottery	WGW	small residual sherds	12th–15th	Medi
042	fill of pit [041]	—	1	—	Glass	Bottle	green bottle sherd, unusual form	19th/20th	Mod
042	fill of pit [041]	—	—	176	Industrial Waste	Iron Slag	large lump	—	—
042	fill of pit [041]	—	1	—	Iron	Nail	large	—	—
042	fill of pit [041]	—	1	—	Iron	Object	large flat object	—	—
042	fill of pit [041]	—	1	—	Lead	Sheet	small sherds	—	—
042	fill of pit [041]	—	30	1190	Pottery	LMR/PMR	large jug sherds including large jug strap handles, base and decorated fingernailed wheel ridge	15th–16th	Medi
042	fill of pit [041]	—	3	23	Pottery	WGW	rilled cooking pot sherd and other small sherds	12th–15th	Medi
043	buried soil	—	2	9	Pottery	WGW	small CP sherds	12th–14th	Medi
047	fill of pit [046]	—	—	1051	Industrial Waste	Iron Slag	various lumps	—	—
047	fill of pit [046]	—	10	—	Iron	Nails	—	—	—
047	fill of pit [046]	—	10	—	Iron	Objects	various lumps, thick corrosion products. x-ray revealed possible buckle with metal alloy plate	—	—
047	fill of pit [046]	—	20	298	Pottery	LMR/PMR	various jug sherds, one thumbled strap handle	14th–16th	Medi
047	fill of pit [046]	—	41	271	Pottery	WGW	various small sherds, jug & CP	12th–15th	Medi
047	fill of pit [046]	—	2	9	Pottery	Yorks	white fabric, green glaze, one with applied strip decoration	m.12th–m.14th	Medi
049	fill of pit [048]	—	8	76	Pottery	WGW	jug & CP sherds	12th–14th	Medi
051	fill of pit [050]	10	—	5	Industrial Waste	Iron Slag	—	—	—
051	fill of pit [050]	10	—	0	Industrial Waste	Mag Res	—	—	—
051	fill of pit [050]	—	1	—	Iron	Hinge	small butt hinge, distorted and broken	—	Mod

CONTEXT	NOTES	SAMPLE	QTY	WGT (G)	MATERIAL	OBJECT	DESCRIPTION	SPOT DATE	PERIOD
051	fill of pit [050]	10	2	—	Iron	Nails	—	—	—
051	fill of pit [050]	—	5	33	Pottery	LMR	jug sherds	14th–16th	Medi
051	fill of pit [050]	—	3	44	Pottery	WGW	jug sherds, including strap handle	12th–15th	Medi
051	fill of pit [050]	10	2	5	Pottery	WGW	small sherds	12th–15th	Medi
055	fill of pit [054]	—	1	9	Pottery	LMR	small jug sherd, intrusive?	15th–16th	Medi
055	fill of pit [054]	—	34	306	Pottery	WGW	including thumbbed jug base, cooking pot rims, horizontal incised line decoration	13th–14th	Medi
057	fill of pit [056]	—	—	1794	Industrial Waste	Iron Slag	—	—	—
057	fill of pit [056]	—	1	—	Iron	Lump	shape unclear	—	—
057	fill of pit [056]	—	1	—	Iron	Nail	—	—	—
057	fill of pit [056]	—	24	1418	Pottery	LMR	mostly sherds from large reduced jug including most of thick base and complete rim/strap handle profile	15th–16th	Medi
057	fill of pit [056]	—	24	190	Pottery	WGW	including cooking pot rims, jug sherds, one with copper green glaze	12th–14th	Medi
058	fill of pit [059]	—	2	20	Pottery	LMR	small jug sherds	13th–15th	Medi
058	fill of pit [059]	—	28	275	Pottery	WGW	CP & jug sherds, very coarse gritty	12th–13th	Medi
061	fill of pit [060]	14	4	5	Pottery	WGW	cooking pot rim, fragments	12th–14th	Medi
063	fill of pit [062]	—	9	108	Pottery	LMR	jug sherds	14th–16th	Medi
063	fill of pit [062]	—	6	42	Pottery	WGW	small sherds, horiz incised decoration	12th–15th	Medi
063	fill of pit [062]	70	1	1	Pottery	WGW	small cooking pot sherd	12th–14th	Medi
063	fill of pit [062]	—	1	4	Pottery	Yorks	green glazed	m.12th–m.14th	Medi
065	fill of pit [064]	15	1	—	Glass	Fragment	colourless	—	Mod
065	fill of pit [064]	15	—	38	Mortar	fragments	—	—	—
065	fill of pit [064]	15	2	2	Pottery	WGW	small cooking pot sherds	12th–14th	Medi
065	fill of pit [064]	—	2	63	Pottery	WGW	one sherd from decorative tube spout, spout broken off but surrounded by complex incised decoration	12th–15th	Medi
069	fill of pit [068]	—	1	627	CBM	Pan Tile	large piece of tile, sooting and iron corrosion on one side	17th/20th	Mod
069	fill of pit [068]	—	1	—	Ceramic	Doll's Head	back of neck from a porcelain doll's head	19th/e.20th	Mod
069	fill of pit [068]	—	1	—	Ceramic	Figurine	base of pipeclay figurine in form of a woman, traces of paint remaining	18th/19th	Mod
069	fill of pit [068]	—	2	—	Clay Pipe	Stems	narrow bore	L.18th/e.20th	Mod
069	fill of pit [068]	—	1	—	Copper Alloy	Fitting	cpa with square central tube	19th/20th	Mod
069	fill of pit [068]	—	16	—	Glass	Bottle/Vessel	assortment of bottles and jars, mostly complete, mostly colourless, some green and blue, several with embossed merchants marks, one with remains of paper label. Base of drinking vessel.	L.19th/e.20th	Mod
069	fill of pit [068]	—	17	—	Glass	Bottle/Vessel	assortment of bottles and jars, mostly complete, mostly colourless, some green and blue, several with embossed merchants marks, one with remains of paper label. Base of drinking vessel.	L.19th/e.20th	Mod
069	fill of pit [068]	—	1	—	Iron	Band	long curving band in three pieces	19th/20th	Mod

CONTEXT	NOTES	SAMPLE	QTY	WGT (G)	MATERIAL	OBJECT	DESCRIPTION	SPOT DATE	PERIOD
069	fill of pit [068]	—	1	—	Iron	Jar	small jar, damaged	19th/20th	Mod
069	fill of pit [068]	—	1	—	Leather	Shoe	near complete shoe and other fragmetn	19th/20th	Mod
069	fill of pit [068]	—	2	33	Pottery	LMR/PMR	jug rim & sherd	15th–16th	Medi/PM
069	fill of pit [068]	—	1	6	Pottery	WGW	small unglazed sherd	12th–15th	Medi
069	fill of pit [068]	—	20	—	Pottery (Mod)	Various	large sherds, complete stoneware jar, flour small flower pots, very large white jar, teacup with floral design and gilding, painted porcelain, brown glazed red earthenware, other decorative sherds	L.19th/e.20th	Mod
069	fill of pit [068]	—	1	—	Wood	Object	circular disc with large central hole. Desiccated. Diam 61, thickness 23.	—	—
074	fill of pit [073]	—	1	—	Clay Pipe	Stem	narrow bore	19th/e.20th	Mod
074	fill of pit [073]	—	25	—	Glass	Bottle	sherds from green wine bottles and colourless egg-shaped bottles including bases and necks	m.19th/L.19th	Mod
074	fill of pit [073]	—	2	47	Pottery	PMR	jug sherds, smooth fabric	17th–m.18th	PM
074	fill of pit [073]	—	100	—	Pottery (Mod)	Various	large sherds, including stoneware blacking bottles, black glazed earthenware jar, earthenware bowls with slip decoration willow, other blue trans printed, banded ware, buff coloured ware	m.18th–19th	Mod
078	fill of pit [075]	—	4	38	Pottery	LMR	small sherds	13th–15th	Medi
079	fill of linear [077]	—	3	26	Pottery	LCCG	small unglazed sandy greyware sherds	13th–14th	Medi
079	fill of linear [077]	—	3	38	Pottery	WGW	very coarse sherds and some very hard fired	12th–14th	Medi
080	fill of pit [075]	20	—	2	Industrial Waste	Iron Slag	—	—	—
080	fill of pit [075]	20	—	3	Industrial Waste	Mag Res	—	—	—
080	fill of pit [075]	20	1	—	Iron	Horseshoe Nail	fiddle key horseshoe nail, exapnaded head and ears	11th – m 14th C	Medi
080	fill of pit [075]	—	1	—	Iron	Nail	—	—	—
080	fill of pit [075]	—	1	16	Pottery	LMR	jug sherd	13th–15th	Medi
080	fill of pit [075]	20	1	18	Pottery	LMR	red gritty jug sherd	13th–15th	Medi
080	fill of pit [075]	20	7	29	Pottery	WGW	cooking pot and jug sherds	12th–14th	Medi
080	fill of pit [075]	—	10	77	Pottery	WGW	various small sherds	12th–15th	Medi
082	fill of pit [075]	—	1	41	Pottery	LMR	jug thumbed strap handle terminal, joins 083	13th–15th	Medi
083	fill of pit [075]	—	—	60	Industrial Waste	Iron Slag	—	—	—
083	fill of pit [075]	—	2	78	Pottery	LMR	white slipped sherds, one sooted base, joins 082	13th–15th	Medi
086	fill of pit [075]	—	5	48	Pottery	WGW	including jug and cooking pot sherds	12th–14th	Medi
089	fill of pit [075]	—	1	—	Iron	Knife?	blade?	—	—
089	fill of pit [075]	—	1	—	Lithics	Flint flake	—	—	—
089	fill of pit [075]	—	3	197	Pottery	WGW	large sherds from same jug	12th–15th	Medi
100	fill of pit [099]	—	1	7	Pottery	LMR	sherd with white slip and copper green glaze	13th–15th	Medi
100	fill of pit [099]	—	1	6	Pottery	WGW	small rilled coarse sherd	12th–14th	Medi
102	fill of post-hole [101]	—	1	10	Pottery	WGW	yellow glaze	12th–15th	Medi
103	fill of pit [096]	—	1	6	Pottery	LMR	jug sherd	13th–15th	Medi
103	fill of pit [096]	—	4	45	Pottery	WGW	including jug strap handle	12th–15th	Medi

CONTEXT	NOTES	SAMPLE	QTY	WGT (G)	MATERIAL	OBJECT	DESCRIPTION	SPOT DATE	PERIOD
104	fill of pit [098]	33	2	3	CBM	Daub/Brick	fragmetns	—	—
104	fill of pit [098]	33	1	—	Glass	Fragment	colourless	—	Mod
104	fill of pit [098]	33	—	49	Industrial Waste	Iron Slag	—	—	—
104	fill of pit [098]	33	—	3	Industrial Waste	Mag Res	—	—	—
104	fill of pit [098]	33	1	—	Lead	Strip	small, pointed	—	—
104	fill of pit [098]	—	1	9	Pottery	LCR	sooted exterior, glazed interior	16th–17th	PM
104	fill of pit [098]	33	6	1	Pottery	LMR/PMR	fragments	13th–16th	Medi/PM
104	fill of pit [098]	—	7	228	Pottery	LMR/PMR	sherds from same jug	15th–16th	Medi
104	fill of pit [098]	—	1	9	Pottery	WGW	small residual sherd	12th–15th	Medi
105	fill of pit [098]	—	1	—	Iron	Nail	—	—	—
105	fill of pit [098]	—	39	2419	Pottery	LMR	mostly large sherds, all from olive glazed jugs, including several rims, strap handles, one frilled base	m.15th– m.16th	Medi
105	fill of pit [098]	—	3	13	Pottery	WGW	small residual sherds	12th–15th	Medi
107	fill of pit [098]	—	1	384	CBM	Floor Tile	Flemish floor tile in two piece, corner missing. Corner nail holes, surface white slipped and glazed yellow. Finish poor, possibly heat damaged. 108mm square, 24mm thick.	L.14th/e.16th	Medi
107	fill of pit [098]	—	1	—	Iron	Nail	—	—	—
107	fill of pit [098]	—	39	1667	Pottery	LMR	large jug sherds	15th–16th	Medi
107	fill of pit [098]	—	15	159	Pottery	WGW	smaller sherds, including rim	12th–15th	Medi
108	fill of pit [098]	—	—	88	Industrial Waste	Iron Slag	—	—	—
108	fill of pit [098]	37	—	27	Industrial Waste	Iron Slag	—	—	—
108	fill of pit [098]	37	—	3	Industrial Waste	Mag Res	—	—	—
108	fill of pit [098]	37	1	—	Iron	Nail	small	—	—
108	fill of pit [098]	—	2	—	Iron	Nails	—	—	—
108	fill of pit [098]	—	1	—	Iron	Object	lump of iron or possibly just corrosion	—	—
108	fill of pit [098]	37	2	6	Pottery	LMR	small sherds	13th–15th	Medi
108	fill of pit [098]	—	2	29	Pottery	PMR	sooted jar base, jug sherd	16th	PM
108	fill of pit [098]	—	12	674	Pottery	PMR	large jug sherds including rims and bases	16th	PM
108	fill of pit [098]	37	3	4	Pottery	WGW	small sherds	12th–15th	Medi
110	fill of pit [109]	—	3	125	Pottery	WGW	coarse gritty, rim and handles from two jugs	12th–14th	Medi
112	fill of pit [109]	—	2	26	Pottery	WGW	green glazed sherds	12th–15th	Medi
113	fill of L-shaped cut [122]	—	1	210	CBM	Pan Tile	small sherd	17th/20th	Mod
113	fill of L-shaped cut [122]	—	11	96	Pottery	WGW	various jug & CP sherds	12th–14th	Medi
114	fill of pit [125], (fills 114+126)	—	28	263	Pottery	WGW	various small sherds including cooking pots	13th–14th	Medi

CONTEXT	NOTES	SAMPLE	QTY	WGT (G)	MATERIAL	OBJECT	DESCRIPTION	SPOT DATE	PERIOD
114	fill of pit [125], (fills 114+126)	—	1	2	Pottery (Mod)	Whiteware	blue banded rim	19th/20th	Mod
116	fill of pit [022/115]	42	3	3	CBM	Daub/Brick	fragmetns	—	—
116	fill of pit [022/115]	42	—	4	Industrial Waste	Iron Slag	—	—	—
116	fill of pit [022/115]	42	—	6	Mortar	Fragmetns	—	—	—
116	fill of pit [022/115]	42	2	12	Pottery	WGW	grooved sherd	12th–15th	Medi
119	fill of pit [118]	—	2	27	Pottery	WGW	jug sherds, coarse	12th–14th	Medi
121	fill of pit [118]	44	—	1	Industrial Waste	Iron Slag	—	—	—
121	fill of pit [118]	44	—	1	Industrial Waste	Mag Res	—	—	—
121	fill of pit [118]	44	4	3	Pottery	WGW	coarse sooty sherd	12th–14th	Medi
121	fill of pit [118]	—	2	17	Pottery	WGW	jug sherds, coarse	12th–14th	Medi
124	fill of pit [136]	—	4	73	Pottery	WGW	jar and jug rims	12th–14th	Medi
126	fill of pit [125]	—	—	8	Industrial Waste	?Slag	—	—	—
128	fill of pit [075]	—	9	61	Pottery	WGW	including sooted cooking pot sherd, thumbbed jug base	13th–14th	Medi
134	fill of pit [041]	47	—	10	Industrial Waste	Iron Slag	—	—	—
134	fill of pit [041]	—	1	—	Iron	Nail	—	—	—
134	fill of pit [041]	—	1	—	Iron	Pintle?	small shaft, right angled	—	—
134	fill of pit [041]	—	1	43	Pottery	RSW	jug strap handle, Raeren/Aachen?	L.15th–m.16th	Medi
134	fill of pit [041]	—	1	5	Pottery	WGW	cooking pot sherd	12th–14th	Medi
135	fill of pit [123]	—	4	37	Pottery	WGW	including rim from fine vessel	12th–14th	Medi
138	fill of pit [137]	—	1	—	Copper Alloy	Mount?	small domed object, sub square with large ovoid central hole	—	—
138	fill of pit [137]	—	33	293	Pottery	WGW	including cooking pot sherds, lower half of face mask	12th–14th	Medi
140	fill of pit [075]	—	5	205	Pottery	WGW	including two cooking pot rims, one thin walled, coarse fabric and wheel rilled	12th–13th	Medi
141	fill of pit [142/056]	59	—	2	Industrial Waste	Iron Slag	—	—	—
141	fill of pit [142/056]	59	—	3	Industrial Waste	Mag Res	—	—	—
141	fill of pit [142/056]	59	1	1	Pottery	LMR/PMR	fragment	13th–16th	Medi/PM
141	fill of pit [142/056]	—	1	2	Pottery	WGW	small jug sherd	12th–15th	Medi
141	fill of pit [142/056]	59	5	6	Pottery	WGW	small sherds, one with combed applied decoration	12th–15th	Medi
142	fill of pit [056]	60	1	1	CBM	Fragment	—	—	—
142	fill of pit [056]	60	—	45	Industrial Waste	Iron Slag	—	—	—
142	fill of pit [056]	60	—	1	Industrial Waste	Mag Res	—	—	—
142	fill of pit [056]	60	1	—	Iron	Nail	small	—	—

CONTEXT	NOTES	SAMPLE	QTY	WGT (G)	MATERIAL	OBJECT	DESCRIPTION	SPOT DATE	PERIOD
142	fill of pit [056]	—	1	48	Pottery	LMR	jug base sherd	15th–16th	Medi
143	fill of pit [075] & [144]	—	49	1128	Pottery	WGW	mostly from same jug with pink fabric and olive glaze	12th–15th	Medi
146	fill of pit [172]	74	—	5	Industrial Waste	Mag Res	—	—	—
146	fill of pit [172]	74	1	—	Iron	Knife?	traingular strip, possibly tip of knife blade	—	—
146	fill of pit [172]	—	1	128	Pottery	WGW	jug base	12th–15th	Medi
146	fill of pit [172]	74	5	19	Pottery	WGW	small jug sherds	12th–15th	Medi
148	fill of pit [147]	52	—	79	CBM	Daub	fragmetns	—	—
148	fill of pit [147]	52	5	24	Pottery	WGW	cooking pot sherds	12th–14th	Medi
148	fill of pit [147]	—	1	89	Pottery	WGW	jug sherd	12th–15th	Medi
149	fill of pit [147]	54	6	57	Pottery	WGW	jug rim	12th–15th	Medi
149	fill of pit [147]	—	2	55	Pottery	WGW	jug sherds	12th–15th	Medi
149	fill of pit [147]	54	1	1	Pottery	Yorks	fragment, white fabric, French?	12th–14th	Medi
156	fill of pit [137]	—	9	128	Pottery	WGW	mostly cooking pot sherds, some jugs	12th–14th	Medi
158	fill of pit [059]	—	6	112	Pottery	WGW	coarse jug sherds, all but one probably from same jug	12th–14th	Medi
161	fill of circular channel	63	—	2	Industrial Waste	Mag Res	—	—	—
161	fill of circular channel	63	—	10	Industrial Waste	Slag/Cinder	—	—	—
161	fill of circular channel	63	2	3	Pottery	WGW	cooking pot sherd	12th–14th	Medi
168	fill of pit [157]	66	3	2	CBM	Fragmetns	—	—	—
168	fill of pit [157]	66	—	0	Industrial Waste	Mag Res	—	—	—
168	fill of pit [157]	—	1	17	Pottery	LMR	jug sherd	13th–16th	Medi
168	fill of pit [157]	—	5	289	Pottery	WGW	including cooking pot base and jug rim and handles	13th–14th	Medi
168	fill of pit [157]	66	1	6	Pottery	WGW	unglazed sherd	12th–15th	Medi
179	fill of pit [098]	—	1	53	Pottery	LCR?	large base sherd, thumbbed, fine redware, unglazed, hand formed?, possibly dripping dish	15th–16th	Medi
179	fill of pit [098]	—	13	819	Pottery	PMR	all from same jug, well made, with finger impressed rose on shoulder	16th	PM
179	fill of pit [098]	—	1	40	Pottery	WGW	handle sherd	12th–15th	Medi
180	fill of pit [098]	71	—	7	Industrial Waste	Slag/Cinder	—	—	—
180	fill of pit [098]	71	1	10	Pottery	LMR	abraded sherd	13th–15th	Medi
180	fill of pit [098]	—	7	717	Pottery	LMR	includes complete jug rim and handle profile, and several other sherds from same jug	15th–15th	Medi
180	fill of pit [098]	—	2	120	Pottery	WGW	strap handle, rod handle	13th–14th	Medi
180	fill of pit [098]	71	1	1	Pottery	WGW	fragment	12th–15th	Medi
184	fill of pit [183]	—	1	—	Copper Alloy	Crucifix	crucifix with pendant loop, incised decoration. Condition of metal suggests relatively recent date. 31 x 17mm	—	Mod?
184	fill of pit [183]	—	1	—	Copper Alloy	Strip	small, irregular shaped	—	—

CONTEXT	NOTES	SAMPLE	QTY	WGT (G)	MATERIAL	OBJECT	DESCRIPTION	SPOT DATE	PERIOD
186	fill of pit [137]	78	2	52	Pottery	WGW	jug sherds	12th–15th	Medi
188	fill of pit [187]	–	11	121	Pottery	WGW	cooking pot and jug sherds	12th–14th	Medi
190	fill of pit [059]	85	–	109	CBM	Daub	including large lump and fragmetns	–	–
190	fill of pit [059]	85	1	–	Iron	Object	small triangular lump	–	–
190	fill of pit [059]	85	3	5	Pottery	WGW	small sherds	12th–15th	Medi
201	deposit	–	7	379	Pottery	PMR	jug sherds, very wide strap handle herds	15th–16th	Medi/PM
201	deposit	–	2	80	Pottery	LWW	jug sherds	15th–16th	Medi/PM
201	deposit	–	1	5	Pottery	WGW	small sherd	13th–15th	Medi
203	poss pit dump	–	1	38	Pottery	PMR	jug sherd	15th–16th	Medi/PM
206	midden deposit	–	1	410	CBM	Floor Tile	Flemish type, near complete tile, damage at two corners and very abraded, corner nail holes, glazed dark mottled gren directly over red body, 105mm square, T25mm	L14th–E16th	–
206	midden deposit	–	1	59	Pottery	PMR	jug base	15th–16th	Medi/PM
207	make–up	–	12	1065	Pottery	PMR	jug sherds, very large sherds from at least two jugs, very wide strap handles	15th–16th	Medi/PM
208	pit fill	–	1	24	Pottery	PMR	jug sherd, thumbed handle terminal sherd	15th–16th	Medi/PM
211	deposit	–	1	75	Glass	Bottle	green wine bottle neck	19th	–
211	deposit	–	2	51	Industrial Waste	Iron Slag	–	–	–
212	midden deposit	–	2	28	Pottery	PMO	sherd from same jar	16th	PM

APPENDIX 5 ADDENDUM TO ARCHAEOLOGICAL WSI

Addendum to Archaeological WSI to cover archaeological mitigation associated with sub-surface archaeological deposits. 81–87 High Street (former First Group Bus Depot), Linlithgow

Introduction

This document is an addendum to a Written Scheme of Investigation (WSI) concerning a development site at 81–87 High Street (formerly occupied by the First Group bus depot), Linlithgow, West Lothian. It follows trial trenching and sets out in detail the work required during the mitigation stage of works (described in outline in Section 8.15 of the WSI). Other sections of the WSI remain relevant, most pertinently the sections describing subsequent stages of reporting (Sections 8.18 & 8.21) and general requirements (Section 9), and are not repeated here.

The addendum is presented in connection with archaeological excavation in order to mitigate the adverse impacts of foundation works associated with the construction of the southern (rear) building of the above development.

Initial discussions with WLC and their archaeological advisors (WoSAS) have taken place and it is proposed that adverse effects caused by the vibro-column foundation technique used for the rear building are mitigated by targeted archaeological excavation and recording prior to construction. The objective of the work will be to provide a record of a representative sample of the archaeologically significant information that will be adversely impacted by the proposed foundation technique.

A draft evaluation trench plan has been provided (Headland Archaeology draft **ILLUS 1**). The trenching established that variable glacio-fluvial geological deposits were higher at both the south and north of the area. Some truncated archaeological features were preserved on the frontage. These were fully excavated and recorded during the evaluation and no further work is required in that area. In the central part of the plot glacio-fluvial deposits dip lower and loam deposits (around 1m deep) are preserved. These deposits contain medieval pottery. Beneath loam are archaeological features, for the most part identifiable cut into the top of the interface with geological deposits. Some of these features may be quarry pits backfilled with midden material; others appear likely to be associated with industrial or craft processes. Two were associated with metal-working waste. The features were concentrated in Trenches 5 and 6; becoming far less frequent to the south (rear of the plot). They may also be concentrated along a former medieval plot boundary.

The top of the archaeological features lies around 52.5m OD. The finished level of the development is around 55m OD sloping down to 54.1m OD to the north. All services will be a maximum of 1m below the finished ground level, with the exception of the main sewer which will be 1.5 to 2m below the finished level. Excavations for ground beams will extend 0.6m below current ground. As glacio-fluvial deposits rise up towards the north the level of archaeological features cut into them may also rise. Consequently potential adverse effects associated with services and ground beams are predicted to be limited and mitigation is proposed only at the northern end of the site (north of Trench 6 on the evaluation).

This mitigation will comprise an archaeological watching brief on excavations undertaken to provide services north of evaluation Trench 6. The work will follow the watching brief methodology set out in Section 8.7 of the WSI (with regard to monitoring of additional site investigation test pits).

In outline the proposed work will involve the excavation of a single area measuring 28 x 10m at base and located over the most sensitive areas of archaeological survival encountered during the evaluation and as shown on the attached plan. The objective is to expose the most significant archaeology encountered during the evaluation and through its excavation provide an archaeological record that provides appropriate mitigation for the adverse effects of the development's foundations

Schedule

It is proposed to undertake the work commencing on the 16th September 2013. It is scheduled to be undertaken over 3 weeks.

Personnel

The project will be managed by Simon Stronach MIFA of CgMs. CgMs is a Registered Organisation and abides by the Codes of Conduct and Approved Practice and Standards of the Institute for Archaeologists.

The excavation team will consist of 5 members of staff and be headed by Laura Bailey of Headland Archaeology. Headland Archaeology is a Registered Organisation of the Institute for Archaeologists.

Stages of work and method

The work will be undertaken as follows:

1. Machine excavation of modern overburden to the surface of underlying loam. Spoil will be stored in a single pile at a safe distance and at an appropriate distance from surrounding buildings and boundary walls.
2. Machine excavation of loam in controlled spits of 0.3m allowing for the retrieval of a representative sample of artefacts (by hand-dug shovel pits) at the upper surface of each spit. Machine excavation will continue until it is possible to identify underlying archaeological features or the upper surface of the interface with geological deposits.
3. Groundworkers may be exposed to soils with potential contaminants related to the site's former use as a bus depot and as noted in the SI report (Crossfield Consulting 2010). They are not a long-term exposure risk and so have not been considered in the SI risk assessment. However, it is recommended that they wear appropriate PPE and maintain a high level of personal hygiene.
4. Hand excavation and recording of all archaeological features. The hand excavated sample will typically amount to 50% of discrete features and 10% of linear features. This sample will be increased where appropriate (for example, for structural features, features associated with subsidiary features such as post-holes,

and artefact-rich features). The level of hand-excavation may be varied subject to discussion between CgMs and WoSAS. Excavation will proceed so as to recover all available stratigraphic information. Representative sections of the excavation area will be cleaned and recorded.

A 'sign-off' site meeting between Headland, CgMs and WoSAS will be held toward the end of the excavation programme to discuss the work undertaken and seek agreement that the excavation has reached a conclusion which is satisfactory to the planning authority (or any steps necessary to achieve this). The 'sign-off' will be set-out in writing between WoSAS and CgMs. The 'sign off' will apply solely to excavation work and there will remain a requirement to undertake the watching brief works as set out in Section 1.5.

Following 'sign-off' all welfare and plant related to the archaeological excavation will be promptly removed so that construction work can start immediately.

Post-excavation analysis and reporting will be undertaken as set out in the agreed WSI. This will be undertaken in two stages: a first draft will be produced on conclusion of the excavation and will include results of all the work undertaken to date. The draft will be submitted to WoSAS for comment. The results of the watching brief on service excavations (set out in Section 1.5) will be appended to this draft when work is complete and the report submitted for final comment and approval as per the WSI.



© 2016 by Headland Archaeology (UK) Ltd

SOUTH & EAST

Headland Archaeology
Building 68C, Wrest Park, Silsoe
Bedfordshire MK45 4HS

01525 861 578

southandeast@headlandarchaeology.com

MIDLANDS & WEST

Headland Archaeology
Unit 1, Clearview Court, Twyford Road
Hereford HR2 6JR

01432 364 901

midlandsandwest@headlandarchaeology.com

NORTH

Headland Archaeology
Unit 16, Hillside, Beeston Road
Leeds LS11 8ND

0113 387 6430

north@headlandarchaeology.com

SCOTLAND

Headland Archaeology
13 Jane Street
Edinburgh EH6 5HE

0131 467 7705

scotland@headlandarchaeology.com

www.headlandarchaeology.com