

130-136 STRICKLANDGATE, KENDAL, CUMBRIA

Archaeological Post-Excavation Assessment



Client: Lake District Estates Co Ltd
Planning Ap. Ref.: 5/08/0070
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Non-Technical Summary

A planning application was submitted by Lake District Estates Company Ltd for the construction of a new hotel and restaurant, and the extension of existing properties at 130-136 Stricklandgate, Kendal, Cumbria. Following a recommendation by Cumbria County Council Historic Environment Service, an archaeological planning condition was imposed by South Lakeland District Council. The work required a desk-based assessment, which was then followed by an archaeological evaluation that consisted of five trenches encompassing 110 square metres. The evaluation was carried out by Greenlane Archaeology between the 29th April and 12th May 2008 and following on from this an excavation of the western part of the site was undertaken between 11th July and 15th August 2008.

The excavation revealed four distinct phases of archaeological activity at the site. Phase 1 was represented by the construction of two burgage plot boundaries in the late 12th or 13th century, associated features included a group of clay extraction pits and two rubbish pits. The site also appeared to have been cleared of vegetation at this stage and a number of features with natural origins were recorded. No structures were recorded from this phase although there is some evidence to suggest that they may have existed at the street front which was not excavated. The second phase of activity spanned the period from 1400-1700 and saw clay extraction continue, structural activity is also suggested by a substantial posthole, and the presence of roofing slate, mortar, daub, burnt limestone, along with the well recorded in the evaluation phase. Evidence for lead and iron working, the processing of cereals, wool and leather working were found in the backfills of earlier extraction pits. Phase 3 saw concerted efforts at ground consolidation in preparation for new buildings further back from the street front. Two structures were excavated; one which was a metal workshop that represented cottage industry at the site, evidence for horn working, butchery and possibly tanning was also recovered from features of this date. The last phase was represented by the foundations of 19th century buildings that replaced earlier structures as the plots became more developed.

The project design for the analysis, publication, and preparation of the research archive has been appended to the report. This would entail the presentation of the results of the excavation and explanation of the phasing, with a more specific analysis of the medieval pottery also proposed. The publication has been recommended for inclusion in *Transactions of the Cumberland and Westmorland Antiquarian and Archaeological Society*, with a report on the medieval pottery to be included in *Medieval Ceramics*. The research archive is to be deposited in Kendal Museum and Cumbria Record Office, also in Kendal.

Acknowledgements

Greenlane Archaeology would like to thank the Lake District Estates Company Ltd for commissioning the project, and Mike Meredith for his information and help on site. Additional thanks are due Jeremy Parsons, Historic Environment Officer at Cumbria County Council, for providing a brief, approving the project design monitoring the excavation in conjunction with Mark Brennand, Senior Historic Environment Officer at Cumbria County Council. The medieval pottery was examined by Ian Miller at Oxford Archaeology North. Headland Archaeology provided the following specialists; the environmental samples were assessed by Scott Timpany, the bone by Auli Tourunen and Carmelita Troy, and a geological and soil synopsis was presented by Steve Lancaster. The clay pipe was assessed by Peter Davey on behalf of the Clay Tobacco Pipe Archive, the leather by Quita Mould of the Barbican Research Associates. Steven J. Allen of York Archaeological Trust assessed the waterlogged timber, the metal was assessed by Nyssa Mildwaters also of Y.A.T and Justine Bayley of English Heritage. Advice on metal working residues was provided by David Dungworth and Justine Bayley, both of English Heritage.

This report was compiled by Sam Whitehead who also supervised the excavation and produced the illustrations. The samples and finds were processed by Dean Williams, who also assessed the medieval pottery, prior to it be checked by Ian Miller. The post-medieval finds were assessed by Jo Dawson. The project was managed by Daniel Elsworth, who also edited the report, along with Jo Dawson. Special thanks are also due to Steve Clarke, Tom Mace, Dean Williams, John Godbert, and John Welsh who carried out the fieldwork in often inclement conditions.

1. Introduction

1.1 Circumstances of the Project

1.1.1 A planning application was submitted by Lake District Estates Company Ltd for the construction of a new hotel and restaurant, and the extension of existing properties at 130-136 Stricklandgate, Kendal (Planning Application No. 5/08/0070; NGR SD 5154 9305). One of the planning conditions placed on the development was for a programme of archaeological work to be carried out, given the site's location within the medieval core of the town. A brief for the archaeological excavation was issued by Cumbria County Council Historic Environment Service, following the completion of a desk-based assessment and an archaeological evaluation (Greenlane Archaeology 2008a and 2008b). After approval of their project Greenlane Archaeology carried out the excavation between the 11th July and the 15th August 2008.

1.2 Location, Geology, and Topography

1.2.1 The entire development site covers an area of approximately 0.3 hectares and fronts Stricklandgate to the west and Maude Street to the south (Figure 1). 130-136 Stricklandgate is at the north end of Kendal's commercial centre and is located amongst a variety of commercial properties. Stricklandgate is the town's main thoroughfare and runs roughly north/south.

1.2.2 The site lies on relatively flat ground and is approximately 50m above sea level (Ordnance Survey 2002). The river Kent is located some 300m to the north-east and drains the higher ground to the north-west of Kendal into Morecombe Bay to the south-west. The solid geology comprises Bannisdale slates but is situated on the edge of a large area of Carboniferous limestone (Moseley 1978, plate 1), with overlying drift deposits of glacial gravel (Countryside Commission 1998, 66).

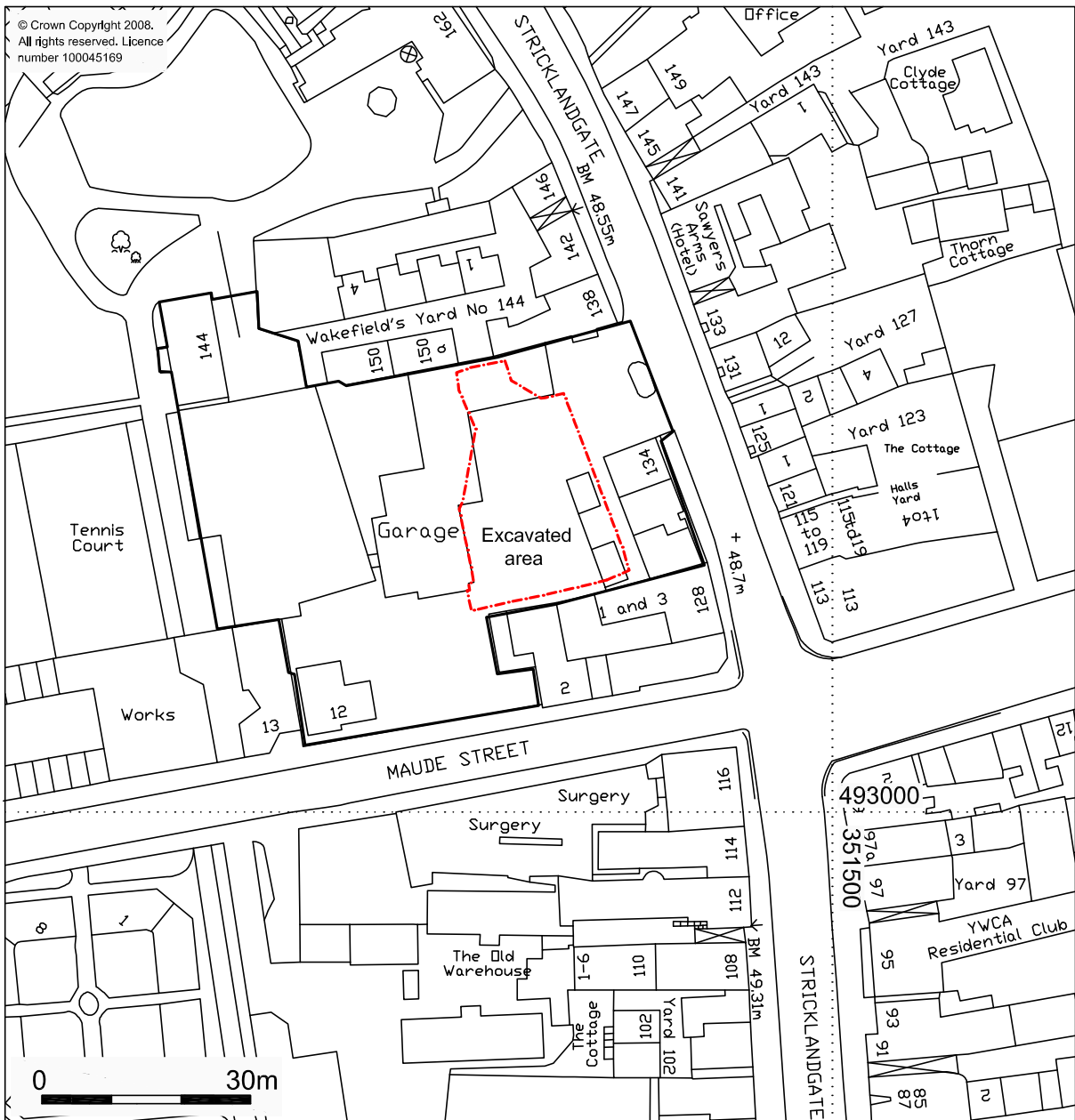
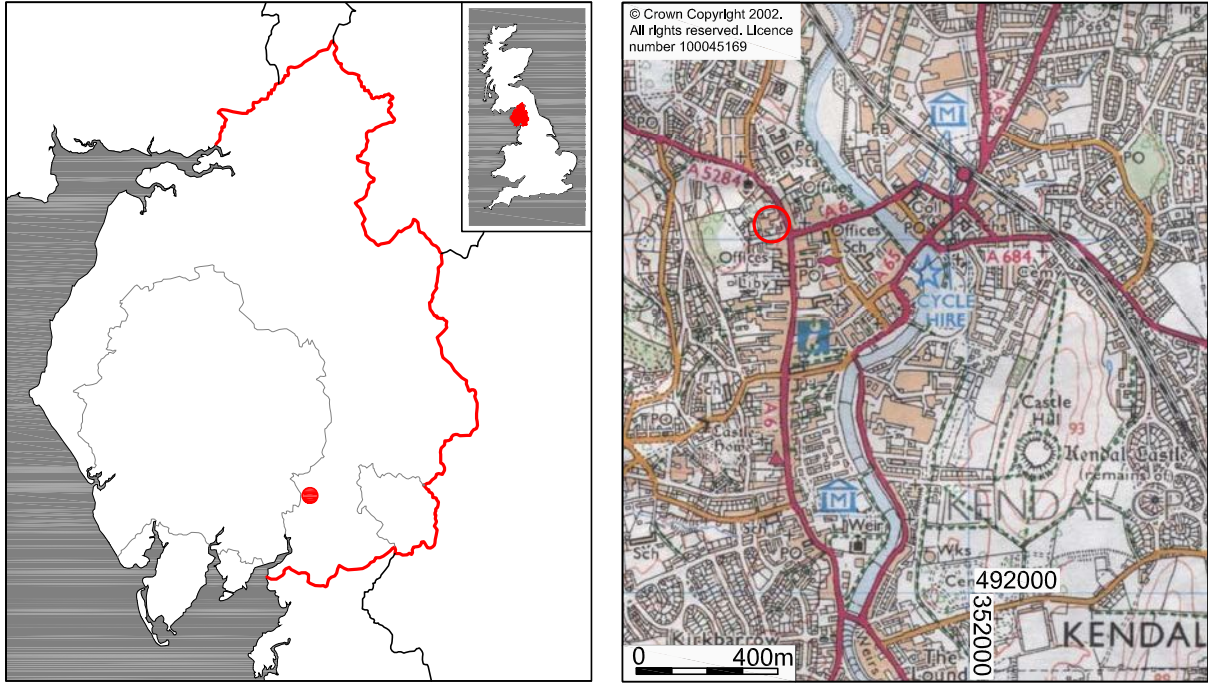


Figure 1: Site location

2. Methodology

2.1 Excavation

2.1.1 The brief for the excavation issued by the CHES (see *Appendix 1*) targeted the western part of the site based upon the results of the evaluation, see Figure 1. Constraints to the western limit of excavations were provided by a substantial vehicle inspection pit relating to the former garage, the northern, eastern and western limits of excavation were dictated by standing buildings not affected by the development. Groundworks necessitated the removal of buried fuel tanks prior to excavation, and the resulting truncation can be seen in Figures 4 and 5. A small vehicle inspection pit in the south-east of the site resulted in a smaller truncation in this area. With the exception of these truncations the rest of the site was largely undisturbed and there was no further damage to the soil horizon and the medieval deposits sealed below. Once the bulk of the overburden had been stripped by a mechanical excavator down to the level of potentially significant archaeological deposits the site was cleaned by hand and the spoil was scanned for any significant artefacts. The site was then gridded into 10m squares and a pre-excavation plan was produced after which each feature or deposit was excavated and recorded in the following manner and in keeping with the standards and guidance of the Institute for Archaeologists (formerly the Institute of Field Archaeologists; IFA 2001).

- **Written record:** every context was allocated a unique number and descriptive records of all deposits and cuts were made using Greenlane Archaeology *pro forma* record sheets; a summary context list is presented in *Appendix 3*.
- **Photographs:** photographs in both 35mm colour print and colour digital format were taken of all archaeological features excavated during the project, as well as general views of the site. A selection of the colour digital photographs is included in this report, and the remainder are presented on the accompanying CD. A written record of all of the photographs was also made on Greenlane Archaeology *pro forma* record sheets;
- **Drawings:** drawings produced for each grid square included the following:
 - i. A pre-excavation and post-excavation area plan at a scale of 1:50;
 - ii. Sections of excavated features at a scale of 1:10 and 1:20;
 - iii. Select single context feature and layer plans at 1:20 and 1:50.

2.1.2 The site boundary was located with reference to nearby buildings and structures known to exist on Ordnance Survey plans and all drawings included heights in meters over datum.

2.2 Environmental Samples

2.2.1 **Strategy:** samples were taken from any cut feature or deposit that was deemed to have the potential for the preservation of organic matter or fine industrial residues; these residues were then analysed with a view to help understand the function of the feature, and also to provide additional dating. In total 1,500 litres of samples were taken from 74 individual deposits, of which four were sub-sampled as waterlogged. A 250ml sub-sample was taken of each of the four deposits considered to be waterlogged.

- 2.2.2 **Processing:** the non-waterlogged samples were processed using flotation techniques with 500µm and 250µm meshes used to separate the flot, and a 1mm mesh used for the retent. The flots and retents were then naturally air dried. The waterlogged sub-samples were gently wet sieved through 250µm and 500µm mesh sieves, then sealed in water-filled water- and air-tight containers to be sent for analysis.
- 2.2.3 **Assessment and recording:** artefacts and ecofacts were removed from the retents and assessed. The content of the retents was recorded on *pro forma* record sheets, and this information is summarised in *Appendix 9*, together with the contents of the flots and waterlogged samples. The flot samples and 18 250ml sub-samples of either waterlogged or anaerobically preserved deposits were submitted to Headland Archaeology for assessment. Both the flot samples and waterlogged sub-samples were then assessed using a stereomicroscope at magnifications of x10 and up to x100 where necessary to aid identification. Identifications were confirmed using the modern reference material and seed atlases including Cappers *et al* (2006). Plant nomenclature follows that of Stace (1997) with ecological information taken from Clapham *et al* (1962).

2.3 Finds

- 2.3.1 **Processing:** all of the artefacts were washed or dry-brushed as appropriate prior to being packaged to be sent for further analysis.
- 2.3.2 **Recording:** the finds were assessed and identified and recorded on *pro forma* record sheets. A catalogue of the finds was produced giving the quantity, a brief description, and date (where known) of each type of find (*Appendix 4*).
- 2.3.3 **Pottery Assessment:** the post-Roman pottery was analysed in accordance with guidance provided by English Heritage in Management of Archaeological Projects (English Heritage 1991) and the guidelines provided by the Medieval Pottery Research Group (2001) (see Chapter 6).
- 2.3.4 **Clay Pipe Assessment:** the clay pipe assemblage was assessed by Peter Davey (following White 2004) (see *Appendix 5*).
- 2.3.5 **Bone Assessment:** material was superficially examined in order to gain a picture of the species presentation, anatomical distribution and preservation of the bones (see *Appendix 6*); this information is to be considered highly preliminary.
- 2.3.6 **Metal Conservation Assessment:** all iron and selected non-ferrous metal finds were examined at x20 magnification under binocular microscope alongside X-radiographs of the finds produced using standard procedures and equipment. The material identifications were checked and observations made on the condition and stability of the finds which is summarised in *Appendix 7*.
- 2.3.7 **Wood Assessment:** all pieces were washed under cold running water to remove adhering burial deposits. Wood species identifications follow Schweingruber (1982).
- 2.3.8 **Leather Assessment:** the leather was wet and washed when examined. A basic record has been made, including measurement of relevant dimensions and species identification where possible. Leather species were identified by hair follicle pattern using low powered magnification. Where the grain surface of the leather was heavily worn identification was not always possible. It is

sometimes difficult to distinguish between cattle hide and calfskin and the term bovine has been used when any uncertainly arose. Shoe bottom unit components and repairs are assumed to be of cattle hide unless stated otherwise. No allowance has been made for shrinkage. Any shoe sizing has been calculated according to the modern English Shoe-Size scale.

2.4 Archive

- 2.4.1 A comprehensive archive of the project has been produced in accordance with the project design (*see Appendix 2*), and current IfA and English Heritage guidelines (Brown 2007; English Heritage 1991). The paper and digital archive and a copy of this report will be deposited in the Cumbria Record Office in Kendal on completion of the project. Three copies of this report will be deposited with the Cumbria Historic Environment Record, one with the client, and one will be retained by Greenlane Archaeology. In addition, a record of the project will be made on the OASIS scheme. A copy of the report will also be deposited along with the finds in Kendal Museum.

3. Background

3.1 Historical and Archaeological Background

- 3.1.1 **Introduction:** the majority of the site background is taken from the earlier desk-based assessment (Greenlane Archaeology 2008a), and is intended to help put the results of the excavation in their local and regional contexts. Part of the map regression which was carried out as part of the desk-based assessment has also been included which has been tailored to be relevant to the excavation results (see *Section 3.2*; Figures 2 and 3).
- 3.1.2 The site is located close to the northern limit of the later medieval and early post-medieval town, as shown by Speed's map of Kendal dated 1611 (see Figure 2). Archaeological investigations on the opposite side of Maude Street, at 110-112 Stricklandgate, revealed remains of activity in the backplots of dwellings fronting Stricklandgate dating between the late 12th to mid 14th centuries and the late 14th to 17th centuries (OA North 2004). As any remains present on the site are likely to be principally medieval or post-medieval in date the more general site history focuses on these and other potentially relevant periods.
- 3.1.3 **Early Medieval period:** as is the case throughout Cumbria, the evidence for early medieval activity is scant. Once the administration of Rome was finally rescinded in cAD 410 it seems likely that Kendal became part of the British Kingdom of Rheged (Kirkby 1962). From the early-mid 7th century onwards the expanding kingdoms of Northumbria began to influence the area. A fragment of an Anglian cross discovered in Trinity Church, Kendal is one of the few tangible pieces of evidence relating to this period (Collingwood 1904). This suggests a pre-Norman church existed on the site and that Kirkland was the early medieval focus of what was to become Kendal.
- 3.1.4 During the 9th and 10th centuries the region was subject to the influence of populations of Hiberno-Norse extraction. Place-name evidence (Smith 1967) indicates that these people were present throughout Cumbria, hence the proliferation of Norse names in the area.
- 3.1.5 **Medieval period:** the settlement of Kirkland, at the southern end of the medieval town, was recorded in the Domesday Book (as *Chechebi*; Faull and Stinson 1986), from which it may be inferred that the mother church of the area was there. The settlement became the centre of a Norman Barony in the later 11th century. The earliest fortification in Kendal, which could potentially have been the seat of the Barony, is Castle Howe (RCHME 1936, 122). The castle is one of a series of early post-conquest motte and bailey fortifications established along the river valleys of the North West and probably dates from the 12th century (Winchester 1979). A later fortification was Kendal Castle to the east of the River Kent which has earthworks and masonry dating to the 13th century onwards (Pevsner 1967, 256-7).
- 3.1.6 **Early town development:** Richard I granted a Saturday market in 1189, and at some time between 1222 and 1246 William III of Lancaster, the lord of the manor, confirmed borough status to a settlement which seems to have been encouraged to the north of Kirkland (Munby 1985). The earliest map is John Speed's of 1611 and this suggests there was some deliberate town planning (Figure 2). There is a notable contrast between the winding course of Kirkland, round the church, and the long straight streets of Highgate, Stricklandgate, and Stramongate, all of which converge on the market place

in Kendal. The streets had narrow burgage plots extending back from the street frontage, and documents dating to 1310 and 1390 suggest that there were around 144 tofts in the town, the width of the tofts being fairly wide allowing further sub-division laterally (CCC and EH c2002, 9). The charter of between 1222 and 1246 has a specific clause relating to fulling and dyeing (Munby 1985, 103), indicating there was an established cloth-based economy in Kendal by this period. Kendal was subject to numerous raids from Scotland in the 14th century, the most notable being the great raid of 1322. There were also outbreaks of sheep murrain from 1280 onwards and poor harvests led to famines between 1315 and 1317 (Winchester 1979, 6).

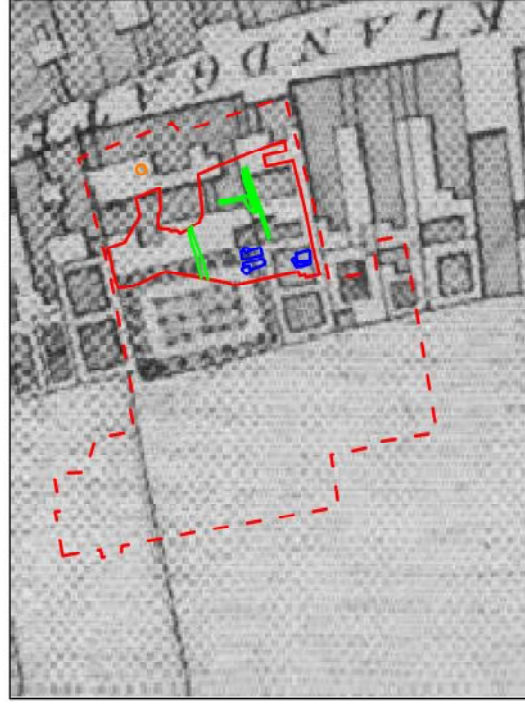
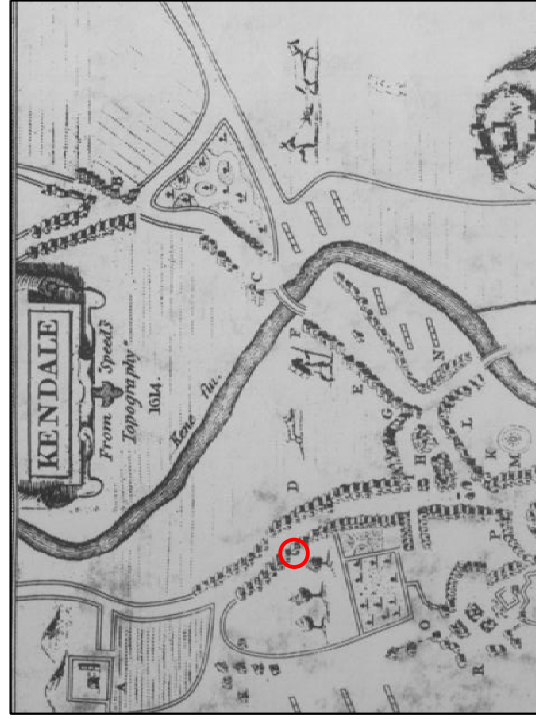
- 3.1.7 **Post-medieval period:** the woollen industry came to dominate the town's economy during the later medieval and post-medieval period and remained the town's major source of wealth for some time (CCC and EH c2002, 10). During the 18th and 19th century the population expanded rapidly and settlement became considerably more dense within the town centre, with the effect that many of the older burgage plots were in-filled with new buildings. This gradually led to the development of the present Yard system, which provided access to properties behind the main streets while retaining some open space (*op cit*, 14-15). It is evident from the map regression that this infilling occurred to the rear of 130-136 Stricklandgate (see *Section 3.2* below).
- 3.1.8 During the late 18th century some major developments took place in close proximity to the site; the land to the north was developed by John Wakefield and Son prior to 1788 and used as a woollen manufactory (Curwen 1900, 334); their weaving shop and workers cottages are evident on the maps from 1787 onwards, (see *Section 3.2* below). They made use of a beck that flowed from Maudes Meadow to the west through their property and across the street to wash yarn (*op cit*, 335). They also established a bank next to their dwelling house on Stricklandgate in 1788, and an inn known as the 'Black O'Moor' or the 'Labour in Vain' (*ibid*). Both were subsequently demolished, but the weaving shop was clearly still present until the end of the 19th century (see *Section 3.2* below).
- 3.1.9 The beck from Maudes Meadow subsequently formed part of a scheme to drain Maudes Meadow begun in 1863, although it was culverted from as early as 1820 (*op cit*, 334). Maude Street was constructed in 1897, and led to the destruction of several houses, including the former home of a Dr Shaw 'the famous orientalist' (*ibid*). Alterations and improvements had already been made to Sandes Avenue on the opposite side of Stricklandgate (CRO(K) WSMB/K 82a 1872), and the development of Maude Street seems to be part of a more general period of improvements to this part of the town at this time.

3.2 Map Regression (Figures 2-3)

- 3.2.1 **Introduction:** included on the maps illustrated are certain features from the excavation from the earliest three phases at the site (Phases 1-3, see excavation results and Figure 6). The burgage plot boundaries (from Phase 1, 1100-1400) have been included to see how they relate to the post-medieval boundaries, and the 18th century structures found on site (from Phase 3) have been included in an attempt to trace their history. The locations of these features are rough due to the inconsistencies in the early mapping of this part of the town.
- 3.2.2 **Speed 1611:** this was the first commercially available plan of *Kendale* and shows that there were dwellings fronting Stricklandgate in the vicinity of the

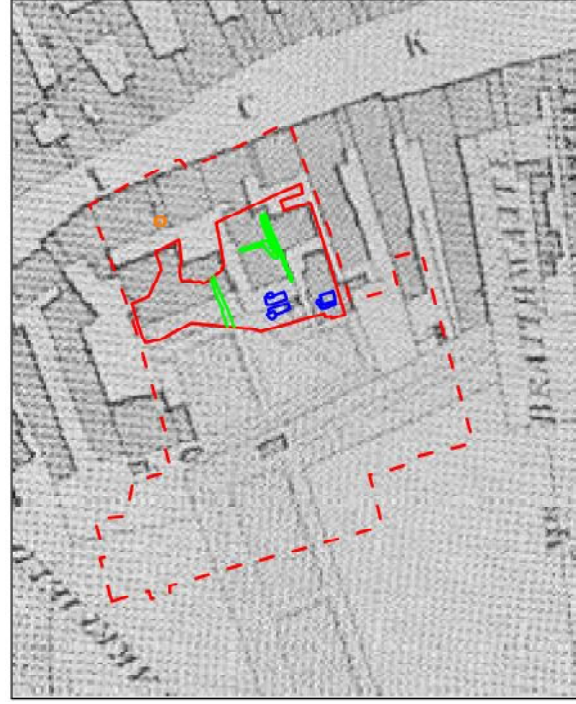
site. The map shows little other detail other than that the land to the rear of these dwellings was enclosed.

- 3.2.3 **Todd 1787**: this map shows there are properties on the site with frontages to Stricklandgate and a parallel row of buildings to the rear. Behind these buildings are outbuildings and garden or allotment areas.
- 3.2.4 **Wood 1833**: this appears to be a more simplified or schematic map than Todd's, and shows that there are established properties on the site with frontages onto Stricklandgate, with buildings running parallel to the rear. On the west side of the property boundaries there is a field which is marked as belonging to a Mrs Braithwaite.
- 3.2.5 **Hoggarth 1853**: this map shows that the secondary row of houses has been re-developed into what appears to be two more distinctive groups that may relate to individual yards. More garden areas seem to be established to the rear of these.
- 3.2.6 **Ordnance Survey c1859**: this map is extremely detailed, and show the divisions within the buildings and the design of the large garden to the rear, which includes a small octagonal building in the north-west corner, probably a summerhouse. The field to the west has now been divided into gardens and parkland (as demonstrated in the evaluation phase, Greenlane Archaeology 2008b), and a weaving shop is shown just outside the north boundary of the site.
- 3.2.7 **Ordnance Survey 1898**: this map shows that there has been little change to the properties with the site area and the boundaries are unchanged, but due to changes in the Ordnance Survey's mapping conventions the detail of the garden has not been shown. In the top north-west corner of the site there is now a detached property. To the south of the site, three properties on the west side of Stricklandgate and a row of seven properties running east/west have been demolished allowing greater access to the field to the west. The row of buildings on the south boundary of the site is still extant.
- 3.2.8 **Ordnance Survey 1912**: to the south of the site boundary opposite Sandes Avenue the access shown on the Ordnance Survey 1898 is now Maude Street. This street continues along the south boundary of what was Mrs Braithwaite's field, terminating at the west end. A strip of land running north/south on the east side of the field appears to have been given over to buildings, which are accessed from Maude Street. The Rating Valuation (CRO(K) WT/DV/2/27 1910) shows that the two cottages within the proposed development area on Maude Street belonged to a Reverend Maude, another on Maude Street belonged to George Burrow (now Maudlands), and the properties on Stricklandgate (now numbers 130-136) belonging to a Thomas Leighton (although they are described as a single cottage).
- 3.2.9 **Ordnance Survey 1938**: the site has changed considerably by this time due to the construction of a garage at the site which has necessitated an access from Stricklandgate and the development of the western part of the site for the first time.



Speed 1614

Todd 1787



Hoggarth 1853

Wood 1833

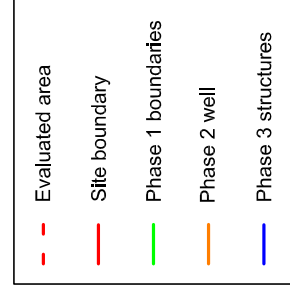
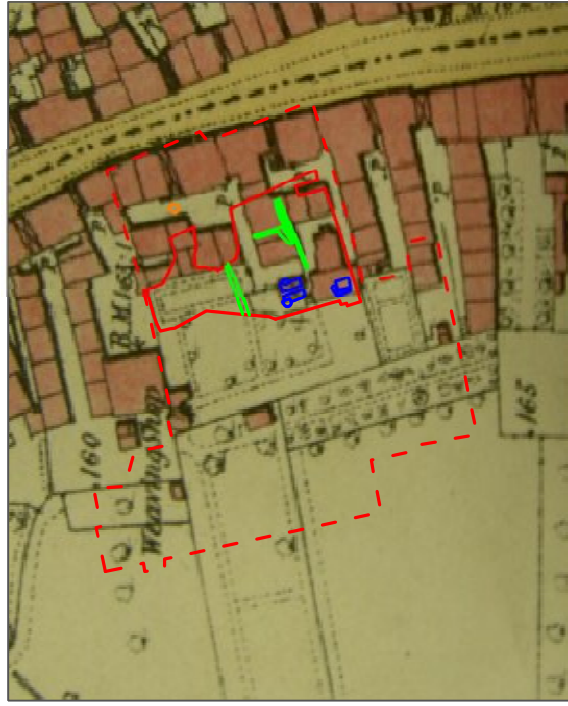


Figure 2: Map regression 1614 -1853



Ordnance Survey 1859



Ordnance Survey 1898



Ordnance Survey 1938



Ordnance Survey 1912






-  Evaluated area
-  Site boundary
-  Phase 1 boundaries
-  Phase 2 well
-  Phase 3 structures

Figure 3: Map regression 1859-1938

4. Original Research Aims

4.1 Academic aims

4.1.1 Based upon the results of the evaluation (Greenlane Archaeology 2008b) this excavation was deemed to have the potential to address a number of academic aims which included:

- To contribute to a typology of medieval pottery fabrics in Kendal;
- To contribute to an understanding of the environment of medieval Kendal and provide information on key points such as past land use, vegetation, and exploitation of resources;
- To contribute to an understanding of medieval health and diet;
- To contribute to an understanding of the extent, development and morphology of the town during the medieval period.

4.2 Objectives

4.2.1 The objectives of the project were twofold:

- To preserve by record the archaeological evidence contained within the area of the site and to attempt a reconstruction of the history and use of this area.
- To inform wider regional, national and period based research frameworks with specific reference to the resource assessment, agenda and strategy documents for the archaeological research framework for the North West of England (Brennand 2006; 2007).

5. Excavation

5.1 Introduction

- 5.1.1 Summary results of the excavation are presented below. The context list is reproduced in *Appendix 3*, Figures 4, 5 and 6 illustrate the plan of the archaeological features recorded, and their division into the four basic phases of activity. In total 58 cut features were excavated which spanned the period from the 13th to the 19th centuries, six post-medieval layers and three post-medieval structures were also recorded. A majority of the cut features were medieval pits, a few of which were possibly the result of tree/vegetation clearance and quarrying. Three medieval boundary ditches were excavated which represented burgage plot boundaries or their sub-divisions, a substantial later medieval posthole with surviving post was also recorded. A majority of the post-medieval features were apparently structural, including wall foundation trenches; a stone built workshop, postholes and ground consolidation.
- 5.1.2 With the exception of the areas of truncation shown on the site plans the entire site was covered in a layer of subsoil or garden soil, this layer sealed all the cut features and covered the layers and structures recorded. The western limit of the excavation was defined by the results of the evaluation phase which along with the desk-based assessment (Greenlane Archaeology 2008b and 2008a) revealed the land in this area to have been largely fields and gardens until well into the 19th century. The southern half of the western limit of excavation also corresponded with a massive truncation caused by vehicle inspection pits relating to the now demolished garage which recently occupied the site. The northern, eastern and western limits of excavation were formed by the extents of the development area, the only exception being an area of truncation caused by buried fuel tanks which had unfortunately removed the archaeological deposits of Stricklandgate's street frontage.
- 5.1.3 The broad phasing employed in this assessment is based on the pottery types recovered which in the medieval period consist of two main traditions with shorter transitional phases. The dating of the earlier gritty ware tradition still seems somewhat loose due to the lack of excavated local kiln sites, the lack of associated dateable artefacts found with the pottery and the wealth of unpublished sites that have been excavated in Kendal which may potentially help refine these dates. Publication of the pottery recovered from this excavation would potentially help the dating of pottery commonly found in Kendal due to the large assemblage and stratified deposits encountered at this site.

5.2. Local Geology and Subsoil

- 5.2.1 The underlying solid geology of the area is Lower Carboniferous Limestone. The deposit immediately underlying the site consists principally of moderately to well sorted silt with occasional stones. There are pockets of sand and gravel within this deposit, and well to moderately sorted sands and gravels underlie the silt. These deposits are interpreted as an alluvial sequence, with the lower sands and gravels representing channel fills dating to the late glacial/immediately post-glacial period when the River Kent would have flowed at a higher level and much faster rate, depositing the sands and gravels observed. Drainage of melt waters and rising sea levels would have significantly reduced the flow rate of the river, resulting in the deposition of

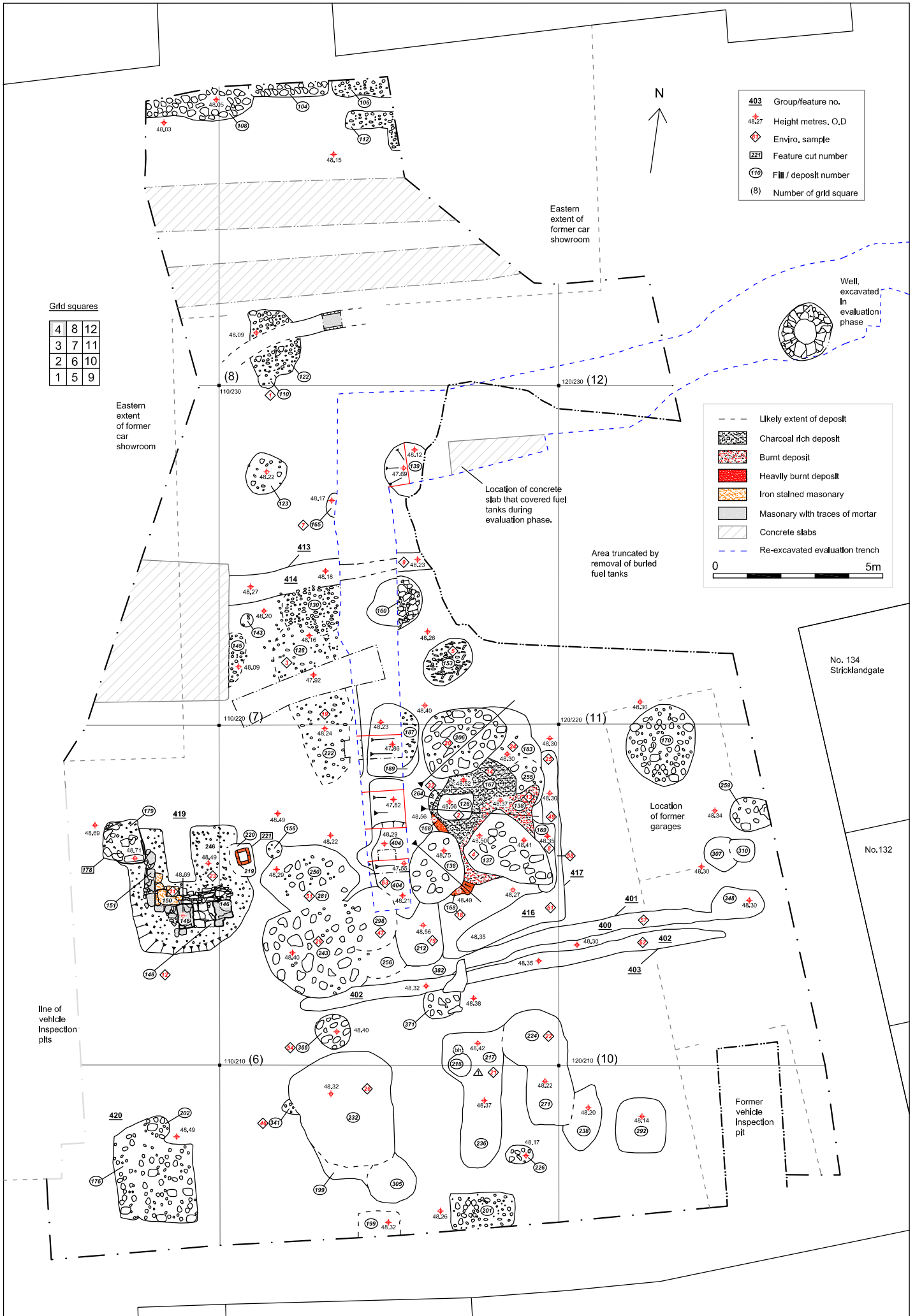
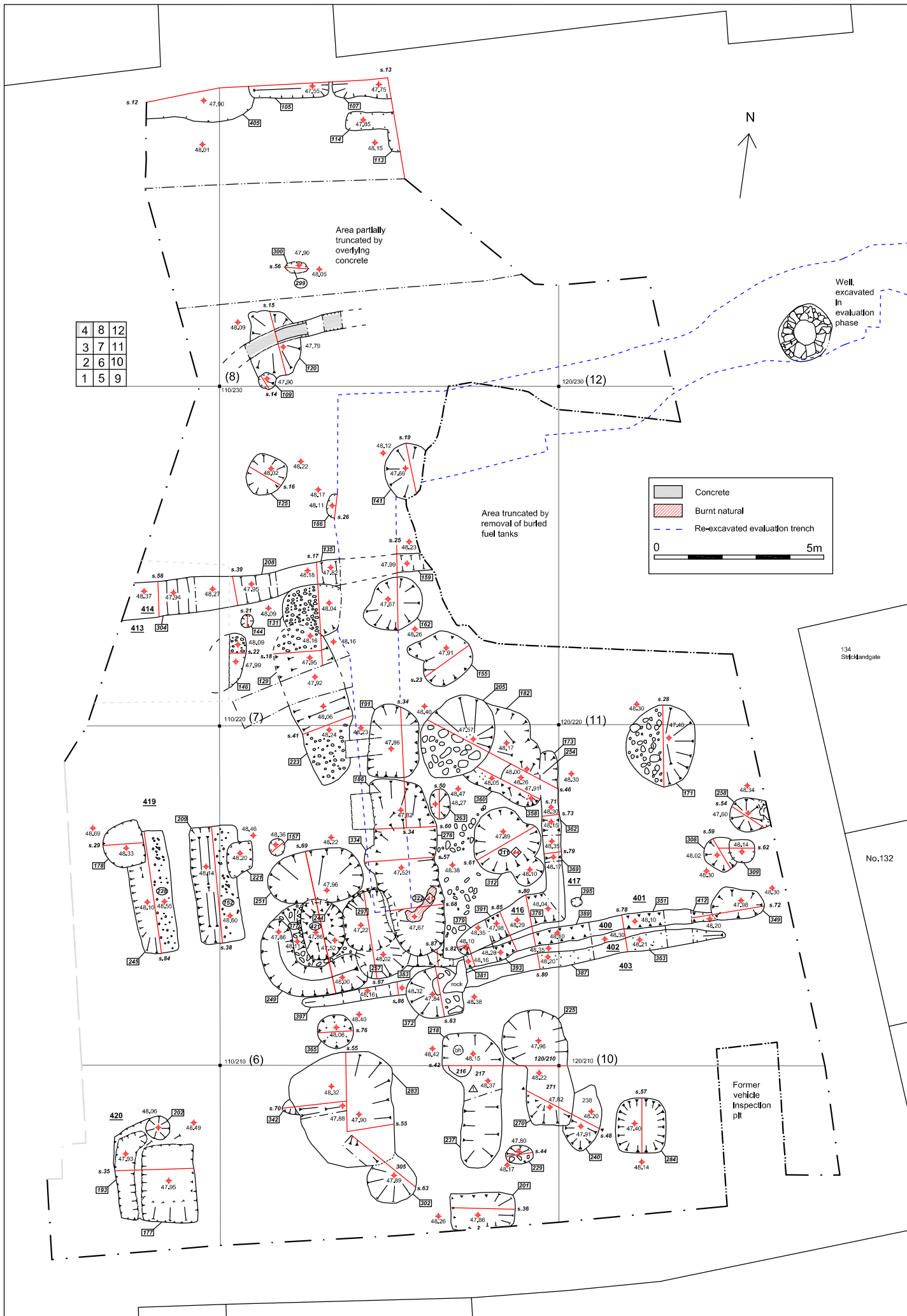
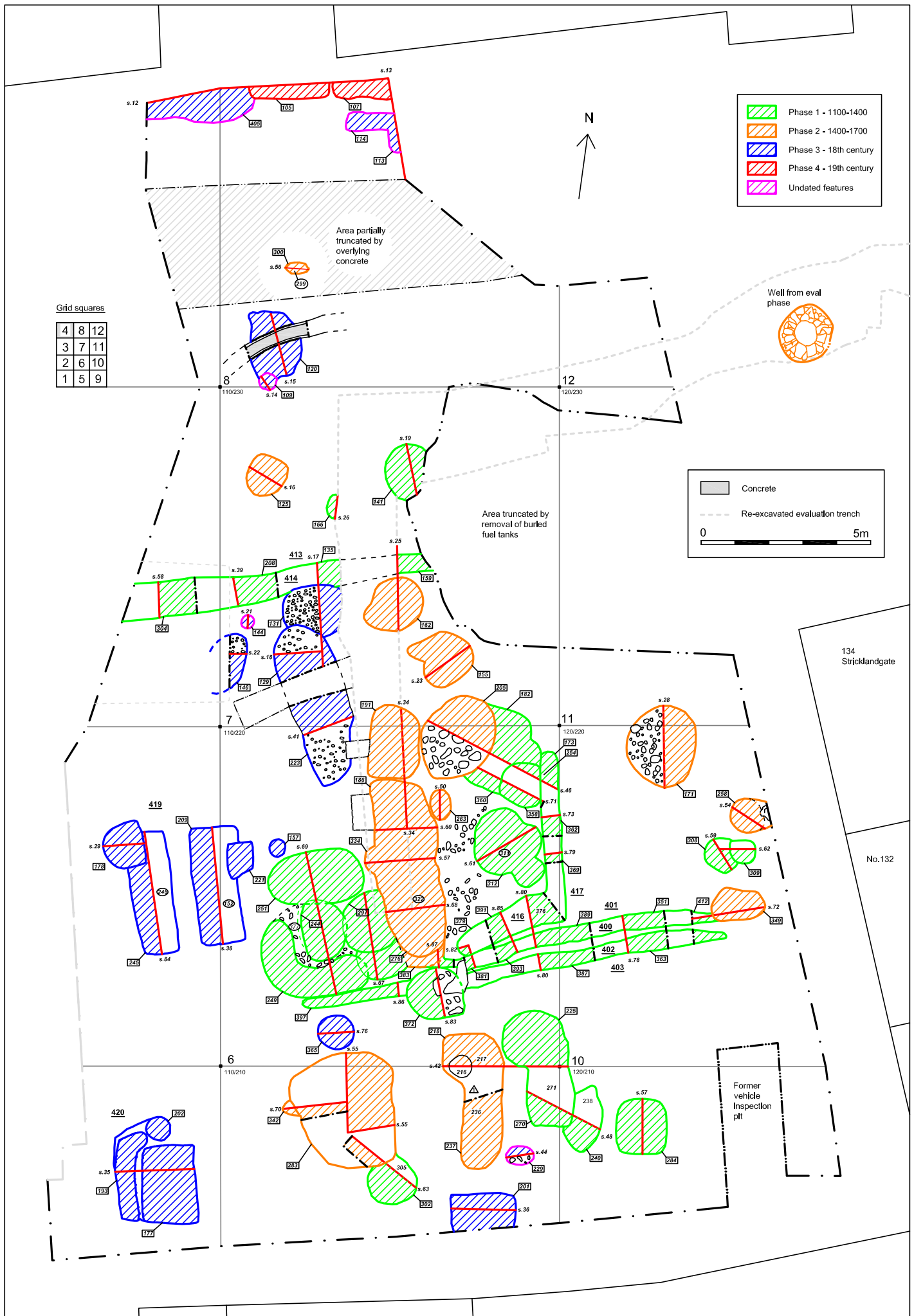


Figure 4: Pre-excitation site plan





silts and partial infilling of the river. An unusual feature of these deposits is the presence of occasional large blocks of limestone. These are interpreted as originally of glacial origin, but they are in their current position as a result of erosion by the river of any associated till that surrounded or supported them (Lancaster, pers comm).

- 5.2.2 The subsoil or garden soil (**199**) was present in all areas of the site and was a uniform greyish mid-brown, fine sandy-clay with occasional to moderate mixed limestone inclusions. This deposit varied in depth from 0.10m in the north-east corner of the site to over 0.50m thick in the south-west corner of the site. Finds from this layer suggest that it began to develop quite rapidly in the later medieval period and some of the earlier post-medieval features became evident up to 0.20m above the natural silts, sands and gravels. While the soil may have begun to develop in Phase 1, it mainly belongs in Phases 2 and 3.

5.3 Phase 1: 1100 to 1400

- 5.3.1 The earliest phase of activity on the site is defined by the presence of pottery produced before 1400 when the reduced greenwares first start to appear, the most well known in this region are those from Silverdale. The pottery types that fit this date range are the northern gritty wares, early 12th to mid 13th centuries, late northern gritty wares and sandy wares, early 13th to mid 14th centuries and partially reduced greenwares late 13th to late 14th centuries.
- 5.3.2 This phase of activity was represented by three boundary ditches which shall be examined firstly (5.3.3-5.3.5) and 17 pits (5.3.6-5.3.24). The two east-west ditches are thought to be boundaries that effectively divide the site into three plots which would have probably related to properties on Stricklandgate. The third ditch is 'L'-shaped and appears to sub-divide the central plot laterally, there is a notably absence of features from this phase to the east of this ditch and a much greater density of features from all periods to the west of it suggesting a different form of land use, possibly occupation, close to the street front.
- 5.3.3 Ditch **413** (Figure 7, Plate 1) was sectioned by four separate slots. The ditch was orientated roughly east-west, running perpendicular to Stricklandgate, and was exposed for a distance of 8.80m. The ditch was truncated by fuel tanks to the east and reached the limit of excavation to the west. The average width of the ditch was 0.84m and the average depth was 0.36m; each slot revealed a distinct and fairly uniform profile with reasonably steep, flattish sides and a gently rounded base. No evidence of a bank or hedge was found to the north or south of the ditch line, and no evidence of the ditch having been re-cut was noted. The single fill of ditch was a uniform mid greyish-brown sandy-clay with occasional mixed gravels and pebbles which seems to have been the result of gradual and natural infilling. Thirteen sherds of pottery were recovered, 12 were from the late twelfth to the late 14th centuries and a single sherd had a date ranging from the 15th to the 17th century, this may indicate the end date for the ditch. It seems likely that this ditch is was a burgage plot boundary and that it would date from some time shortly after Kendal was granted borough status in the early 13th century.
- 5.3.4 Ditch **401/403** (Figure 7, Plate 2) comprised two parallel linear features that ran roughly east/west, again perpendicular to Stricklandgate. The northernmost **401** of these two linears was the ditch, and its counterpart some 0.25m to the south **403** was probably a corresponding hedge line or possibly a re-cut of the ditch. The eastern origins of these features were clear and

related closely to the rear of the current properties fronting Stricklandgate, the west end of the ditch was 'lost' after 8.50m in amongst a number of cut features while the west terminus of the associated 'hedge' line was evident and showed that its total length was 12.80m. Ditch **401** was excavated in five places and was typically 0.41m wide and 0.17m deep with concave sides and a rounded base. The fill from this ditch **400** was a mid greyish-brown clayey-silt which contained occasional sub-angular limestone gravels. In total 15 sherds of pottery were recovered with a date range from 1100-1400, a majority of these were northern gritty wares with a date up to 1250. Feature **403** was excavated in four places and was 0.44m wide and 0.14m deep on average, although it must be said that the depth and profile of each section varied considerably. Generally the base was undulating and irregular with apparent root hollows, the depth also varied considerably and at times was very shallow. The fill of this feature was a greyish-brown silty-clay with moderate quantities of sub-angular gravels and pebbles which yielded 13 sherds of pottery. Seven of the pottery sherds were northern gritty ware, five were later gritty ware and there was a single sherd of reduced greenware that would have dated from the 15th or 16th century.



Plate 1: Section [208] (looking west) from ditch 413

Plate 2: Ditches 403 (left of two east/west) and 401, ditch 417 is on the right - looking west

5.3.5 Ditch **417** (Figure 7, Plate 2, Plate 3, Plate 4, and Plate 14), like feature **403**, has a distinct start and finish, the ditch was 'L'-shaped and ran north/south for 5m before doglegging west for a further 3.50m. There can be no doubt that this ditch respects the ditch and hedge boundary **401/403** as it runs perpendicular to it from the north then turns and runs parallel to it westwards until its terminus where the two boundaries meet. The partial intercutting of these two features was not enough to determine their relationship as the fills appeared identical at this point. In total six sections of this ditch were excavated, the north/south arm of the feature was typically 0.45m wide and 0.17m deep and the east/west arm 0.90m wide and 0.25m deep. It certainly appeared in plan that the feature had been re-cut, especially the east/west part; this would help explain why it was wider in this area, there was no evidence for this in the excavated sections however. The profile of the feature was fairly uniform with a wide flattish base and short concave sides that varied in their steepness. The fill of this ditch was a greyish brown silty-clay

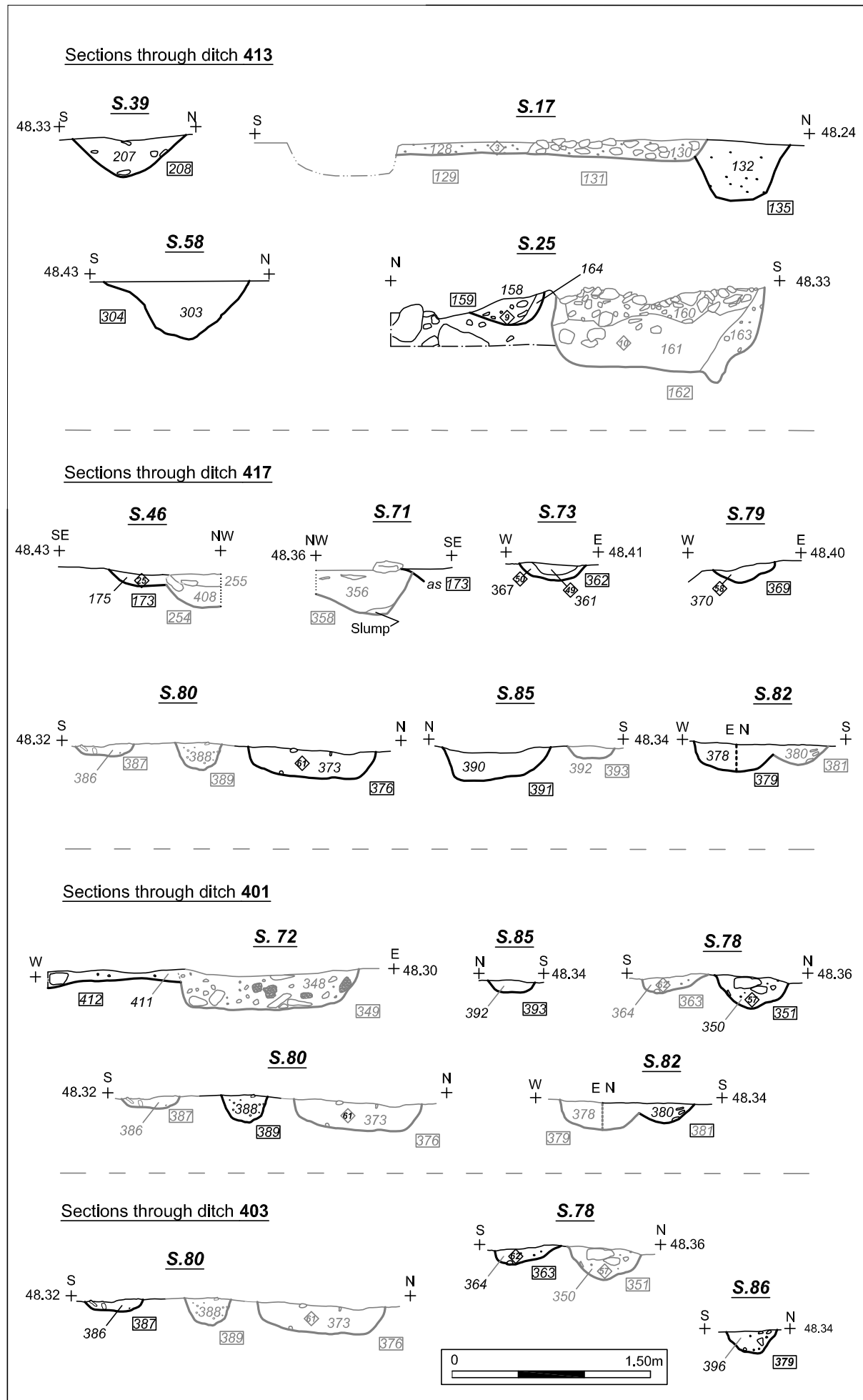
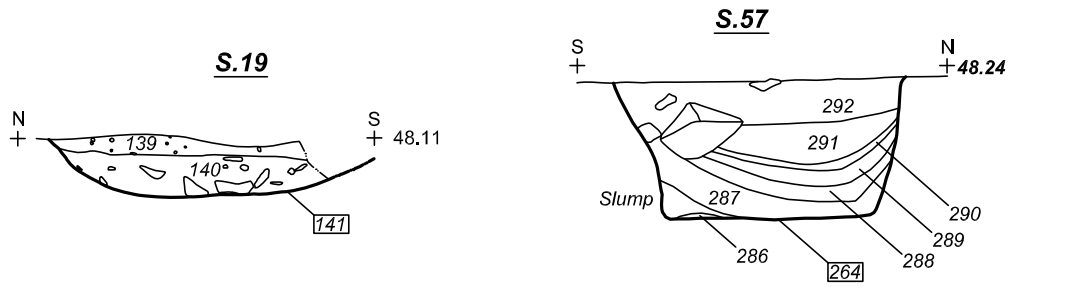
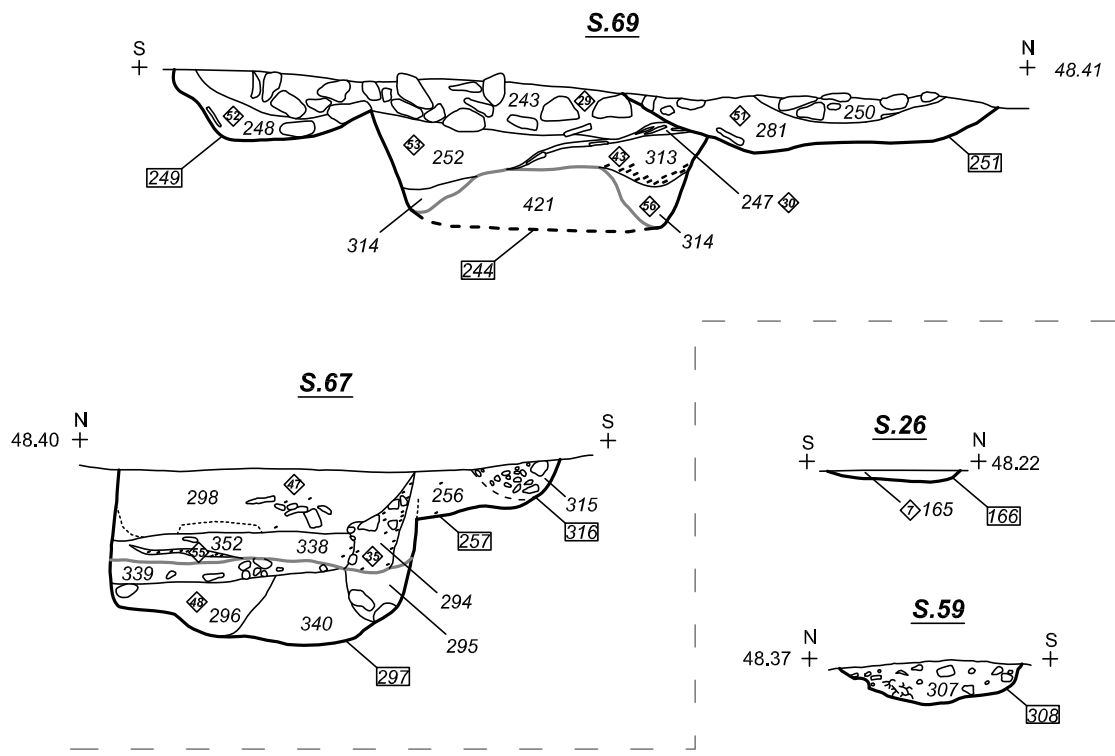


Figure 7: Ditch sections: Phase 1

Rubbish pits



Quarry pits



Pits with probable natural origins

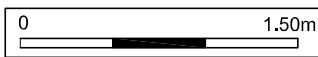
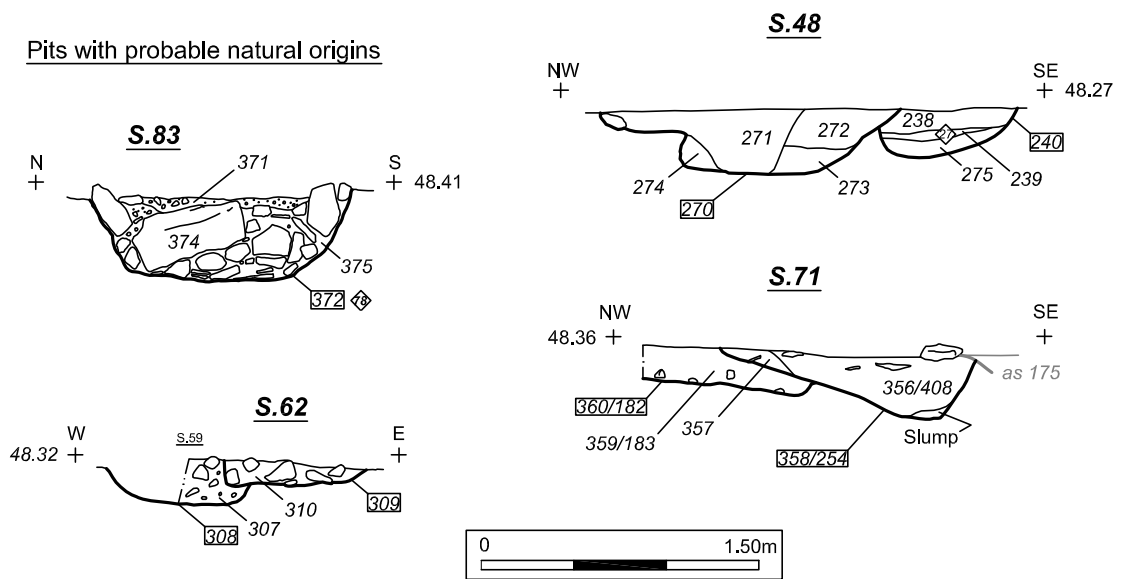


Figure 8: Phase 1 pits

with occasional sub-angular gravels and occasional to moderate quantities of charcoal. In total 22 sherds of medieval pottery were recovered, and the environmental samples revealed bone, burnt bone, cinders and very small quantities of prill and slag. The majority of the pottery recovered from this feature was northern gritty ware although late gritty ware, partially reduced greenware, sandy ware, reduced greenware and midlands purpleware were also recovered. The presence of two sherds of reduced greenware and two sherds of purpleware perhaps suggests that the ditch/boundary was re-cut, as it appeared in plan, and in continual use from the 12th to the 17th century. It is also possible that the east/west arm of this ditch is a partial re-cut of ditch **401** from which only Phase 1 pottery was recovered. The finds and retents from this feature suggest that it was located in an area used for the disposal of domestic refuse or at least in close proximity to a property.



Plate 3: Ditch 417 (at corner), looking west

Plate 4: Ditch 417 (showing corner), looking roughly north-east

5.3.6 There are very few pits that can be certainly dated to this phase of activity at the site, and that only include pre-1400 pottery. Many more are likely to date from this phase due to Phase 1 pottery in their lower fills, many however contain a mixture of Phase 1 and later pottery throughout and their phasing is less secure. On certain occasions pits that have no reliable dating evidence have been ascribed phases due to their similarities in shape, size and fills, and their spatial relationships with pits of known date. There appear to be three types of pitting in this phase, rubbish pits [**141, 284**], clay extraction pits [**249, 244, 297, 251**] which have often been later filled by domestic refuse, and pits which relate to land clearance or root activity [**372, 240, 270, 225, 302, 308, 309, 166, 358/254, 360/182, 312**] in some cases these have also been partially backfilled with domestic refuse. There is also a pit with no obvious function [**166**] and tentative evidence for a cess pit [**162**] on the site, the lack of waterlogged deposits in this feature has unfortunately made this impossible to establish through the environmental remains.

5.3.7 Pit [**284**] was located towards the south-east corner of the site, at the east end of a roughly linear collection features that contained medieval pottery. The pit was sub-circular in shape, 1.60m in diameter and 0.75m deep with a flat base and very steep slightly irregular sides. A total of eight fills were recorded including a layer of well preserved organic matter that had been sealed by later brownish-yellow and grey sandy clays. A total of 49 sherds of pottery were recovered from six of the eight fills, all this pottery pre-dated

1400 and the majority were sandy wares with gritty wares making up the rest. The pit was almost certainly a rubbish pit for the deposition of domestic waste, a majority of this had undoubtedly rotted down to form the fine brownish lenses sealed within the naturally occurring mineral rich infill. The pottery from the upper fill was almost entirely the same as that from the lower fill suggesting it was a relatively short lived functional feature that may or may not have also initially served as a quarry pit for domestic clay extraction.

- 5.3.8 Pit **[141]** was located to the north of the northern plot boundary **413** and was half sectioned in the evaluation phase (Greenlane Archaeology 2008b); the remaining fill was excavated in this phase. The pit was 1.50m in diameter, 0.40m deep with concave sides and a gently rounded base, it contained two fills. The upper fill (**139**) was a mid greyish-brown sandy-clay with occasional sub-angular gravels; this fill produced two sherds of northern gritty ware. The lower fill (**140**) was a brownish pale-mid-grey clayey-silt with occasional fine sandy lenses and occasional to moderate quantities of sub-rounded gravels and sub-angular pebbles. No pottery was recovered from this deposit in the excavation phase however 11 sherds were recovered from this deposit in the evaluation. The more abraded of these sherds were northern gritty wares and the fresher pieces were sandy wares and later gritty wares which date the feature to between 1200 and 1350. The retents from the environmental samples showed the fills to contain bone, barley and unspecified cereal grains and it seems almost certain that this feature was a rubbish pit.



Plate 5: Rubbish pit [141] from the west

Plate 6: Rubbish pit [252] from the east

- 5.3.9 Pit **[251]** was a large oval pit located on the east edge of the dense group of features in the centre of the site (Plate 7), it was 2.80m east/west, 1.60m north/south and 0.40m deep. The sides of the pit were steep and irregular and the base was flat; when half sectioned the pit clearly truncated pit **[244]** to the south and contained two distinct fills. Lower fill (**281**) was a pale brownish-grey slightly sandy-clay that contained five sherds of northern gritty ware. An environmental sample from this deposit revealed slight traces of slag and prill along with a nutshell and moderate quantities of charcoal. The upper fill (**250**) largely consisted of large sub-angular and sub-rounded iron stained blue coloured limestone cobbles that were typically 0.10m by 0.25m in size and were un-worked, this rubble was in a mid greyish-brown silty-clay matrix. The upper fill of this pit was a deliberate backfill to consolidate the ground surface presumably some time after the pit had gone out of use and a reasonable degree of natural infill had occurred. The upper fill contained pottery of a slightly later date, while there were three pieces of northern gritty ware there was also a single sherd of later gritty ware and a single sandy ware sherd. It would appear that this feature was one of a number of clay

extraction pits in this area, and is certainly contemporary and presumably related to pits [297, 244, 249] and boundary [401/403].

- 5.3.10 Pit [244] was a large sub-circular pit in the south-east part of the main group of features in the centre of the site, it was 1.80m north/south, 1.35m east/west and was 0.90m deep. The pit had steep flat sides that led to a flat base, initially it was half sectioned, then later fully excavated. The western edge was slightly undercut near the top but this appeared to be due to its modification by the stony deposit (377), (see 5.3.11). The feature was capped by a stony layer that also covered pit [249] to the south suggesting the contemporaneity of the two features, the capping later sealed four lower deposits. The lower fill (421) was a 0.35m high dome of re-deposited natural that covered the base of the centre of the pit (Plate 7). At first it appeared that this clay was the base of the pit around which ran a narrow moat like channel but after further excavation it was concluded that the pit was dug first then the clay added as it appeared mixed and contained pockets of silt. Whether or not this clay had any function was keenly debated as it appeared to have been carefully placed in the centre, rather than just tipped in from one side. The channel created by the dome of clay was filled by deposit (314) which was a mid greyish-brown silty-clay with frequent sub-angular stones and was loosely compacted; one sherd of northern gritty ware was recovered from this deposit. Overlying the basal fills were deposits (252 and 313) which were quite distinctly different, the earlier deposit was (313) which appeared to have been tipped in from the north and represented domestic refuse. Fill (313) was a loosely compacted dark greyish-brown sandy-silt with occasional sub-rounded gravels, it contained a single sherd of gritty ware pottery and six cattle bone fragments. The environmental samples taken also revealed numerous burnt and un-burnt bone fragments as well as charcoal. Deposit (252) filled the south side of the pit and was a loosely compacted mid greyish-brown silty-clay and contained two sherds of gritty ware and a single sherd of sandy ware as well as cattle bone. The environmental samples revealed burnt and un-burnt bone, charcoal and a nutshell. Upper fill (243) capped both this pit and pit [249] immediately to the south and was dumped to consolidate the ground surface. The dump was 70% to 80% percent large limestone cobbles and boulders in a mid greyish-brown silty-clay. The larger stones were generally sub-rounded and the smaller ones sub-angular, these stones lacked the orange iron staining of those capping pit [251] and were a separate dumping episode. Within the stones of fill (243) nine sherds of gritty ware were recovered along with two sherds of sandy ware and two sherds of reduced greenware that dates from the 15th century. It seems that this deposit would date from Phase 1 and that the later pottery has worked its way into the stones from the overlying soil.



Plate 7: Pits [249], [244] and [251] from the east

Plate 8: Pit [244] from the east, showing deposit (421) in base

5.3.11 Pit [249] curved around the west and south sides of pit [244] and was roughly 4m long and 0.90m wide, its depth was 0.40m at its east end and its base sloped gently downwards before reaching a maximum depth of 0.55m at its north end. The sides were fairly uniform being moderately steep and slightly concave with no perceptible break of slope down to the flattish base. This feature contained two fills, (243) the upper fill (as described in 5.3.10), and a basal fill (248) which was a yellowish-grey slightly sandy-clay. This lower fill contained six sherds of northern gritty ware, three sherds of sandy ware and a single sherd of partially reduced ware along with the bones of cattle and sheep and some charcoal which indicate the disposal of domestic refuse. It should be noted that this feature respects the other pits in this area as well as the boundary at the end of which it is located; all of this suggests that these features are contemporary and form the beginnings of the development of this plot of land. What is also suggested is that the pits were dug to quarry the clay natural in this area, the different sizes and shapes are attempts to maximise clay extraction within a limited area that is bounded to the south by a hedge. Once clay extraction had occurred it is also possible that the pits as a group had a secondary function perhaps for the processing of the clay, this may help explain the provenance of some of the stone used to cap many of the pits. The dome within pit [244] is certainly hard explain and it suggests some sort of industrial process. Deposit (377) also suggests a secondary and industrial function for the extraction pits, this was located between pits [249] and [421]. The small baulk between the two pits appeared to have been re-built and consolidated by the addition of rocks which were largely absent in the sides and bases of the pits in this area. If these pits were simply quarry pits it would seem unnecessary to bother whether the baulks between them collapsed or not, and it is likely that this area would have collapsed as it is undercut on the east side by pit [244]. It seems probable that the consolidation of this edge was to allow pit [249] to retain liquid without it draining into the deeper pit [244].



Plate 9: Pre-excitation shot of clay extraction pits, from east

Plate 10: Area after full excavation

5.3.12 Pit [297] is the final pit that can definitely be ascribed to this group, it was roughly circular in shape, approximately 1.70m in diameter and 0.95m deep. The sides of the pit were very steep and were undercut in places and the base was rounded. The pit contained eight fills, the lower fills appeared to be largely undisturbed but the upper fills appeared to be the result of disturbance and it is thought that the pit had been partially re-cut. There were three basal fills (295, 296 and 340), fill (340) probably represented slumping of the pit sides and was presumed to be the earliest fill, no finds were recovered from

this deposit. Fill **(295)** was a mid orangey-brown slightly silty-clay that contained occasional sub-angular cobbles and a single sherd of sandy ware pottery. Fill **(296)** was a mid-dark brown silty-clay that had no inclusions but yielded a single sherd of gritty ware pottery, the environmental sample revealed little except for a fragment of bone and some charcoal. Fill **(339)** lay above the three lower deposits and formed a flat stony layer that was 0.12m thick and incorporated mid yellowish-grey silty-clay, no finds were recovered from this deposit which appeared to be the latest undisturbed fill. The upper fills comprised **(298, 338, 252, and 294)** all of which appear to represent later pitting, cut into the top of **[297/276]** which may represent later attempts to locate the clay natural. From these fills there were 15 sherds of Phase 1 pottery, seven sherds of reduced greenware and two sherds of the midlands purpleware that has a date range 1500-1700. These fills may relate to **[257]** which was a shallow cut immediately to the south that also contained a mixed assemblage of pottery comprising nine sherds of gritty ware, one sherd of sandy ware, two purpleware sherds and a sherd of brown-glazed red earthenware that post-dates 1650.

- 5.3.13 In spite of some confusion in the area of pit **[297]** that was caused by later disturbance it is clear that there is an interesting group of clay extraction pits that are roughly contemporary and which relate to boundary **[401/403]**. These features were partly re-used as rubbish pits and there is some evidence to suggest that they may have had an intermediary industrial function (see 5.3.11). It seems probable that all the features in this phase of activity date from the 13th century as the lower fills contain a mixture of gritty wares along with later gritty wares, and transitional wares such as sandy wares and partially reduced greenwares. It is somewhat perplexing that these pits are not cut by the later large Phase 2 pit complex **[276/191]**, this would suggest that they are all roughly contemporary, the presence of later pottery in the basal fills of **[276/191]** does not bear this out though and other extraction pits from Phase 2 were evident on the site.



Plate 11: Pit **(297)** from the west

Plate 12: Pit **(297)** from the east

- 5.3.14 Pit **[372]** was located towards the west end of the southern boundary **401/403**, it was sub-rounded with a diameter of 1.50m and a depth of 0.50m and had steep and slightly concave sides with a flattish base. The relationship between this feature and the boundary was unclear due to the presence of a large boulder on the eastern edge of the pit and the similarity of the pit's upper fill to that of linear **403**. The pit contained three separate deposits **(371, 374 and 375)**, the main fill of the pit was **(374)** which consisted of medium to

large rocks one of which could be classed as a boulder, and these were tightly packed and generally sub-angular. Fill **(375)** was a dark-brown silty deposit that looked like peat; this filled the voids between the rocks and was interpreted as a mixture of organic matter that was incorporated with the stones and soil that had filtered down from above. The upper fill **(371)** was a grey silty-clay that was 0.12m thick and effectively sealed the deposits below, this deposit was indistinguishable from the fill of the hedge line and ditch and contained two sherds of gritty ware. It seems likely that this pit is probably contemporary with the boundary and may relate to attempts to remove the large boulder that blocks the course of the ditch, or even the removal or death of a tree in this area, either way it has obviously been deemed a useful place to deposit unwanted rocks.

- 5.3.15 Pit **[240]** was a slightly irregular looking sub-oval shaped feature in the south-east corner of the site (Plate 13) which was partially truncated by the larger pit **[270]**. The feature was roughly 2m north/south, 1m east/west and 0.30m deep and contained three fills. The sides of the pit were irregular, the west side being steeper and flatter than the east and the base was undulating. Lower fill **[275]** was a firm yellowish-grey sandy-clay with occasional sub-rounded gravels, from this fill a plano-convex hearth base was recovered which was not considered to be in situ. The middle fill **[239]** was a dark greyish-brown silty-clay that contained 18 cattle bones. The upper fill **[238]** was a firm greyish-brown sandy-clay containing occasional sub-rounded gravels and pebbles, from this fill there were four sherds of gritty ware, a single sherd of sandy ware, two sherds of 15th or 16th century greenware and a single sherd of brown-glazed red earthenware that would post-date 1650. It is assumed that the later pottery in the upper fill has derived from the overlying subsoil that was left in place over this feature prior to excavation. This feature appears to be natural in origin along with the adjacent pit and has the appearance of a tree throw or a root bole that has been removed as part of the site clearance. Soon after the resulting pit has been partially backfilled with domestic waste, the upper layer appears to have incorporated later pottery that occurs in the subsoil which was very similar in composition and colour.
- 5.3.16 Pit **[270]** was an irregular sub-rectangular feature (see Plate 13) located in the south of the site, along with a number of other features in this area it was considered to be natural in origin. The east side of the feature had a shallow flat side, while the west side was very shallow before breaking half way down to an undercut edge that changed abruptly into a flattish base. The main fill of this pit was a greyish dark-brown sandy-clay that included occasional sub-rounded and sub-angular gravels and pebbles as well as charcoal flecks. From this fill four sherds of sandy ware pottery were recovered, this concurs with the stratigraphic relationship of this pit to **[240]** which contained gritty ware and appeared to be cut by this feature. There were three other fills recorded in this feature that were all sandy-clays containing varying quantities of re-deposited natural and indicative of the generally mixed fill. It seems highly probable that this feature is a tree throw and that the lumps of natural incorporated into the fills derived from the suspended tree roots.



Plate 13: Pits [270] and [240] from the south-west

Plate 14: Pit [312] from the south-east

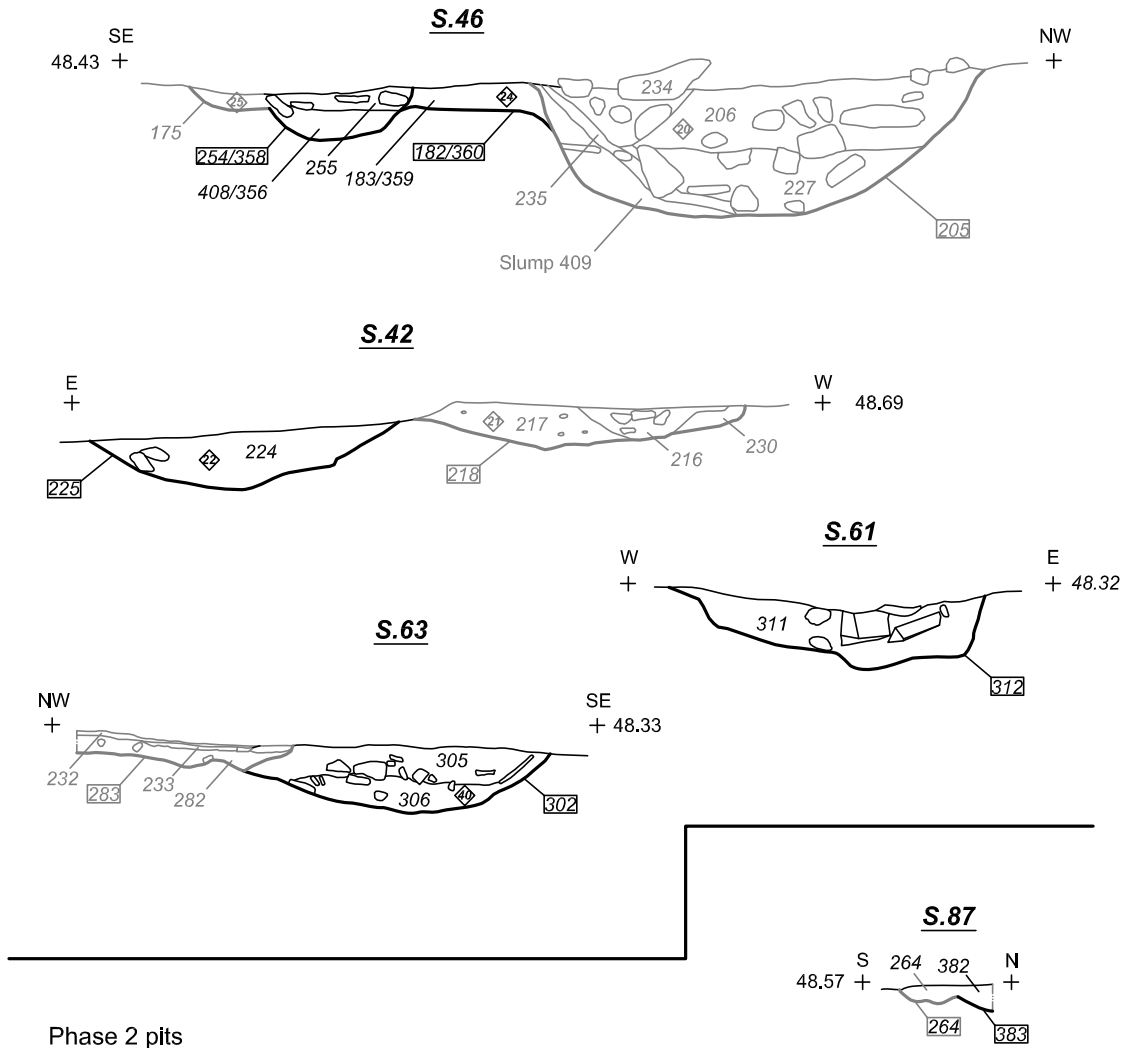
5.3.17 Pit [225] was located to the north of pit [270] and at the time was considered to be the same feature, this may or may not be the case but both appear to have a similar form and be of a similar age. The edges were similar to those of [270] in that the west side was generally steeper than the east and they were somewhat irregular. The single fill (224) was a firm brown sandy-clay with some mineral mottling suggestive of root activity, this fill yielded two sherds of gritty ware and a single sherd of sandy ware. It seems likely that this feature also relates to the removal of vegetation, or possibly a planting area to accommodate rootstocks.

5.3.18 Pit [302] was located centrally close to the southern edge of the site and was cut by the much larger feature [283]. The pit was circular in shape and approximately 1.50m in diameter and 0.40m deep and contained two fills. The upper fill (305) was a pale greyish-brown sandy-clay with the occasional sub-angular limestone gravels, pebbles, and cobbles and was very similar in composition to the subsoil. The lower fill (306) was very similar in composition to the upper fill although it contained more sub-angular limestone cobbles and gravels and occasional flecks of charcoal. The feature had the appearance of a tree root bole that had been removed with some rocks thrown into the base, the upper fill (305) perhaps a product of a more gradual and natural infilling. From the upper fill 16 sherds of pottery were recovered which were predominantly gritty wares with two sherds of sandy ware. It seems likely that this and certain other features in this part of the site are the result of the removal of vegetation which relates to the modification and development of this land.

5.3.19 Pit [308] was located on the eastern edge of the site and was partially truncated by pit [309]. The feature was circular in shape and had a bowl like profile with gently sloping slightly concave sides and a gently rounded base; it was 1m wide and 0.25m deep. The single fill (307) was a mid to dark brownish-grey clay that had orange mineral mottling and occasional sub-angular gravels and pebbles, two sherds of northern gritty ware were recovered from this fill.

5.3.20 Pit [309] was partially truncating pit [308], it was sub-circular in shape and had a diameter of 0.75m and a depth of 0.15m. The pit had a single fill (310) which was compact grey clay with moderate quantities of sub-angular

Pits with probable natural origins: phase 1 cont.



Phase 2 pits

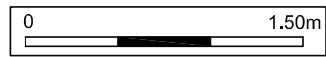
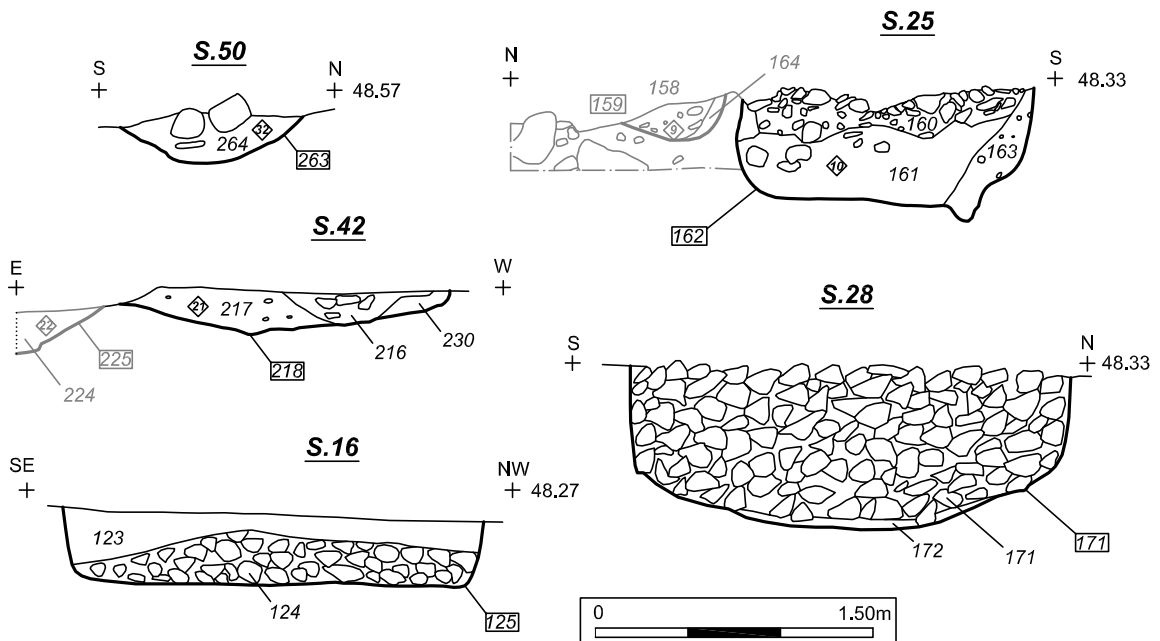


Figure 9: Phase 1 / 2 pits

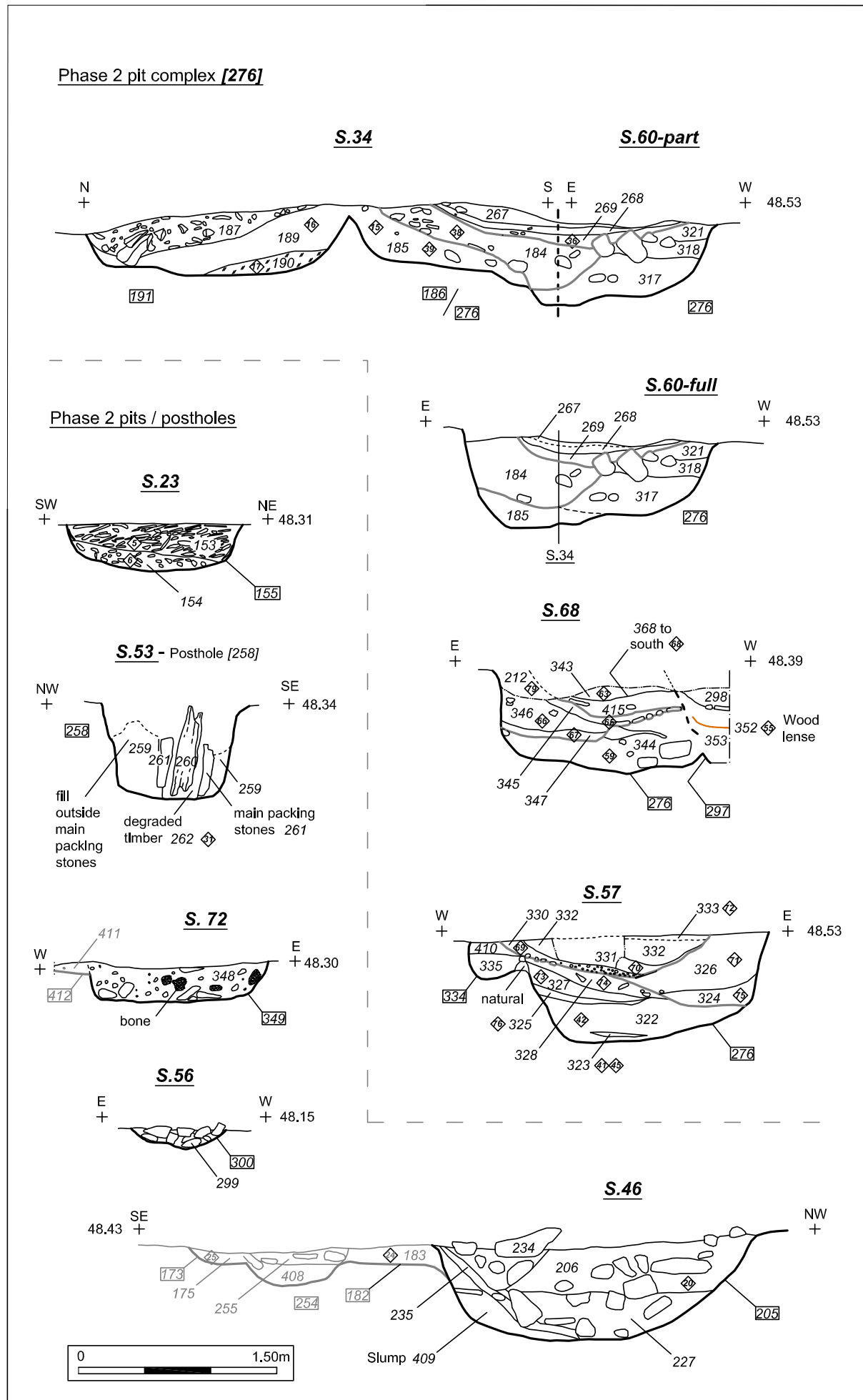


Figure 10: Phase 2 sections

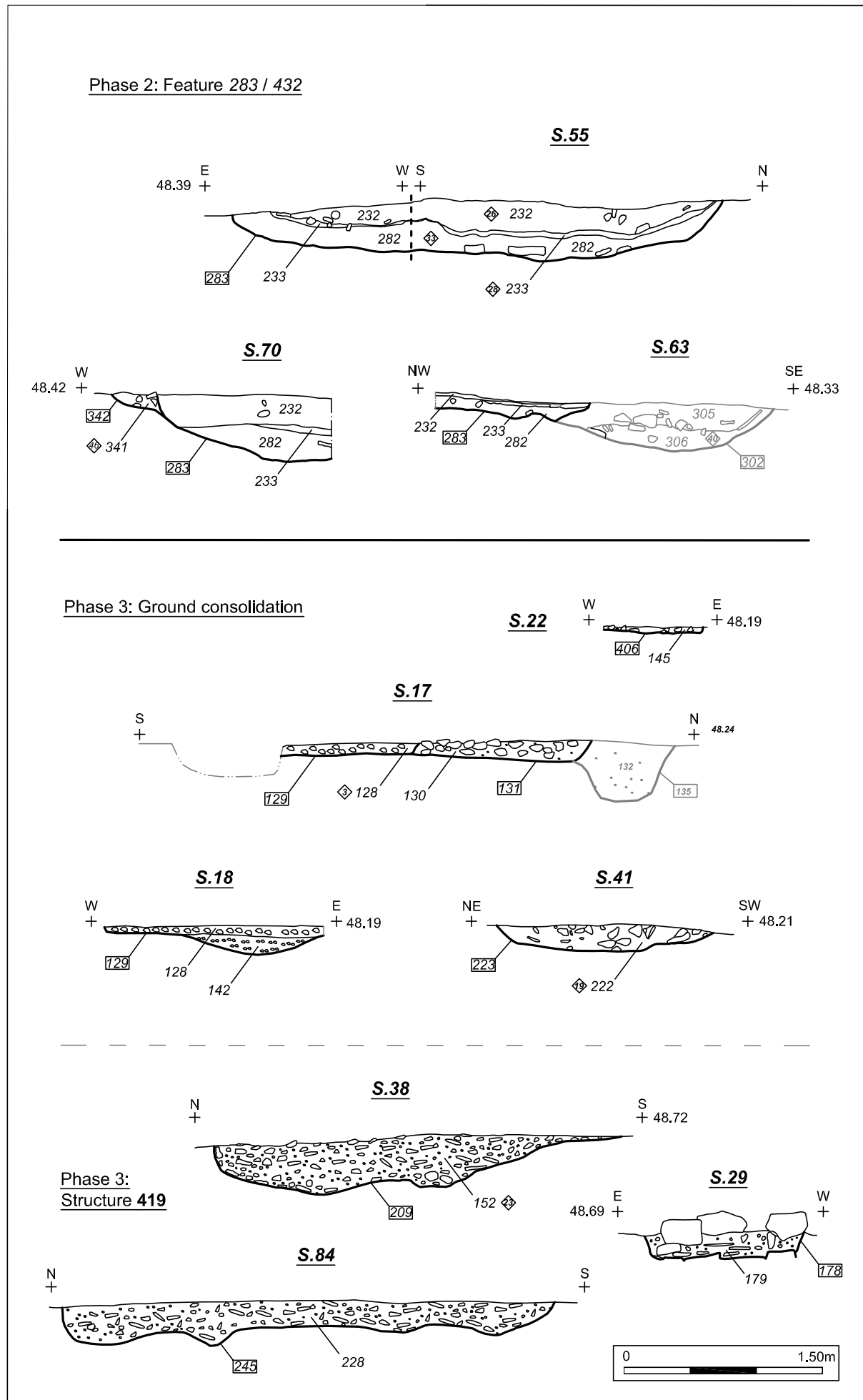


Figure 11: Phase 2 / 3 sections

limestone pebbles. No finds were recovered and the feature was probably the result of plant root activity.

- 5.3.21 Pit **[166]** was once again located just to the north of the northern plot boundary and had been partly truncated by the earlier evaluation trench. Excavation of the remaining half revealed it to be a very ephemeral feature that was 0.70m in diameter and 0.06m deep, it was sub-circular in shape. The fill of this feature (**165**) was a dark brown sandy-clay with occasional flecks of charcoal and gravels. No finds were recovered from this feature but the environmental sample revealed un-diagnostic slag and three fragments of gritty ware that may put this feature in this early phase.
- 5.3.22 Pit **[358/254]** was located in the centre part of the site at the north end of the 'L'-shaped ditch **[417]**. The pit was roughly circular and had a diameter of 1.35m; it has two numbers as it was sectioned twice, (**s.46/71**, Figures 8 and 9). The sides of this pit were very irregular, as was the base which sloped down to the east. The feature had two main fills, a stony upper fill (**255**) and a reddish-brown sandy-clay lower fill (**408/356**). From the lower fill three sherds of gritty ware were recovered which would appear to date the feature to Phase 1, the feature also appeared to be cut by ditch **[417]** (**s.71**, Figure 8). This feature was almost certainly natural in origin and presumably pre-dated the ditch, and pit **[205]** to the west.
- 5.3.23 Pit **[360/182]** was a wide shallow feature that was located between pit **[358/254]** and pit **[205]**. Its shape was irregular/sub-circular with an approximate diameter of 2.40m and a depth of up to 0.20m, the sides were irregular and the base was flattish but uneven. The single fill recorded (**359/183**) was a mid greyish-brown silty-clay with moderate quantities of sub-angular limestone pebbles and cobbles. From this fill two sherds of Phase 1 pottery were recovered and a single sherd of phase 2 reduced greenware. The fill contained some re-deposited natural patches and appeared to be natural in origin, it pre-dates the quarrying pit **[205]** to the west and seems to be roughly contemporary with pit **[358/254]**.
- 5.3.24 Pit **[312]** was located in the centre of the site (Plate 14), just to the west of the 'L'-shaped ditch **[417]**. The pit was sub-circular in shape and its long axis ran north-west/south-east, initially the south-east half of the pit was removed after which it was recorded and fully excavated. The pit sides were irregular but generally steep and short leading to a flattish base. The single fill (**311**) was a light greyish-brown sandy-clay that contained sub-angular cobbles and pebbles which were concentrated in the centre, as well as patches of re-deposited clay natural. From this fill six sherds of pottery were recovered, five were from Phase 1 and there was a single sherd of reduced greenware dated from 1400-1600. Eleven fragments of animal bone were also recovered that were from cattle and sheep/goat suggesting some refuse dumping. It is probable that the feature is either a hasty quarrying episode or a natural feature that appears to have been partially in-filled with stone, once again at the end of the medieval period.

5.4 Phase 2: 1400 to 1700

- 5.4.1 This phase of activity on the site is defined by the presence of reduced greenware pottery which is generally considered to be in production between 1400 and 1600 (see 6.1.1), and follows on from the gritty ware traditions and a transitional phase represented by the sandy wares and partially reduced greenwares. Also included in this phase are deposits containing fine purpleware pottery whose date range is 1500-1700. This pottery is often

found in association with earlier wares especially reduced greenwares, and seldom with post-medieval fabrics. The phasing of features based on these pottery types has not always proven to be straightforward on this site with many features in this phase containing pottery from Phase 1 and vice versa, and it will be interesting to see whether our current view of pottery production and use in this area becomes refined by future work.

- 5.4.2 This phase of activity was represented by a continuation of clay extraction, pits **276**, **186**, **191**, **205**, **171**, **155**, **162**, and **125**. At least one structure of this date was indicated by posthole (**258**) and through the incorporation of building materials in the fills of certain features (see 7.3.2), and the fills from pits **[276]** and **[283]** hint at various industries that would have been operating in the vicinity (see 7.3.3).
- 5.4.3 Pit **[276]** was an enormous trench-like feature that was orientated roughly north/south and was over 5m in length, 1.80m wide and typically 0.75m deep. It is possible that it developed from a series of individual pits as the base shows certain undulations and concavities typical of separate pit bases. What is certain is that it was all open at one point before it was in-filled, as there are three distinct groups of fills that were common throughout its length. The fills of pit **[191]** immediately to the north were also very similar and it is likely that this pit was roughly contemporary also. The pit was first encountered during the evaluation phase where its full extent was not realised, eventually it was fully excavated and three perpendicular sections were recorded. The sides of the pit were very steep and reasonably regular given the overall size of the feature, the base was flattish although there was a slight slope from north to south and a noticeable step near the north end where pit **[186]** had become partially incorporated into the **[276]** pit complex. While there were a total of 27 fills recorded from the three sections of the pit these can be grouped into three main fills that are common to each section, this should be evident in Figure 10.
- 5.4.4 The lower fill was characterised by a moderately firm mid brownish-grey silty-clay with a small sand component, occasional to moderate sub-angular limestone gravels and occasional sub-rounded limestone pebbles and cobbles. This fill contained many fine laminations of well preserved organic matter interleaved with laminations of re-deposited natural, this is indicative of small and repeated dumping episodes; the direction of tipping was clearly from the west suggesting that the earlier Phase 1 extraction pits had been in-filled by this time. The pottery recovered from this deposit included 10 sherds of gritty and sandy ware and two sherds of reduced greenware, it should be noted that seven of the gritty ware sherds were recovered from the lower fill of pit **[186]** which may possibly be a slightly earlier pit but undoubtedly belongs to this phase (see 5.4.10). A trimming of leather was recovered from deposit **(323)**, but no bone was recovered from hand excavation. The paucity of domestic artefacts from this fill relative to the upper fills of this pit suggested initially that it may have been a cess pit or latrine however one might have expected a greater degree of settling of the deposits and not the rather steep tip line evident in the sections if this was the case. It is also evident that the tipping seems to have occurred from the west of the pit rather than the east, where the rear of any dwellings would probably have been.
- 5.4.5 A total of eight environmental samples were taken from the various lenses and deposits that made up this lower fill, the retents revealed pottery and bone fragments, occasional hazelnut shells, small quantities of prill and slag and appeared to represent an assortment of dumped waste. The dark organic

deposit **(323)** contained extremely well preserved organic remains and the presence of bracken and holly leaves was observed during the excavation. This deposit was sampled **41**, and along with **(322)** (sample **42**) contained the waterlogged remains of the seeds of nettles, rushes, chickweed and buttercups. Such species are typical of damp and uncultivated ground.



Plate 15: Feature [276], section 68 – looking south

Plate 16: Feature [276], section 60 – looking south



Plate 17: Feature [276], section 57 – looking north

5.4.6 The deposits that comprised the secondary fill of this feature were characterised by being generally dark reddish-brown clayey-silts which were softer and moister than the underlying deposits and contained moderate sub-angular limestone gravels, pebbles and cobbles. The organic content of these deposits seemed higher and the deposits were generally more homogenous than from the primary fill where frequent finer laminations were evident. The 15 sherds of pottery recovered from this deposit were all reduced greenwares that date from between 1400 and 1600, a fragment of building slate was also recovered. Once again no bone was recovered apart from some burnt and un-burnt fragments of sheep/goat retrieved from the environmental sample retents, along with charcoal, cinders and a lead oxide object which appears to be lead dross suggesting lead working in the immediate vicinity. The deposits

forming this secondary fill all appear to have been tipped in from the east side which would correspond with the rear of the housing on Stricklandgate. The homogeneity of this secondary deposit along with its looser compaction and lack of re-deposited natural laminations suggests a phase of more rapid infilling, and the direction of tipping certainly differentiates it from the primary infill.

- 5.4.7 The upper fill of each section throughout the pit typically consisted of three separate deposits; common to each section was a lower organic reddish dark-brown silty-clay (**269**, **331** and **415**), and an upper re-deposited clay capping layer **404** comprising (**268/269**, **332/333** and **343**). The lower organic layer was very soft and contained moderate quantities of sub-rounded gravels and pebbles, as well as varying quantities of charcoal. From this deposit there was a single sherd of gritty ware, five sherds of reduced greenware from three separate vessels, and a single sherd of fine purpleware. The retents from an environmental sample of this deposit showed high levels of charcoal, over 20 fragments of burnt and unburnt bone, a single hazelnut shell and undiagnostic charred organic matter. The upper re-deposited clay capping layer **404** (see Plate 17, Figures 4 and 10) was approximately 3m by 1.3m and up to 0.30m thick, it covered the central part of the feature and appeared to have been truncated at the south end and on its south-east corner. The clay itself appeared to have originally come from some depth below the ground surface where it was typically paler, better sorted and freer from rocks. The deposit was compact, sterile of finds and had been deliberately placed to seal the pitting and consolidate the ground surface. Another distinctive fill (**330**) was most evident in section **57**, this was a thin layer of well sorted sub-rounded gravels that contained pieces of burnt limestone, charcoal, mortar, cinders and daub; this deposit is interesting as it represents building demolition waste from the 16th or possibly the early 17th century.
- 5.4.8 While it is clear that pit **[276]** has been used for the disposal of household refuse and possibly earlier on as a latrine its early purpose remains unclear. The idea of further clay extraction makes sense considering the size of the feature and the way that it avoids the fills of earlier pits and largely cuts into virgin ground. This is also made more plausible by the waterlogged samples from the lower fills which indicated the growth of plant species that favoured damp and uncultivated ground, this suggests that the plot is waste ground at this time and therefore was more likely to have been quarried. If however quarrying was the likely reason for this pitting it is surprising that the pit is not deeper, especially considering that the cleaner and more sterile clay was generally some distance below the top of the natural ground level. It is also possible that the pitting is the result of a series of intercutting refuse pits that have at some point been emptied for the manuring of nearby land shortly before the deposits described above were introduced. It should also be remembered that ditch **417** was still in existence at the time this pit was in use, and that these features all seem to go out of use at a similar time.
- 5.4.9 Pit **[383]** was a heavily truncated shallow pit that appeared to have been truncated by the southern end of the large pit complex **[276]**. The southern and eastern sides were all that remained and were shallow and concave, the base had been truncated by pit **[276]**. The fill of this feature (**282**) was removed after the excavation of the large pit, it was a mid greyish-brown silty-clay with no inclusions. An attempt was made to establish a relationship between this feature and the west end of the boundary ditch **401**, but no relationship could be established in this small section (**s.87**, Figure 9). A single sherd of fine purpleware was recovered from this attempt, which

suggests that it partially truncated the earlier boundary. In plan this deposit was spatially separate from pit [257], so no relationship could be established with that feature either. This feature has tentatively been ascribed to this phase on account of the pottery sherd found, although it was initially assumed to have been a Phase 1 feature.

- 5.4.10 Pit [186] was located at the north end of the [276] complex and may or may not be a partially truncated earlier feature, while all seven sherds of pottery recovered from its lower fill (185) date from Phase 1, a single sherd of reduced greenware was recovered from this deposit in the evaluation phase. It is probable that it is contemporary with pit [276] and that this pit merely deepens on its southern progression; the upper fills certainly appear to be shared between the two pits and contained Phase 2 pottery (5.4.3 - 5.4.4, see also Plate 18, Figures 10 - s.34).
- 5.4.11 The presence of a later pit cutting [276/297] was first suggested in the evaluation phase (Greenlane Archaeology 2008b) by the apparent truncation of the clay layer 404 in plan, then later suggested by section 68 where it appears that this layer was truncated by pit [297] in spite of the fact that pottery from the lower deposits of this pit clearly date it to Phase 1. Pottery recovered from the upper fills of pit [297] also has a wide date range with a single sherd from fill (298) dating from post 1650.
- 5.4.12 Small pit [334] was located on the western side of pit [276] (s.57, (Figure 10) and was 0.75m north/south, 0.35m east/west and 0.30m deep. The relationship of this pit to pit [276] was unclear in plan and section, however the two sherds of reduced greenware pottery recovered suggests that they were contemporary. It seems likely that this pit represents the removal of a boulder necessary for the excavation of pit [276]. A very similar looking feature was pit [263] located to the east of pit [276] which may also relate to the removal of a boulder around the time that pit [276] was in use.
- 5.4.13 Pit [191] just to the north of [276] was sub-rectangular in shape and measured 2.15m north/south, 1.45m east/west and was 0.55m deep, the pit contained three fills (190, 189 and 187). The pit had been longitudinally half sectioned within the evaluation trench, these descriptions and the section drawing relate to the removal of the remaining half of the fills during the excavation after repeated cleaning (see Plate 18, s.34, Figure 10) The lower fill (190) and the deposit above (189) were essentially the same, two context numbers were ascribed due to the larger quantities of charcoal in the lower part of the fill. Both these contexts comprised soft, mid brownish-grey slightly sandy-clay with occasional sub-angular flint gravels and infilling/dumping had predominantly occurred from the south end judging from the tip line evident in the section. A total of 32 fragments of pottery were recovered from these deposits and they formed a rather confusing assemblage with 25 sherds of Phase 1 pottery (a majority of which were towards the later end of that date range) and seven sherds dating from 1400-1700 including two un-abraded sherds of fine purpleware, which were recovered from the very basal layer. During the evaluation 22 two sherds of Phase 1 pottery were recovered compared to three Phase 2 sherds, which also included purpleware. A total of 12 burnt and unburnt bone fragments were also recovered from these deposits and were all cattle except for a single possible human humerus or femur. The upper fill of this pit was a well compacted dark-brown sandy-clay with moderate-frequent angular cobbles and pebbles. This fill was clearly distinct from the lower deposits and contained three reduced greenware sherds and a single sherd of gritty ware pottery as well as sheep/goat bones.

5.4.14 Pottery from the lower deposits of **[191]** suggests that it was cut around the time that **[276]** filled up, due to the incorporated purplewares and spatial relationships of the two pits also suggest their rough contemporaneity. These pits have wide ranges of pottery dates which suggests considerable longevity of the features, but it is surely inconceivable that these pits could have been in use from the 14th to 16th centuries. Perhaps it is easiest to conclude that there must have been an immense background scatter of Phase 1 pottery on the site that has become incorporated into obviously later features. It seems reasonable to conclude that pit **[191]** was used as a rubbish pit anyway, and that it appeared to have been hurriedly backfilled at the end of the medieval period, as was **[276]**, to make way for a new phase of land usage in the post-medieval period.



Plate 18: Pits [191] and [186] from the west, pit [205] is in the background

5.4.15 Pit **[205]** was a large sub-circular feature located at the north of the dense network of features in the centre of the site (Plate 19). The pit cut through the earlier Phase 1 feature **[360/182]** and had the appearance of a backfilled quarry pit. Pit **[205]** was 2.50m in diameter and 0.90m deep, the sides were moderately steep, concave and fairly regular and blended imperceptibly into the rounded base. The pit was half sectioned and found to contain two main deposits, there was also evidence of slumping on the east side. The lower fill (**227**) was a yellowish mid-brown silty-clay that contained frequent sub-angular to sub-rounded limestone pebbles, cobbles and boulders, occasional charcoal flecks, a single sherd of gritty ware and a single sherd of later gritty ware pottery. The upper fill (**206**) consisted of frequent sub-rounded and sub-angular limestone cobbles and pebbles in loose dark brown sandy-silt matrix. The stone was poorly sorted and would have been of very low grade in building terms; it appeared that all the stone in the upper fill had been deliberately dumped in a single episode to backfill the pit and that the sandy silt was topsoil that had been washed down into the voids between the stone. This type of fill is inherently very hard to date and the pottery found covers Phases 2 and 3 with two sheds of reduced greenwares (1400-1600), four

sherds of brown-glazed red earthenware that would date from 1650 onwards and a single sherd of mottledware (1650-1750). It seems more than likely that this pit is contemporary with pit **[191]** immediately to the west given their spatial arrangement, and that the backfilling occurred in Phase 3.

5.4.16 Pit **[171]** was very similar in size and shape to pit **[205]** and was located approximately 4m to the east. The pit was roughly circular with very steep slightly concave sides that shallowed into a gently rounded base, its diameter was approximately 2m and it was 0.90m deep (see Plate 20). The pit was half sectioned and found to have two fills, lower fill **(172)** was a 0.10m thick layer of moderately compact orangey-mid brown sandy-clay which covered the base and sides of the pit. No finds were recovered from this fill which appeared to represent slumping/erosion of the pit edges and mineral in-wash. Upper fill **(170)** largely consisted of sub-angular limestone cobbles which were interspersed with angular gravels and pebbles, an in-wash of loamy soil had filled the voids between the rocks in the upper half of this fill. From this back-fill two sherds of mottledware were recovered that would date from 1650-1750, this suggests that this backfilling of the pit was contemporary with that of pit **[205]** where mottledware was also recovered. The lower fills of these two features are similar in composition and lack the loamy quality found in many of the post-medieval features. Pits **[171]** and **[205]** are likely to be clay extraction pits from the late medieval period that have subsequently remained open until the early post-medieval, at which point the plot was required for building, ground consolidation seems to have occurred to facilitate this.



Plate 19: Pit **[205]** from the north-east

Plate 20: Pit **[171]** from the east

5.4.17 Pit **[155]** was located at the north end of the main area of pitting, it was sub-rounded in shape with an approximate diameter of 1.60m and a depth of 0.35m. The sides of this pit were steep, somewhat irregular and the base was flat. Two fills were recorded, lower fill **(154)** was a 0.16m thick deposit of firm pale-mid brown sandy-clay with occasional sub-angular limestone gravels and pebbles. From this primary fill one sherd of northern gritty ware and one sherd of sandy ware pottery were recovered along with a fragment of burnt limestone. Upper fill **(153)** was a loose deposit of crushed and broken roofing slate interspersed with a small quantity of greyish dark-brown sandy-silt, this fill contained two sherds of reduced greenware, a single sherd of buff-coloured earthenware, a single sherd of brown-glazed red earthenware and three sherds of brown salt-glazed earthenware. The later fabrics could all have a date range from 1650-1700 which appears to tie in with the the deliberate infilling of pits **[171]** and **[205]** which are both in this part of the site.

The allocation of Phase 3 for the infilling of the pits seems fairly secure, given the homogeneity of the upper fill, and this suggests that the reduced greenware incorporated was residual or even still in use at during the late 17th century. What is important is that this pit illustrates a change in land value during the 17th century when a deliberate attempt has been made to infill a number of pits in this area, this may well be related to the increase in structures as suggested by posthole (258) (see 5.4.20) and later by Todd's plan of 1787. Once again the lower fill contains Phase 1 pottery raising the possibility that these fabrics continued to be used past the 15th century, it is more likely that they are residual however.

5.4.18 Pit [162] was located just to the south of the northern boundary ditch [413], it was sub-rounded in shape with a diameter of 1.60m and a depth of 0.60m (Plate 21, s.25 Figure 9). The sides of this pit were irregular but generally very steep rounding abruptly into a flattish base, three fills were recorded from this feature. It is probable that the earliest fill was a slump of natural (163) that was located on the southern side of the pit, the deposit was well compacted and represents the natural in-wash and stabilisation of a freshly dug pit. The main basal fill (161) was a greenish/greyish mid-brown silty-sand which was friable and contained occasional sub-angular gravels. This fill was well sorted and archaeologically sterile suggesting that it had accumulated gradually through natural processes. Upper fill (160) comprised a layer of sub-angular limestones of mixed grades which were typically cobble sized, these stones were bonded by a dark-greyish silty sand. The fill clearly represents a capping layer to the pit which had the appearance of a cess pit, especially with the greenish tinge to the main fill (161). Without any finds or residues from the environmental samples it is hard to ascribe either date or function to this feature, however it resembles the other clay extraction pits in this part of the site in terms of size and shape and the composition of the lower fill was similar to that of [171 and 205]. The stone capping would also suggest that it may have gone out of use at a similar time to these pits.

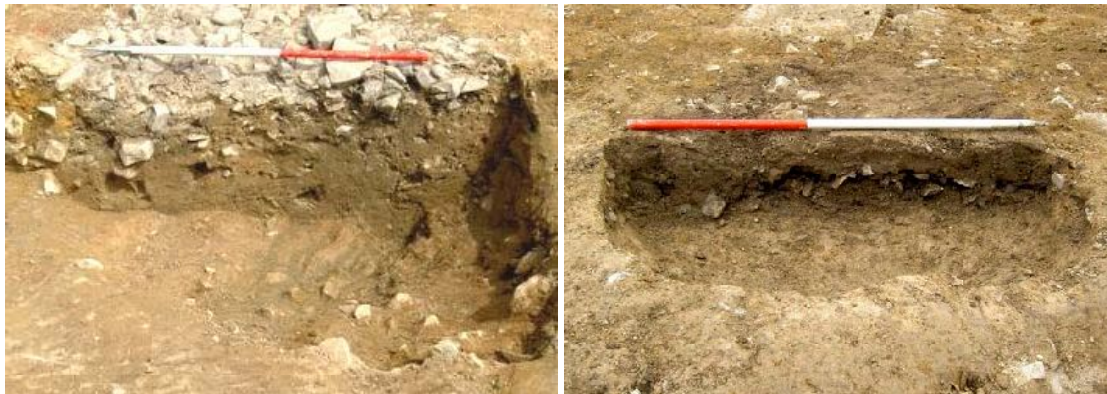


Plate 21: Pit [162] from the west

Plate 22: Pit [125] from the north-east

5.4.19 Pit [125] was located to the north of the northern plot boundary and was a sub-circular pit with a diameter of 1.20m and a depth of 0.40m (Plate 22). The pit contained two fills, (123) and (124). Lower fill (124) was a greyish-brown sandy-clay with frequent well sorted sub-angular limestone pebbles. From this deposit a fragment of burnt bone was recovered along with two sherds of reduced greenware pottery. The upper deposit was a firm brown sandy-clay with occasional sub-angular and sub-rounded gravels and pebbles. This fill yielded a small quantity of animal bone from a cow, a sheep/goat and a bird,

along with a two sherds of gritty ware pottery which would date from Phase 1 and were therefore residual. The function or purpose of this pit is something of a mystery although it should be noted that black staining of the stone in the lower deposit suggests that it may have at one time been waterlogged.

5.4.20 Posthole **[258]** (Plate 23 and Plate 24) was located against the eastern limit of excavation, it was circular in plan with a diameter of 1m and a depth of 0.70m. At the eastern edge of the cut there was a large limestone boulder, and it appeared that this natural occurrence had been intentionally utilised in the construction of the posthole. The sides of the cut were very steep, flat and the base was gently rounded, four separate fills were recorded. Fill **(259)** consisted of large angular pieces of limestone with long axis up to 0.25m in length, these were fairly evenly distributed throughout a sterile orangey-yellow clay. This fill formed the outer packing/backfill which surrounded the more carefully arranged stonework that encased the timber post (see **s.53**, Figure 10). Fill **(261)** comprised the well arranged limestone pieces that formed a socket for the timber post, these flatter stones were edge set to create a tight socket which held the lower 0.70m of the post (see Plate 24). The width of this socket was between 0.30m and 0.35m wide indicating the original width of the post it held. During excavation it was noted that these stones would have held the post at a slight angle rather than completely vertical although this presumably resulted from the demolition of the structure. Deposit **[262]** appeared to represent the degraded remains of the sapwood of the oak post which formed a dark-brown almost peat like silt, from this deposit a single piece of animal bone was recovered as well as two sherds of pottery. The earliest pottery was a partially reduced greenware sherd dating from 1250-1400, the later sherd was reduced greenware (1400-1600) and it seems likely that this dates the feature. Interestingly pottery of this date was recovered from the well found some 13m to the north of this feature during the evaluation phase of this project (Figures 4, 5 and 6). Post **(260)** was 0.70m in length and 0.15m in diameter, it had split down the centre and represented the heartwood of a much wider oak post. Accurate radiocarbon dating of this timber was unfortunately not possible; this was largely due to the degradation of the sapwood. The location of this post is somewhat unfortunate as it is likely that if any others exist they are buried under the buildings still standing to the east of the site. A single posthole is not easy to interpret; it is however possible that it forms the south-western corner of a building that was located on Stricklandgate.

5.4.21 Pit **[349]** was located on the east side of excavation, it was sub-oval in shape and measured 1.60m east/west by 0.90m north/south and had a depth of 0.25m. This pit truncated the eastern terminus of the southern plot boundary **410**. The pit was half sectioned along its long axis which revealed the sides to be irregular though generally very steep, and the base to be flat. The pit had a single fill **(348)** that was a mid-grey clay with small patches of orange and yellow re-deposited natural clay, it also included occasional to moderate quantities of sub-angular limestone gravels, pebbles and cobbles. Twenty-four cattle bones were recovered from this feature and while they were no longer articulated it is possible that they were from a single animal. Six sherds of pottery were also recovered from this feature, five of these were from Phase 1 and there was a single very fresh looking sherd of midlands-type purpleware which would appear to date the feature from between 1500-1700. It seems likely that the pit was dug specifically to bury the rear end of a calf and probably immediately backfilled to keep scavengers away from the remains.

5.4.22 Pit **[300]** was a small irregular looking sub-circular pit located in the northern part of the site; its sides were shallow, concave and somewhat irregular. The pit contained a single fill **(299)** that was a mid-brown sandy-clay with frequent sub-angular to sub-rounded limestone pebbles and cobbles. From the fill a single sherd of sandy ware and a single sherd of reduced greenware were recovered, and on that basis it has been allocated to this phase of activity. This pit had been heavily truncated by foundations from the garage that used to occupy this part of the site and was undoubtedly originally larger.



Plate 23: Timber post (260) within posthole [258]

Plate 24: Packing stones (261) within posthole [258]

5.4.23 Feature **[283]** was a large sub-rounded depression in the south of the site that was 3.40m north/south by 2.80m east/west, the north-east quadrant was excavated and this revealed the maximum depth to be 0.50m. The sides of the feature were short, concave and moderately steep before gradually shallowing to a flattish base (Plate 25 and Plate 26, s.55, 63 and 70, Figure 11). This feature cut the earlier Phase 1 pit **[302]** (see 5.3.18) as well as probably cutting the small pit **[342]** which appeared to be roughly contemporary (see 5.4.24). Three fills were observed, lower fill **(282)** was a moderately firm pale-medium greyish-brown sandy-clay with occasional charcoal fragments and limestone pebbles with a concentration of larger flatter slabs of sub-angular limestone at the base. From this deposit two unidentified pieces of animal bone were recovered, and a small sherd of reduced greenware pottery was recovered from the environmental sample. Deposit **(233)** was a thin lense of charcoal that entirely sealed the lower deposit, generally this lense was 2-3cm thick although it was mixed with clay. From this layer four sherds of reduced greenware were recovered along with two sherds of sandy ware, non-diagnostic slag, and burnt and unburnt cattle bone fragments. Upper fill **(232)** was a moderately firm greyish-brown sandy-clay that included occasional to moderate quantities of sub-angular limestone gravels, pebbles and cobbles. From this deposit 22 sherds of greenware pottery were recovered some of which refitted to form bung-hole jars or cisterns, 16 sherds of Phase 1 pottery were also recovered along with a single post-medieval brown-glazed red earthenware sherd. Fragments of mortar, iron nails, slag and numerous burnt and unburnt cattle and sheep bones were also recovered. Environmental samples were taken from each deposit in this feature, the most significant **28-(233)** contained evidence of probable cereal processing together with an abundant quantity of oat grain and rare quantities of bread/club wheat and barley. The presence of many grains still contained within their hulls, together with spikelet and culm (straw)

fragments provides some indication of cereal processing. The environmental assessment report (*Appendix 9*) suggests that the sample may represent corn drying residue, as many oat dominated assemblages have been seen in other kiln deposits. Sample **26** from the upper deposit also contained small quantities of charred oat and barley species. It seems likely that the charcoal rich deposit (**233**) has come from a corn drying kiln, but the feature itself is not typical of such a kiln due to its size, shape and the lack of a flue or structural remains in stone or wattle and daub. The small quantity of carbonised matter in relation to many excavated kilns (eg Masser 2006, 67) also suggests that this is a re-deposited scatter of drying kiln deposits from elsewhere in the vicinity.



Plate 25: Feature [283] from the north-east, showing charcoal deposit (233)

Plate 26: Feature [283] from the north-east, fully excavated

5.4.24 Feature **[342]** was located in the southern part of the site, it was sub-circular in shape with a diameter of roughly 0.40m although its full size and shape remain unknown due to the truncation of its east side by pit **[283]**. The feature had a single fill (**341**) that was a mid-dark brownish-grey sandy-clay with frequent sub-angular and sub-rounded limestone gravels and pebbles. From this fill a single sherd of gritty ware pottery and two sherds of reduced greenware pottery were recovered. The feature was interpreted as natural in origin, possibly a burrow.

5.4.25 Feature **[218/237]** was sub-rectangular in shape, being wider at the north end than the south. It was roughly 4m north/south, 1.80m wide at its widest point and had a maximum depth of 0.25m (see **s.42**, Figure 9). The feature bore a strong resemblance to **[225/270]** which was adjacent to the east; both were irregular, wider and deeper at the north end and contained mixed fills. Feature **[218]** had three separate fills, the primary fill appeared to be (**230**) which was a firm light brown very sandy clay. This fill was located at the west side of the feature, contained occasional sub-rounded gravels and appeared to be derived from the pit sides through erosion. The main fill was (**217**) which was a dark-grey sandy-clay which was mixed with paler grey and pink clays and had orange mineral mottling, the circular truncation of this deposit evident on figures 4 and 5 is from a geotechnical borehole. Eleven sherds of reduced greenware pottery were recovered from this fill which included re-fitting pieces of bung-hole jars, five sherds of later yellow ware pottery were also recovered, rather inconveniently, that would date from 1650-1750, four of these re-fitted and it is possible that these derived from the overlying subsoil which was left high in this area. Burnt limestone pieces, a whetstone and

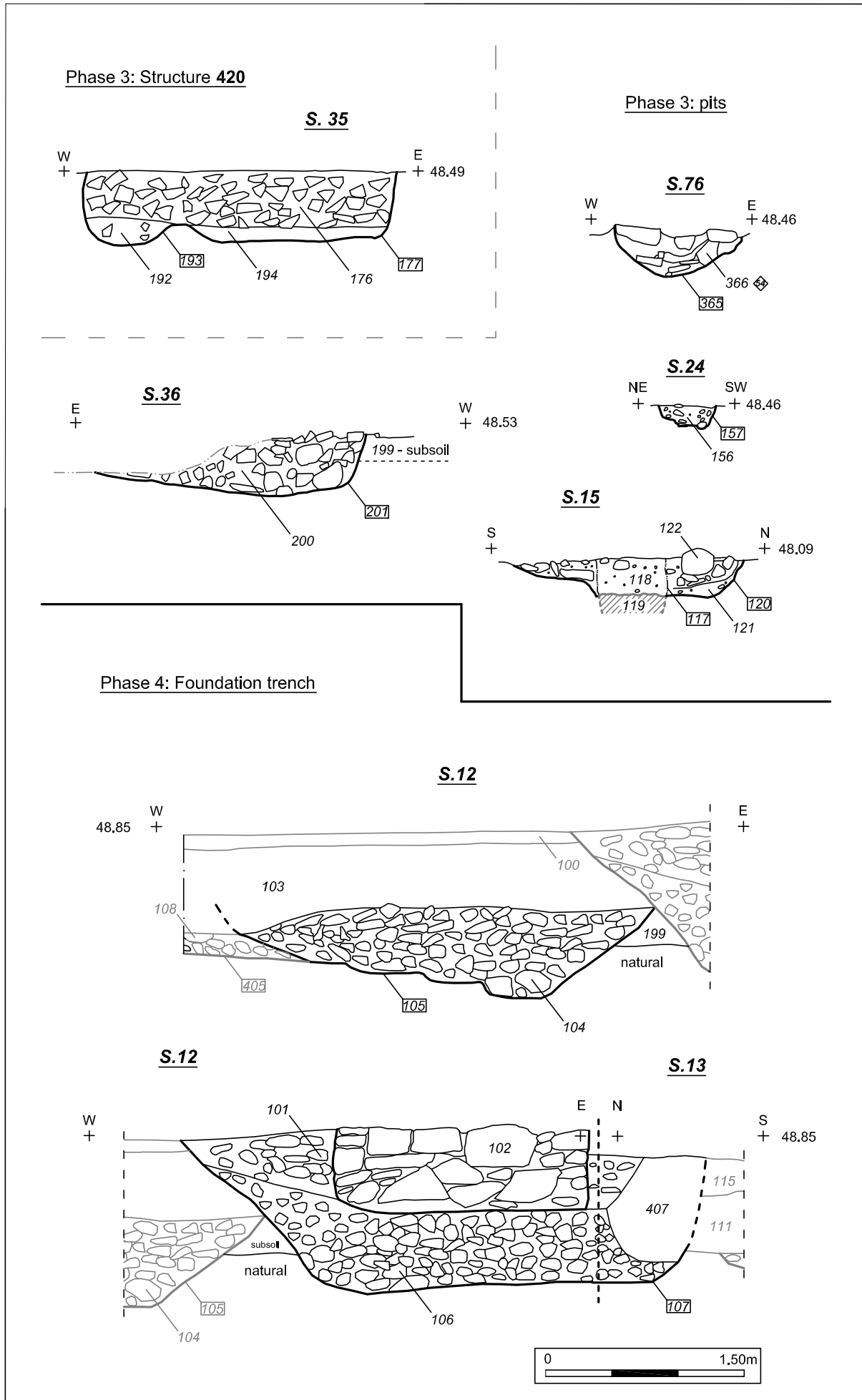
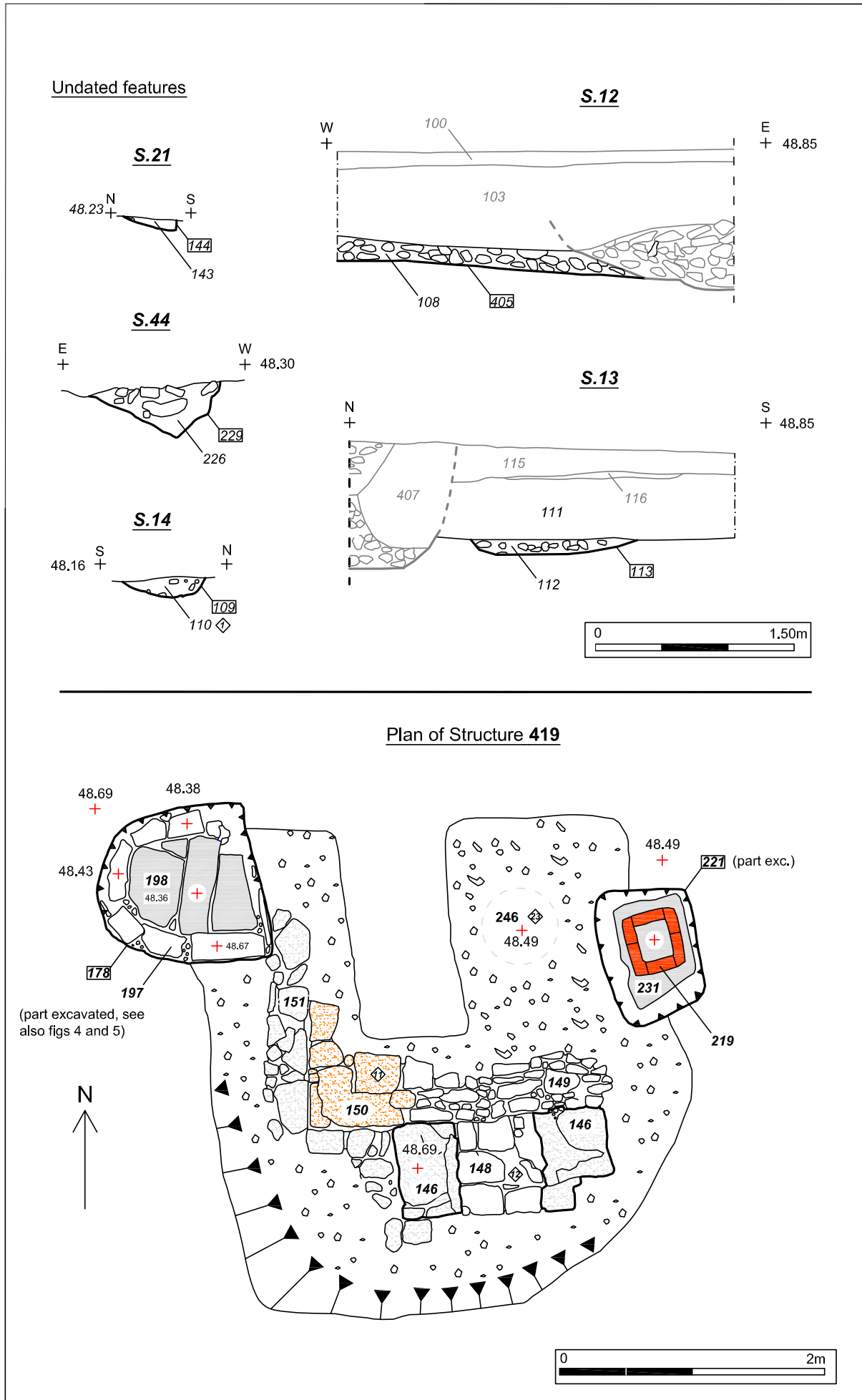


Figure 12: Phase 3 / 4 sections



bone from cattle and sheep were also recovered from this deposit. Deposit **(216)** was the upper fill, and was a firm pinkish-grey clay with occasional sub-rounded gravels and sub-angular pebbles. From this deposit a single sherd of gritty ware pottery was recovered and nine sherds of reduced greenware many of which re-fitted. The southern end of this feature **[237]** was rapidly excavated and proved to be shallower than the north end, although equally irregular. The fill **(236)** was a moderately compacted pinkish-brown slightly sandy-clay with grey clay patches, this contained occasional charcoal flecks and a single sherd of gritty ware and reduced greenware. It seems most probable that this feature is natural in origin, possibly the results of a tree throw, or tree root clearance. This is suggested by the mixed deposits found within this amorphous pit whose sides were irregular, and also corresponds with the date the subsoil started to develop on the site which was presumably a consequence of horticultural activity.

5.5 Phase 3: Late 17th and 18th century

- 5.5.1 This phase of activity on the site is defined by the presence of post-medieval pottery types including brown- and black-glazed red earthenwares, tin glazed earthenwares, pearlwares, and the absence of the earlier reduced greenwares. The dating of these post-medieval features based on pottery fabrics was straightforward and unsurprisingly tighter date ranges can be assigned within this phase. Other finds types have also proved useful in dating these features such as clay pipes, glass, and ceramic building materials.
- 5.5.2 This phase of activity was largely represented by structural features such as foundation trenches, floors and walls, there is evidence that some of these structural elements relate to light industrial activity on the site. Pits and postholes from this date were also recorded, along with an area with four main layers that run in an uninterrupted sequence back to the late medieval period and seal a medieval pit from Phase 1 or 2 - **[312]**. The majority of these features were located towards the west side of the site, some 25m from the street frontage which suggests that the land closer to the street had been built up by this time. Another significant feature of this phase is the widespread infilling of earlier Phase 2 pits and other features with limestone rubble. It appears that a major change in land use occurs in this phase and widespread ground consolidation is occurring to facilitate new building on the site, this is evident on Todd's map of 1787 (Figure 2).
- 5.5.3 **Structure 419** comprised foundation trenches **[245** and **209]**, walling **(146, 151)**, flooring **(148, 149)**, tanks **[178, 221]** and posthole **[157]**. The structure appears to be a small metal working building that seemed to be in operation from the early or mid-18th century to the mid-19th century, after which the structure appears to remain until the early-20th century (see Figures 2 and 3). This building represents the only direct evidence of light industrial activity at the site, although there is some evidence to suggest that copper and possibly iron working were ongoing at the site prior to the construction of this building. Copper buttons, tokens, tacks and pins appear to have been produced in the building.
- 5.5.4 Trenches **[245** and **209]** were to the west of the main cluster of medieval features that were located in the centre of the site and formed part of structure **419** (see Figures 4 and 11). The two trenches were parallel and orientated north-west/south-east, each was approximately 3.50m by 1.25m and 0.30-0.40m deep and they were 0.70m apart (see Plate 27). All sides of

the trenches were steep and reasonably regular except for the south sides which sloped more gradually down to the undulating flattish base. A single fill was recorded from each trench (**152** and **228** = group no. **246**), the fills were identical and had clearly been dumped straight into the freshly cut trenches. Deposit **246** was a reddish dark-brown sandy-clay with frequent angular limestone gravels and pebbles, the reddish colour appeared to have been derived from iron oxides present in the fill. From this deposit a large quantity of pottery and animal bone was recovered along with charcoal, slag, other ceramics, glass, mortar and a piece of copper alloy sheet and a copper alloy button. The animal bone recovered included a sawn sheep horn core, cattle horn cores and two horse scapula suggesting butchery and tanning was occurring in the vicinity. A large majority of the pottery dated from 1650-1750 and some from 1700-1800, so it would appear that an early or mid-18th century date is likely for the construction of the structure, this concurs with the clay pipe date range of 1650-1750. From Todd's map of 1787 (see Figure 2) it appears that there is a structure in roughly the same location as these trenches, and a structure appears to remain in this location until sometime between the 1912 and 1938 Ordnance Survey editions (Figure 3). These trenches were partially overlain by a stone structure that consisted of truncated mortared stone walls (**146**) and a floor surface (**148/149**), (Plate 29 and Plate 30), and there were two rectangular pits [**178/221**].



Plate 27: Pre-excavation view of structure 419 from the north

Plate 28: Pre-excavation view of structure 419 from the west



Plate 29: Masonry (146) either side of (148), floor surface (149) in foreground

Plate 30: Iron staining (150) on floor surface (149), and wall (151) to right

- 5.5.5 Masonry **(146)** comprised two large limestone slabs which were 0.50m square, the slabs were roughly dressed and sat 0.60m apart at the southern end of each of the two trenches **[245 and 209]**. In association with the two slabs there was a linear arrangement of limestone rubble coursing **(151)** that extended 1m westwards from the west slab then returned to the north for some 1.70m before apparently being truncated. Both the slabs and the rubble course had mortared upper surfaces and represented the lower course of a wall, the slabs appeared to indicate the location of an aperture which may have been a doorway. The mortar **(147)** present on the slabs was a pale greyish-white lime based mortar with small rounded gravel inclusions. The floor surface **(148/149)** extended from within the threshold northwards for 0.50m, where it had an east/west width of 2.32m although its full eastern extent was not realised. The flooring was constructed from un-mortared limestone rubble that was roughly flat on its upper surface, the region to the north of the threshold **(149)** was tightly bonded with clay that included fragments of iron oxide, mortar, pottery, glass, shell, and copper. The pottery fragments recovered from **(149)** had a slightly later date range than that found in the underlying trenches, typically post 1750 (see *Appendix 4*). It seems likely then that the pottery and glass were added in construction to improve the bonding and sealing of the floor stones, although it is also possible that it represents the remains of later dumping within the structure that worked its way into the crevices. A sample taken from the area within the threshold **(148)** included a pin, button, an incomplete coin or token and tack fragments all made from copper. It seems likely therefore that the area was used for small scale metal working, certainly of copper and probably iron. The heavy iron staining **(150)** which was found on the western part of floor surface **(149)** also suggests the possibility of iron working within the structure, although this may also be due to the storage or dumping of iron in the area as no iron products were recovered.
- 5.5.6 Feature **[178]** was located in the centre of the site towards the western limit of excavation, and it appeared to cut structure **419** (see Figures 4 and 11, Plate 31 and Plate 32). The pit was sub-rectangular in shape and measured 1.30m north/south by 1.20m east/west. It was 0.35m deep and had vertical edges and a flat base. Three separate fills were recorded within this pit, the main fill **(179)** was a dark-brown sandy-clay that contained sub-angular limestone pebbles and cobbles. A large quantity of pottery was recovered from this fill (62 sherds) along with animal bone, glass, industrial waste and a single clay pipe fragment. The fill of this feature was very similar to the fills of trenches **[245 and 209]** and although some of the pottery date ranges are a little later it could still have been contemporary, gradually infilling in the early part of the 19th century. The secondary fill of the pit **(197)** comprised six limestone blocks that were roughly squared on their upper surfaces, these decreased in size as they ran round the south, west and north edges of the pit. The blocks were well fitted to the edge of the pit and a slate was evident on the east side, within these blocks three large re-used roofing slates **(198)** had been laid to form a base for the pit. It seems likely then that the in-fill of this pit **(179)** is older than the structural elements **(197/198)** which may suggest that feature **[178]** is contemporary with structure **419**.
- 5.5.7 Feature **[221]** was located on the north-east side of the eastern trench of structure **419**, and like **[178]** it initially appeared to truncate the structure. The feature comprised a sub-rectangular pit that measured 1m north-west/south-east, 0.70m north-east/south-west and was 0.25m deep. Within the vertically sided and flat bottomed cut a large slate **(231)** had been placed on the base,

this measured 0.80m by 0.50m and was 0.04m thick. Upon the slate three courses of six red bricks (219) had been laid to form a square tank, surrounding this tank sterile clay (220) had been packed to backfill the cut. No finds were recovered from within feature [221] but it seems likely that fulfilled the same function as pit [178] on the west side of the structure, and that they were small tanks to hold water used in the metal working process. It seems possible that the tanks were contemporary and may have enabled more than one person to work metal within the structure at the same time, or it is equally possible that [221] is a later replacement for [178] which appears to have gone out of use in the early or mid-19th century. The wall of the structure (151) does appear to respect tank [178] and it seems likely that the tank was located at the end of the wall so it could be reached without too much trouble. It also seems plausible that a small hearth could have been located in the 'threshold' area (148), perhaps at waist height which would explain the large regular slabs at ground level in this area. The trenches probably do indicate the full extent of the main part of this structure, although there may have been more extensive associated shelters and timber elements originally. The trenches presumably aid drainage from within the building at the wall/floor join and exterior water from the walls/roof. The presence of copper buttons and waste copper in the backfill of these trenches suggest that copper working was being carried out on the site from before the construction of this mid 18th century structure.



Plate 31: Pit/tank [178] with north half of fill (179) removed

Plate 32: Pit/tank [178] from the north, showing linings (197, 198)

5.5.8 Posthole [157] was located 0.40m to the east of structure 419 and was circular, with a diameter of 0.40m and a depth of 0.20m. The feature had steep fairly regular sides and a flattish base. There was a single fill (156) which was a loose dark-grey sandy-silt with patches of clay natural, angular limestone pebbles and sub-rounded limestone gravels. From the fill numerous pottery sherds were recovered along with glass fragments, part of a slate pencil and some slag. The assemblage is hard to date exactly although a mid-19th century date seems probable which makes it possible that the feature went out of use at roughly the same time as tank [178]. Perhaps this suggests that all these features were part of structure 419 with this posthole perhaps supporting a shelter on the east side of the metal working area.

5.5.9 **Structure 420** comprised pit (177), linear (193) and pit/posthole (202), it was located in the south-west corner of the site and is thought to represent a pre-1750 structure, a similar sized structure is evident in this location on Todd's early map of 1787 (Figure 2). Artefactual evidence suggests that the structure was not demolished until after 1750 and map evidence suggests that it was

replaced between 1833 and 1853. The exact function of this small structure is unknown and the cuts described below lacked evidence of timbers, flooring or burning.

5.5.10 Pit **[177]** was sub-rectangular in shape, orientated roughly north-west/south-east and it measured 2.30m by 1.60m with a maximum depth of 0.55m. The sides of the pit were regular and almost vertical and extended down to a flat base (**s.35**, Figure 12), except on the southern side where the upper vertical side broke at its mid point to a shallow flat slope that extended out 0.50m to the base. The full height of the western side had also been lost in places due to the adjacent linear **[193]**. Dark mineral staining was noted on the base of this feature, this merely represented manganese oxidising from the ground water at a point between the overlying silt in-fill and the more porous underlying sands and gravels (Lancaster, pers comms). The feature contained two fills, the upper fill was common to all three features grouped together in this 'structure'. Lower fill **(194)** was a yellowish-brown sandy-clay with occasional gravels, charcoal flecks and cockle shell fragments. From this fill came a mixed assemblage of pottery which suggests that the structure went out of use in the later half of the 18th century. This date is of a very similar range to the finds from the overlying stone backfill **(176)** which is the main fill of all three features in this group. This suggests that this structure was demolished to make way for a new building, rather than a process of gradual decline. A building is indicated in this area on Todd's map of 1787 (Figure 2) and it would seem likely that this feature relates to that structure and that it was demolished and in-filled for the new structure that appears between 1833 and 1853 (Figure 2). The stone backfill **(176)** may represent the remains of the earlier structure shown on Todd's map; this is suggested by the quantity of mortar/shell found within this rubble deposit.



Plate 33: Pit/posthole **[202]**, linear **[193]** and pit **[177]**, looking east

Plate 34: Structure 420, looking north

5.5.11 Linear **[193]** ran parallel to the western edge of pit **[177]** before curving round around the north-west corner and terminating just short of posthole **[202]**. The length of the ditch or slot was 2.50m, its width was 0.55m and it had a depth of 0.55m. Its lower fill **(192)** was separated from the lower fill of pit **[177]** to the east by a small baulk between the features, this was 0.15m high and above this level the stone backfill **(176)** was common to both features (see 5.5.9). The sides of the linear were generally vertical and they graded imperceptibly into the rounded base of the feature, as mentioned the upper part of the east side was lost due to its proximity with pit **[177]**. The lower fill **(192)** was a

greyish-brown slightly silty sandy-clay containing moderate sub-angular-sub-rounded limestone gravels and pebbles, and occasional charcoal flecks. From this deposit eight sherds of pottery and a single sherd of glass were recovered, these finds indicated a late 18th century or later date.

- 5.5.12 Posthole **[202]** was located 0.15m to the north of pit **[177]**, this was the same distance that separated the west ditch from the pit. The posthole had a diameter of 0.70m and a depth of 0.43m, it was entirely filled by the rubble deposit **(176)** (see 5.5.9) which appears to have a late 18th century or later date.
- 5.5.13 Pit **(365)** was located midway between structure **419** and **420** and approximately 3m to the east. The pit was circular in plan with a diameter of 0.45m and a depth of 0.40m. The sides were vertical and rounded into a slightly concave base (see Plate 35 and Plate 36). A single fill **(366)** was recorded and comprised frequent sub-angular limestone blocks that were up to 0.30m in length, as well as cobble and pebble sized pieces amongst which was a mid-brown sandy-gravel. The pit appeared to have been deliberately backfilled and late 18th and early 19th century pottery was recovered from this deposit, along with mortar fragments. The function of this pit remains unknown although it does appear that this land was a yard or garden area from Todd's 1787 map. Once again the date of the stony backfilling is consistent with that of a number of other features on this site, most notably structure **420**.



Plate 35: Pit **[365]** before excavation

Plate 36: Pit **[365]** with southern half of fill **(366)** removed

- 5.5.14 Pit **[201]** was located against the centre of the southern limit of excavation, it was rectangular in shape and measured 1.80m east/west, a minimum of 1.20m north/south and was 0.40m deep. The west and north sides of the pit were close to vertical, flat and fairly regular, the east side had been partly truncated but what remained suggested a shallower flat slope that led to the flattish base. A single fill **(200)** was recorded and consisted of loosely compacted angular limestone interspersed in a brown sandy-clay with a silt component. The stone was typically 0.06m-0.25m in diameter and showed no evidence of being used as building material, there was noticeable dark silt-staining on the stone at the base of the pit suggesting waterlogging. The fill contained numerous sherds of pottery, unfortunately the assemblage can only be dated to post 1650 as it is mainly comprised red earthenwares. An interesting assemblage of cattle and sheep bone was recovered from this pit, which included sawn and un-sawn horn cores suggesting horn working or tanning in the vicinity. This fill is roughly contemporary with those of the

structure **419** foundation trenches where more horn cores were deposited along with horse bone.



Plate 37: Pit [109] (5.7.7) to the left, the earliest truncation of the upper fill of larger pit [120]

5.5.15 Pit [120] was roughly ovoid in shape and located in the south-west corner of grid square 8 towards the north end of the site (Plate 37). The feature was approximately 1.30m long and 0.30m deep and had a gently rounded base with steepish highly irregular sides, it had been cut by small pit [110] as well as having been heavily truncated by a modern pipe trench (s.15, Figure 12). The feature contained two deposits, lower fill (120) was a 0.30m thick deposit of firm grey, orange and yellow mixed clays that contained occasional angular and sub-angular limestone gravels and pebbles. From this lower fill came a copper alloy object thought to be a thimble, a single sherd of gritty ware and a sherd of fine black-glazed red earthenware that was possibly part of a cup handle. The morphology of the thimble suggests a broad date range and the presence of the modern pipe trench through this feature makes its dating somewhat problematic. The upper fill (122) comprised a backfill of rounded-angular limestone cobbles between which soil had ingressed, no finds were recovered from this deposit. It seems probable that the feature represents a tree throw or the pit created by the removal of a tree's root bole, after which a certain amount of natural silting occurred before the pit was backfilled to level the ground. This feature would appear to belong to in Phase 3 with the gritty ware being residual.

5.5.16 **Ground consolidation:** these three spreads of stone appear to have been laid to fill erosion hollows on the site (Plate 39), these hollows may have been caused by the mechanics of the clay extraction that occurred in Phase 2. The assignation of a phase for these deposits is largely based on their

relationships with other features as the assemblages that they have yielded have a very broad date range (see Figure 11 for sections).

- 5.5.17 Deposit **(130)** was located in the western part of the site just to the south of ditch **413** whose fill it partially overlay, its southern edge appeared to have been partly overlaid by the larger spread **(128/222)**. The spread comprised frequent sub-angular limestone gravels, pebbles and cobbles in a pale-brown sandy-clay. The firmly compacted deposit was roughly circular in shape with a diameter of 1.50m and a depth of 0.17m. From this deposit pottery from Phases 2 and 3 were recovered, along with burnt limestone and mortar fragments. It is probable that this deposit represents deliberate ground consolidation filling a shallow erosion hollow that may relate to earlier quarrying nearby.
- 5.5.18 Deposit **(145)** was located at the western edge of the site and had been truncated on its western side by a concrete slab that related to a recent car showroom. The spread comprised frequent sub-angular limestone gravels, pebbles and cobbles in a pale-brown sandy-clay. The firmly compacted deposit was 0.05m deep, 1.30m north/south and at least 0.50m east/west. It is probable that this deposit represents deliberate ground consolidation, the small hollow it is filling doubtlessly representing nothing more than a puddle. While no artefacts were recovered it seems most likely that this feature would date from Phase 3 due to its spatial relationship with spreads **(130)** and **(128/222)**, the stony in-fills of these spreads may well be a bi-product of earlier clay extraction to the south-east.
- 5.5.19 Deposit **(128, 142/222)** was truncated through its midpoint hence two separate numbers have been allocated. The spread was located in the western part of the site and just to the south of ditch **413**, it was orientated roughly north/south and measured 4.8m by 1.8m and was up to 0.2m deep. Two fills were recorded from the northern part of this spread (Plate 38), lower fill **(142)** contained a single sherd of pottery from Phase 1 which was possibly residual, the upper fill **(128)** contained a single sherd of Fabric 6 pottery which would probably date from Phase 2 (see *Section 7.3*), slag was also recovered from this layer. From the southern end of this feature **(222)** a rather mixed assemblage was recovered which comprised earthenware, gritty ware and a glass bottle stopper.



Plate 38: Erosion hollow [129] - (128, 142) from the south

Plate 39: Wider view of Plate 38 showing ground consolidation, from south

- 5.5.20 **Post-medieval layers:** these were all located in the small area bounded on the east and south by the earlier 'L'-shaped ditch **417**. It is evident that from Todd's map onwards that this area had been built upon, at that time these

layers would have lain below the second row of buildings back from Stricklandgate. It is helpful to know that these layers must therefore pre-date 1787 and it is fortunate that this early stage of building has saved this stratigraphy from further disturbance. The layers described below were typically 0.05m thick, amorphous in shape and generally less than 1.50m in diameter (see Figure 4).

- 5.5.21 Layer **136** was the upper of the seven layers or spreads recorded in this area, and is probably contemporary with **137** almost adjacent to the east. The deposit consisted of a greyish dark-brown clayey-silt with moderate to frequent angular limestone cobbles and occasional slate fragments and the pottery from this layer dates from 1650-1750.
- 5.5.22 Layer **137** was almost identical to **136** and probably represents the same phase of activity which would have been the dumping of stone to level and consolidate the ground for building. From this deposit pottery dating from after 1650 was recovered along with numerous fragments of cattle and sheep bone and a sherd of glass for which an 18th century date has been postulated.
- 5.5.23 Layer **126** overlay the lower charcoal rich layer which comprised **167/138** and below that **168**. Deposit **126** filled a small hollow in the upper surface of layer **167** and was a mid reddish-brown sandy-gravel that was archaeologically sterile and was presumably dumped to level the ground for building work.
- 5.5.24 Layer **169** sat between the upper stony deposits **136/137** and the charcoal rich layer **138**, part of this deposit also overlay ditch **417** which had completely in-filled by this time. The deposit comprised a dark reddish-brown clayey-silt with moderate limestone gravels and charcoal pieces, this dump was discrete and had the appearance of peat ash. Unfortunately no artefacts were recovered from this deposit.
- 5.5.25 Layer **138** was a dark reddish-brown clayey-silt that was mottled with fire reddened clay and charcoal flecks, it contained occasional to moderate quantities of sub-rounded and sub-angular limestone gravels and pebbles. From this layer numerous cattle and sheep/goat bones were recovered along with red slip coated buff earthenware pottery with a date range from 1650-1750. Two sherds of pottery from Phase 1 and 2 was also recovered but were obviously residual.
- 5.5.26 Layer **167** was probably part of the same layer as **138** and was certainly stratigraphically contemporary, the only differentiating factor was the lack of fire reddened clay in this part of the layer and an increased quantity of charcoal flecks giving a darker grey colour to the deposit. This part of the burnt layer yielded no artefacts although its association with **138** suggests a late 17th or an early 18th century date. Daub and mortar were recovered from the sample suggesting that it represents refuse from a demolished or fire damaged building.
- 5.5.27 Layer **168** was beneath layers **138** and **167** and represents a layer of more intensively burnt material that includes a higher proportion of fire reddened clay and charcoal (Plate 40 and Plate 41). At its eastern end this deposit directly overlay the natural, but closer to the large pit to the west **[276]** a small quantity of subsoil had developed before this deposit was laid down. Pottery from this deposit dated from 1650 onwards, a clay pipe stem fragment from this deposit was ascribed a 17th century date. There was no evidence to suggest that this burning occurred *in situ*, the underlying subsoil and natural was un-burnt and the retents from this deposit did contain some un-burnt organic matter.



Plate 40: Deposit 168 from the south-east

Plate 41: Deposit 168 from the east, with pit [312] in the foreground

5.6 Phase 4: 19th century

- 5.6.1 This phase of activity on the site is represented by two foundation trenches at the far north of the site (Plate 42), it was evident that **[102]** was the foundation cut for the wall that was still standing and the 1898 Ordnance Survey map shows an arrangement of buildings in this area that would fit well with the shallow cuts that were observed. From both features only four sherds of pottery were recovered all of which were northern gritty wares and undoubtedly residual having being retrieved from the stony backfills of wall foundation trenches.
- 5.6.2 Cut **[105]** was located in the centre of the northern limit of excavation, it was 2.30m east to west and 0.40m of its southern end were available for excavation. The southern side of the cut was generally shallow and irregular deepening to the east, the base sloped gently from west to east where it reached a maximum depth of 0.40m below the top of the natural. Fill **(104)** was the only to be recorded and comprised frequent angular limestone pebbles and cobbles interspersed with a dark-grey silty-clay. This fill produced two sherds of pottery which both came from Phase 1 and were residual. The cut of this feature was evident in the section up to 0.30m above the level of the natural suggesting a later date. It seems probable that this cut and fill are part of the foundation trench for wall **(102)** to the east.
- 5.6.3 Foundation trench cut **[102]** was once again located in the section at the northern limit of the site. It was 1.60m west to east before it was lost in the eastern limit of excavation and extended 0.55m southwards from the northern limit. The cut had a total depth of 1.20m and it truncated the natural by 0.30m, four separate fills were recorded that represented the foundation rubble, the wall itself and two separate construction cut backfills. From this feature a single sherd of residual Phase 1 pottery was recovered. It seems probable that this is the southern wall of the building shown in this area on the 1898 Ordnance Survey plan which appears to have been partly re-used in the construction of the current building there shown on the 1938 Ordnance Survey map.

5.7 Undated features

- 5.7.1 While many of the features on the site have confusing dating evidence or none at all, an attempt has been made to assign them to their most likely phase based on their similarity to other features in terms of morphology,

spatial arrangement, their height over datum or the nature of their fills. The phasing of the features discussed below is more problematic and there seems to be little point in hazarding a guess at their dates.



Plate 42: Foundation trenches [105, 102], and undated cut [114] to the right

- 5.7.2 Cut **[405]** extended eastwards from the western limit of excavation for 3.20m before being truncated by **[105]**, its southwards projection from the northern limit of excavation was 1m and it was 0.15m deep. The feature represented a shallow irregular hollow in the natural that had been filled by sub-rounded limestone cobbles and pebbles. No artefacts were recovered from the fill **(108)** and no cut was evident above the height of the natural ground in the section, this feature remains undated.
- 5.7.3 Cut **[113]** was located against the north-eastern limit of excavation and comprised a 0.10m truncation of the natural, this cut was a minimum of 0.30m west/east and was 1.20m north/south. The cut was not evident in the section above the level of the natural and contained a stony fill **(112)**. Fill **(112)** comprised frequent sub-angular limestone pebbles and cobbles interspersed with a dark-grey silty-clay, no artefacts were recovered. It is possible that this cut relates to 19th century buildings shown in this area on the 1898 map (Figure 3), and probably represents their robbed out foundations that may have been removed to facilitate the much larger garage building shown on the 1938 Ordnance Survey map.
- 5.7.4 Cut **[114]** was located against the north-eastern limit of excavation and comprised a 0.10m truncation of the natural, this feature was either part of **[113]** or had an unknown relationship to it. The cut extended westwards for a distance of 1.44m from the baulk and was 0.55m wide, its single fill was as described for **(112)** and once again no finds were recovered.
- 5.7.5 Pit **[144]** was circular in plan with a diameter of 0.35m and a depth of 0.08m, it was located to the south of the northern plot boundary in the west part of the site. A single fill **(143)** was recorded that was a firm reddish-brown sandy clay that contained flecks of charcoal and occasional gravels. This feature was probably natural in origin.

- 5.7.6 Pit **[229]** was ovoid in shape with a long axis of 0.80m east/west, it was located centrally close to the southern site boundary. The sides were steep, irregular and the base came to a point towards the west end. The sole fill **(226)** was a firm greyish-brown clayey-sand that contained sub-angular limestone pebbles and cobbles. This feature was probably natural in origin.
- 5.7.7 Small pit **[109]** truncated the upper stony fill of pit **[120]** and it was 0.60m in diameter and 0.15m deep (see Plate 37). The pit was roughly circular with gently sloping and somewhat irregular concave sides that led to a gently rounded base. The sole fill **(110)** was a greyish-brown silty-clay with occasional limestone pebbles and charcoal flecks, no finds were recovered from this deposit.

6. Finds, Samples and Archive

6.1 Finds

- 6.1.1 A large quantity of finds (totalling 1586 individual fragments) was recovered during the excavation, including a small proportion of significant finds from retent samples, the vast majority of which comprised pottery. Additional information on the medieval pottery is given below, followed by a brief account of some of the post-medieval pottery and the other categories of artefacts.
- 6.1.2 **Medieval pottery:** a large proportion of the finds (478 individual fragments or just over 30% of the total number of finds) comprise medieval pottery, the majority of which came from stratified deposits such as pit fills and buried soils. For the purposes of this report medieval pottery is considered to include types that date as late as the 17th century (see *Appendix 4*). The medieval pottery was divisible into four ware types, comprising northern gritty ware, partially reduced grey wares, lightly gritted/sandy wares, and more fully reduced green-glazed wares. These are all well-known ware types from other sites, and descriptions of these four different wares are given below. The majority of the medieval pottery was northern gritty ware and fully reduced green-glazed ware, both of which are commonly found in Kendal and the region. A very small amount of other, more unusual types was also recovered, including Midland purple type ware, dated to the 16th to 17th century.
- 6.1.3 The assemblage can be split into two broad groups: an earlier group, comprising gritty, sandy, and partially-reduced wares; and a late medieval group, dominated by reduced greenwares. Some of the earliest pottery has affinities with material known to have been produced in kilns at Docker Moor (Gibbon 1986). The more fully reduced greenwares were much more common, occurring in several sealed contexts and in buried soils and made ground deposits. Many of these fragments were large and un-abraded suggesting that they were from their primary context. Interestingly, two fragments were found with the same inscribed 'trident'-shaped mark, which may be part of a particular pattern or an individual potter's signature. The more unusual types, particularly the purple ware, are rare in Kendal. These too were also generally in good condition, even refitting, suggesting that they are from their original contexts.
- 6.1.4 **Northern Gritty Ware (12th – mid-13th century):** these wares are generally hard and coarse, with numerous sub-angular to sub-rounded inclusions. Gritty wares were the dominant type in circulation throughout the North during the 12th century, and, in broad terms, appear to have continued until the mid-13th century (McCarthy and Brooks 1992, 22).
- 6.1.5 **Lightly Gritted/Sandy Wares (13th – early 14th century):** the fabrics in these wares from this excavation comprise less common sandy fabrics, usually completely oxidised, ranging in colour from orange to buff/reddish-buff. These appear to be similar to the dominant 13th-/early 14th-centuries fabrics in Penrith, and may originate in that area (Brooks 2000, 124).
- 6.1.6 **Partially Reduced Grey Wares (late 13th – 14th century):** the material in this fabric from the excavation is similar to a group of closely-related sandy fabrics, which appear to dominate late 13th and 14th century assemblages in the region (Ian Miller pers comm.).

- 6.1.7 *Late Medieval Reduced Greenwares*: the 'Reduced Greenware' tradition, which was introduced in Carlisle during the 14th century, became the dominant ware throughout the region during the 15th and 16th centuries (McCarthy and Brooks 1992); there is some evidence to suggest that Reduced Greenware remained in production during the 17th century at Silverdale (White 2000). In broad terms, the main forms include plain jugs and jars, although decorated examples are known, as well as bung-hole cisterns, urinals and bowls.
- 6.1.8 *Medieval pottery quality and potential*: as stated above, the assemblage was sizeable, and much of it was recovered from stratified deposits and sealed contexts. It also included many large and refitting fragments. The four main ware types, during initial assessment, included fabric types previously unrecorded, in addition to the later, rarer ware types such as Midlands-type purple ware. The assemblage has the potential to increase the knowledge of fabrics and forms of medieval pottery in the Kendal area.
- 6.1.9 The scarcity of good medieval pottery assemblages from excavations in north-west England has been highlighted by McCarthy and Brooks (1992) and by English Heritage (Mellor 1994). In recent years, however, several urban excavations in Kendal and elsewhere in the region have begun to redress this situation but it remains the case that much of this material awaits formal publication. The sizeable Craghills assemblage with a date range spanning the 12th to the 16th centuries has good potential to add important new information to this corpus of data and is considered to be of both local and regional significance. This collection will add considerably to the understanding of medieval ceramic traditions in the town as well as provide insights into the development of medieval pottery in north-west England, particularly for the 15th and 16th centuries, and the transition to post-medieval ceramic traditions (Ian Miller pers comm.).
- 6.1.10 Whilst as yet medieval ceramics in the north-west of England are not understood sufficiently to provide close dating of archaeological deposits, there is clear potential to refine the phasing of the late medieval stratigraphic sequence on site by linking the occurrence of the Reduced Greenware vessels with closely dateable post-medieval fabrics, such as Cistercian-type wares and tin-glazed earthenware; the analysis of the Reduced Greenwares in conjunction with the early post-medieval fabrics is key to informing a better understanding of the transition from medieval to post-medieval ceramic traditions, which represents a primary research aim in the study of medieval ceramics. Further detailed study of these wares has the potential to enhance the form and type series compiled as a result of previous excavations carried out in Kendal, in order to provide a more comprehensive understanding of late medieval pottery supply in the town (Ian Miller pers comm.).
- 6.1.11 The condition of the pottery is variable. In broad terms the earlier material, comprising the Gritty, Lightly Gritted, and Partially Reduced wares, is largely composed of small and abraded sherds, indicative of some post-depositional disturbance and as might be expected, this earlier material appears to be represented largely by a restricted range of forms, dominated by functional utilitarian wares such as jars and/or cooking pots, and several jugs are also present. In contrast, the Reduced Greenware component of the assemblage is in remarkably good condition; it is most unlikely that these sherds have sustained a significant degree of post-depositional disturbance, comprising numerous large sherds, allowing vessel forms to be reconstructed. There is

seemingly a wider range of forms present amongst the Reduced Greenware vessels, including a significant proportion of cisterns.

- 6.1.12 The most numerically significant fabrics were Northern Gritty ware and Reduced Greenware, including the "Silverdale" ware. The former may be broadly dated to the 12th to 13th centuries (McCarthy and Brooks 1992). The latter to the 15th to 16th centuries, although this particular tradition may continue for some time afterwards (White 2000); a proportion of these vessels are likely to have been produced during the early post-medieval period (Ian Miller pers comm.).
- 6.1.13 Although the fabric types and vessel forms present are fairly typical of the region in the medieval period, the production, distribution and consumption of pottery in Cumbria is currently poorly understood. Previous excavations in Kendal, and other urban centres in the area such as Lancaster, have indicated a dominance of Gritty wares, however, the exact provenance of these fabrics is hampered severely by a lack of knowledge of the production centres; the only securely located production centre for Gritty wares is a site at Docker Moor, and the wares from these kilns are well represented in the Craghills assemblage. By contrast, Gritty ware assemblages from excavations in Carlisle are dominated by a characteristic Red Gritty ware, which is entirely absent from the Craghills assemblage (Ian Miller pers comm.). Therefore, further analysis of the pottery assemblage, especially in the light of the recovery of previously unknown fabrics, is highly recommend, having the potential to further knowledge of this important aspect of medieval material culture in the area. In this respect, the assemblage is considered to be of regional significance (Ian Miller pers comm.).
- 6.1.14 **Post-medieval pottery:** a similar amount of the finds (568 fragments or a little over 36% of the total finds) comprised post-medieval pottery, and as many were coarsewares they are of limited use in providing dating evidence. For the purposes of this report post-medieval finds are considered to be those with a date-range beginning in at least the 17th century (see *Appendix 4*). In contrast, finewares, which were more readily subject to changing fashions and therefore more useful for dating, were considerably fewer in number. All the artefacts are summarised in *Appendix 4*, and the dating evidence has been incorporated into the discussion on phasing, below. The coarsewares typically comprised black- and brown-glazed red earthenware, and buff-coloured earthenwares, in a variety of utilitarian forms such as crocks and pancheons, which would have been widely used and are particularly difficult to date. The finewares include tin-glazed earthenware, salt-glazed stoneware, porcelain, creamware, and pearlware, dating to the 18th and 19th century, and majolica and transfer-printed white earthenware dating from the 19th to 20th centuries. Again, many of these are relatively common types for the period and are mainly useful in dating features.
- 6.1.15 **Post-medieval pottery quality and potential:** the assemblage represents the typical types that might be found on such a site, although they have generally come from contexts such as made ground, buried soils, and garden soils. Only those from **(152, 228 - 246)** are from a sealed context, and this appears to be a foundation trench. The relative lack of finewares also reduces the usefulness of the assemblage in terms of dating. However, the assemblage does include many large fragments, and, like the medieval pottery, it has the potential to increase the knowledge of pottery in the Kendal area. This is perhaps particularly true of the coarsewares which were almost certainly locally manufactured.

- 6.1.16 **Clay pipe:** the excavation produced a total of 26 clay pipe fragments from seven contexts (see *Appendix 5*). The groups are too small for any confident dating of them to be attempted as closed assemblages. Despite this, there are a number of identifiable bowl and decorated stem fragments present. The four fragments from context **(152)** are consistent with an early 18th century date. The single complete bowl form [A] can be compared with the published series from Chester where it is dated to 1710-1720 (Rutter and Davey 1980, 81, fig 17, nos. 10-13), though the Kendal example is less well finished. The roller stamped stem [B] is similarly of Chester 'pinnacle and dot' type, dated 1690-1710, but no identical stamp is included in the Chester series and, again, the Kendal example is of rather lower quality than is usually found in Chester products. The single stem from context **(168)** is probably of 17th-century date, while the stems from contexts **(177)** and **(179)** are of a narrow bore, thinness and clay type which strongly suggests a 19th-century date. Context **246** appears consistent for the first part of the 18th century. One bowl fragment is certainly of that date and another probably so, though too small to be certain. A stem with a further example of a Chester-type pinnacle and dot roller stamped motif, though not the same die as that from context **152**, includes an oval stem stamp which appears to show Queen Anne from the portrait on her coins and is also closely paralleled in Chester (*ibid*, 165, fig 57, nos. 55-59, and especially no. 59). Amongst the unstratified finds was a Yorkshire 'bulbous' bowl, dating from 1650-70, with an illegible stamp, which is probably a trans-Pennine import (White 2004, 47, fig 6.5). This is a further small but interesting group of pipes from Kendal. With the exception of the Yorkshire-style 17th-century bowl, the identifiable pipes are of early 18th-century types and exhibit Chester forms and decoration. Given their relatively low quality and the apparent uniqueness of the roller-stamps, it is possible that they were made in Cumbria following Chester models.
- 6.1.17 **Clay pipe quality and potential:** the assemblage is relatively small, but the fact that it includes unique examples of stamped pipes increases its importance, at least within the field of clay pipe studies. It is assumed that the examples with potential to contribute to these studies have been identified for illustration in clay pipe journals. The inclusion of these figures in such journals is more appropriate than in a publication on the site excavation, since the unique pipes have more value to clay pipe studies than within the context of the excavation.
- 6.1.18 **Other ceramics:** this covers ceramics other than pottery and clay pipe. An unglazed ceramic small spherical toy (a 'marble') was recovered from context **(152)**, and the remainder of the ceramics were all building materials. These comprised six brick and drain fragments, all from Phase 3 contexts except one, which was later contamination in a Phase 2 context, and daub from the retent of one environmental sample, 69, from a context also allocated to Phase 2.
- 6.1.19 **Other ceramics quality and potential:** the assemblage is extremely small, and has no potential for further analysis, with the possible exception of the daub, which may include voids from organic inclusions that may be possible to identify.
- 6.1.20 **Glass:** a total of 47 pieces of glass were found, of which 42 was green glass, three very light turquoise and two colourless. The majority of these were from wine or beer bottles, with only two possible fragments of window glass present (from contexts **(156)** and **(305)**). All the glass was post-medieval in

date, more specifically 18th to 19th century, in contrast to the wide date-range of the pottery.

- 6.1.21 All the green glass and one piece of colourless glass was recovered from two structures, **419** and **420**, which were situated in the south-east corner of the site. Glass bottle fragments recovered from feature **420** included: one rim c1750-1800 from context **246**, one base c1800-1850 from context **(179)**, three fragments of bases c1750-1850 from context **(228)**, and two complete bases c1800-1850 from context **(152)**. The pit **(179)** also contained a green thin walled glass container with wide mouth, probably a pickle jar, c1850 (Fletcher 1975), and one fragment of a colourless glass base probably of some type of bottle. Structure **419** produced the following finds from its associated contexts: **(177)** contained two necks with rims c1750-1800; **(192)** one fragment of base c1750-1800; **(195)** one near-complete base c1700-1750.
- 6.1.22 *Glass quality and potential:* the glass assemblage is very small, and adds little to the information available from the pottery from the same contexts. It also has little intrinsic interest, and therefore has little or no potential for further analysis.
- 6.1.23 **Metal:** 18 metal objects were sent for conservation assessment, comprising 10 iron, five copper alloy, and three lead alloy objects. Most of the metal recovered was in fair to poor, to poor condition (see *Appendix 7*). The iron objects were largely unidentifiable; those which could be positively identified were nails or fragments of nail. Identifiable copper and copper alloy objects included button fragments and an incomplete coin or token from context **(148)** and a button and a piece of flat sheet from context **(152)**. An object from context **(121)** appeared to possess punched dot decoration, although the actual nature of the object was unclear. The lead alloy objects, which were retrieved from the retent of sample **12**, comprised short rods of unknown purpose.
- 6.1.24 *Metal quality and potential:* the metal assemblage was very small. The iron and lead objects are in very poor condition and it is unlikely that further analysis would be beneficial. The copper alloy objects, specifically those relating to the possible post-medieval metal-working on the site (*Section 5.5.3*), may benefit from further cleaning, conservation, and analysis, principally to identify them, however it is unlikely that this would add significantly to the information already known.
- 6.1.25 **Industrial waste and fuel residue:** iron slag and other industrial waste was hand-recovered from several contexts, and was also present, as well as prill, in the retents of some of the environmental samples. Hearth bottoms were recovered from two contexts, **(275 and 298)**. In addition, what appears to be waste from lead working was present in two samples, **67** and **75**. The former of these was initially identified as litharge cake and then a lead container (see *Appendix 7*), but is considered more likely to be lead dross (English Heritage 2001, 19, fig 30). Three types of fuel residue were recovered from the site: burnt peat was hand-collected from context **(311)**, and cinders and charcoal were present in some of the retents of the environmental samples.
- 6.1.26 *Industrial waste and fuel residue quality and potential:* the recovery of industrial waste, including the likely hearth bottoms, suggests that some form of metal-working was occurring in the vicinity, if not actually on the site itself. The iron-working residue does not merit any further analysis due to its very small quantity. The possible lead dross from sample **67**, context **(347)**, is of interest, as is a second piece of probable lead waste from sample **75**, context **(324)**. This was the secondary fill of the large pit complex **[276]**; further

analysis is not recommended, however, as it is unlikely to add significant new information.

- 6.1.27 **Stone and mortar:** a relatively good condition stone artefact with good evidence of having been used as a whetstone was recovered from context (217) (see Appendix 7). In addition, nine examples of burnt limestone lumps were hand-collected, all from separate contexts (Phases 1 and 2, with one also from Phase 3), and additional burnt limestone was identified in the retents of samples. This is thought to have been associated with the production of mortar or plaster in the area. Roofing slate was recovered from three contexts (from Phases 2 and 3), and during the evaluation the well was found to contain a sizeable deposit of such material. In addition, a fragment of slate pencil was recovered from context (156), allocated to Phase 3. Four fragments of mortar were hand-collected from Phase 2 and 3 contexts; mortar was present in many of the retents of the environmental samples, in the largest quantities in samples 11, 12, and 54 (all from Phase 3 contexts). A single tiny fragment of translucent yellowish-brown flint was recovered from sample 27, context (239). This would appear to be derived from deliberate working as it takes the form of a small blade with a bulb of percussion evident at the proximal end and obvious flaking along its dorsal crest. Its form is typical of debitage or micro waste from the production of a larger artefact and while not easily dateable is perhaps most likely Mesolithic or Neolithic.
- 6.1.28 **Stone and mortar quality and potential:** although not closely dateable from its form, the whetstone was recovered from a context allocated to Phase 2, and is of interest in the context of the activities that were carried out in this period. However, it has little potential for further analysis. Similarly, the burnt limestone, roofing slate, flint, and mortar are interesting to note in the contexts in which they were present, but they have little potential for further analysis.
- 6.1.29 **Leather:** a trimming of cattle hide was found in context (**323**). This is leather secondary waste trimming, tapering trimming with all edges cut; of unworn cattle hide with length of 138mm, a maximum width of 10mm, and a thickness of 3mm. Waste of this sort is produced when cutting out pattern pieces and trimming to size during the manufacture or repair of leather goods and, as such, indicates leatherworking being undertaken in the vicinity. The remains of a sole from a man's welted shoe sole, for the right foot was found unstratified. It is a large, broad shoe sole with wide tread tapering slightly to the wide waist. The toe area and right side of upper forepart and the lower waist and seat area are broken off and missing. A line of grain/flesh stitching is present along each side of the sole, with a stitch length 8mm. The sole has a length of 194+mm, a width tread of 112mm, and a waist of 85mm, which equates to a modern adult male size. The sole dates to the post-medieval period, but lacks any other diagnostic features that would allow further dating.
- 6.1.30 **Leather quality and potential:** the leather assemblage was extremely small, and during assessment all the information that could be gleaned from it was recorded. It has no potential for further analysis.
- 6.1.31 **Wool:** very short lengths and clumps of wool were recovered from the retents of samples **42** and **65** (both from contexts allocated to Phase 2), and from the flot of sample **55** (from an unphased context). They are assumed to be sheep's wool, and some appear to have been spun into yarn, whereas others appear to be un-spun clumps.
- 6.1.32 **Wool quality and potential:** the presence of surviving wool is presumed to be quite rare, particularly from medieval contexts, especially in the North West.

However, the fragments are extremely small, and it is not thought that they would merit further analysis.

- 6.1.33 **Bone:** animal bone was recovered from 92 contexts, and was found through either hand excavation or during environmental processing of the soil samples (see *Appendix 6*). A total of 389 fragments were hand collected, and bone fragments were present in 55 environmental samples. The faunal assemblage has proved to be moderately well preserved and includes both burnt and unburnt bones, principally of domestic animals (sheep or goat, cattle, horse and pig). Some bird and fish bones are also present, as well as some bones belonging to small animals, such as rabbit, mouse or rat. The represented species are typical for medieval and post-medieval assemblages. The proportion of pig bones in the sample is very low, having been only identified from one context (**179**). One burnt long bone fragment from context (**190**) could not be assigned to any specific animal species but was assessed by a human remains specialist as a possible human humerus or femur.
- 6.1.34 The assemblage consists principally of normal domestic waste, including both food and slaughter waste. However, it is possible that part of the assemblage represents specialised waste products from crafts or industrial activities, such as horn working, tanning or slaughter, most especially suggested by the presence of sawn cattle and sheep horn cores and horse bones in contexts (**152/246** and **200**). Context (**348**) includes complete long bones of cattle, which are likely to derive from one individual. This might represent a partial articulated skeleton or, alternatively, waste from butchery activity. Among the burnt bones some unusually large and complete fragments were recovered from contexts (**137**, **189**, and **190**). As the burnt bone is brittle and breaks easily it is usually very fragmented when recovered during archaeological excavations. Therefore it would appear likely that these bones were recovered from primary contexts, which had not been subjected to later disturbances.
- 6.1.35 *Bone quality and potential:* the assemblage consists of species typical of both the medieval and post-medieval periods, and principally represents normal domestic waste, including both food and slaughter. However, given the strong suggestion of specialised craft and/or industrial activities, a full analysis of the bone assemblage will be required in order to reach a more detailed conclusion on the nature of the deposits. A full analysis of the animal bone assemblage has potential to reveal information about the different activities, such as possible horn working and domestic activities, carried out on the site, as well as their temporal and spatial distribution. The possible presence of human remains of the material should also be examined. Full analysis of the material is therefore highly recommended. Also of interest is the presence of fish bone, which may be identified as either marine or freshwater, and therefore the source of the fish may be refined.
- 6.1.36 **Marine shell:** a very small quantity of marine shell, all of it edible cockle fragments (seven in total, and all from Phase 3 contexts), was hand-collected. In addition, cockle, mussel, and a single barnacle fragment, were recovered from the retents of some of the samples. This comprised material from Phase 1 (**243**) and Phase 3 (**148**, **150**, **152**, **206**, **222**, and **266**).
- 6.1.37 *Marine shell quality and potential:* the marine shell assemblage is very small, and the majority of it comes from contexts allocated to Phase 3. It is possible that the shell fragments originated from mortar rather than food waste, or a mixture of both. No further analysis of the fragments is necessary, but it would be useful to compare the distribution of marine shell across different phases

for other excavations in Kendal. Documentary evidence may also be of assistance, for instance was the exploitation of cockles in Morecambe Bay a relatively late occurrence, mainly during the 17th and 18th centuries and later?

- 6.1.38 **Wood:** context **(260)** produced two sections of timber which were sent for assessment by a specialist (*Appendix 8*). The timber was highly eroded, with no surviving sapwood. The ends of both pieces had been broken away and were missing. The first piece was 0.69m long, 0.15m wide, and 0.05m in thickness. The second piece was 0.66m in length, 0.16m in width and 0.08m thick. Context **(323)** produced a section of round wood 0.10m long and 0.03m in diameter, with stem and side shoots present, along with bark. Light charring was also present on both ends.
- 6.1.39 The preservation of the wood has been due to its burial in a waterlogged anoxic environment until its time of excavation. The sapwood no longer survives and the heavily-eroded surfaces are likely due in part to water and in part to microbial action. This suggests that the waterlogging has not been entirely permanent.
- 6.1.40 *Wood quality and potential:* the wood assemblage was very small. The two pieces of timber ascribed context number **(260)**, which are in all likelihood parts of the same piece of wood, were identified as *Quercus spp.* (Oak). The timber from context **(323)** was identified as *Corylus avellana* (Hazel). The oak timber was a post from a structure assumed to be a house; it had split longitudinally and only represented the heart wood. The sapwood had rotten *in situ*, as was illustrated by the size of the post relative to the socket formed by the packing stones which surrounded it (see 5.4.20). This timber had 30-40 rings, but without the sapwood and bark dendrochronological analysis would have given too broad a date range to be useful in dating the posthole from where it came. A brief analysis of growth rings suggests that the timber grew rapidly and may have been coppiced. The hazel from pit fill **(323)** was a charred off-cut of round wood and probably represents debris from a fire. Again it is not possible to date this by dendrochronology but there is enough wood present for ¹⁴C dating although accurate dating can be constructed from the pottery assemblage from this feature.

6.2 Samples

- 6.2.1 **Introduction:** the detailed results for individual features or contexts are presented in Tables 2 (retents), 3 (flot samples), and 4 (waterlogged samples) in *Appendix 9*.
- 6.2.2 The majority of plant remains found within the flot samples were preserved through charring, however uncharred seeds were recovered from several samples, although it is not certain in all cases whether this is due to anoxic conditions or due to modern contamination. Hence, the uncharred seeds recovered from samples not identified as fully waterlogged are recorded in the tables in *Appendix 9* but not discussed below.
- 6.2.3 Charred cereal grain was present in twenty-one of the samples (see Table 3, *Appendix 9*) with context **(233)**, in particular, found to contain an abundant quantity of charred grain together with other evidence of crop processing (see below). Three types of cereal grain were identified from the flot samples: *Triticum aestivo-compactum* (club/bread wheat), *Avena sp* (oat) and *Hordeum vulgare* (barley). Charred weed seeds were found within twelve of the samples (see Table 3, *Appendix 9*), with taxa recovered including: *Rumex sp* (sorrels), *Chenopodium sp* (goosefoots), *Carex sp* (sedges) and *Plantago lanceolata* (ribwort plantain). Included within the other charred plant remains

and of particular interest are the possible findings of *Panicum* sp (millet) and *Psium* sp (pea) from context (333) and (370) respectively. The possible presence of peas is significant as it suggests cultivation of not only grain (as shown above) but of other crops also. The presence of peas is rare in palaeoenvironmental samples and is usually only a rare find (e.g. Hatherley 2006). The presence of millet in context (333) would again indicate another potential crop and expanding evidence of the agrarian economy. However, as with the pea, further analysis is needed for identification to species level.

- 6.2.4 **Crop processing:** Sample 28 (context (233)) contained evidence of probable cereal processing together with an abundant quantity of oat grain and rare quantities of bread/club wheat and barley. The presence of many grain still contained within their hulls, together with spikelet and culm (straw) fragments provides some indication of cereal processing. It is likely that this sample represents a corn drying kiln deposit, with similar oat-dominated assemblages seen in other kiln deposits (e.g. Ellis 2002; Holden 2006; Timpany 2006). Together with the grain, charcoal fragments were also abundant within the assemblage and may represent fuel used in the kiln. Further information on the context of this deposit is needed, however, before further comment can be made on the grain assemblage.
- 6.2.5 **Wood Charcoal:** the large quantity of charcoal recovered from the samples (many containing common to abundant quantities) suggests that charcoal was still the main fuel used during this part of the medieval period. Coal fragments were recovered from two samples (29, 54) but these were in rare quantities and as such are unlikely to represent the main fuel-type used. Also of interest is the number of samples, which were found to contain roundwood charcoal, which is suggestive of woodland management; roundwoods representing either selection of wood or possible coppicing. Wood charcoal fragments are often present of a size and condition suitable for identification and/or Accelerated Mass Spectrometry (AMS) dating (see Table 3, Appendix 9). Fourteen samples were found to contain large charcoal fragments of 2cm or over in size, of which seven samples (contexts (126), (167), (169), (183), (345), (268), and (331)) contained an abundant quantity suggestive of *in situ* burning (see Table 3, Appendix 9).
- 6.2.6 **Other finds:** mammal bone was present in eight samples, with contexts (239) and (324) containing abundant quantities. Mammal bone and burnt bone in context (169) and marine shell in context (158) are likely to represent discarded food debris.
- 6.2.7 **Waterlogged samples:** the three samples containing waterlogged plant remains all have similar assemblages, with taxa such as pale persicaria, sedges, goosefoots and buttercups present in all samples. Of these samples the ones from contexts (323) and (322) proved to contain the most abundant plant remains. On the whole these assemblages are indicative of damp ground with taxa such as rushes, sedges, pale persicaria and nettles all found within these types of habitats (Clapham *et al*, 1962). The abundance of chickweed within context (323) is likely to relate to one of the species which is associated with damp ground rather than areas of cultivation (e.g. *Stellaria palustris* – marsh stitchwort) although to get to species level further identification of the fruits would be needed.
- 6.2.8 **Retents:** material present in the retents is discussed under the relevant finds sections in 6.1 and is covered briefly in the following paragraph. The samples, having been primarily taken from medieval negative features such as pits, confirm the general interpretation of their contents containing domestic

rubbish, with the presence of bone (both burnt and unburnt) and charcoal being noticeable in most; hazelnut shell fragments were present in 11 contexts and marine shell in seven, demonstrating at least their presence in the local diet. Small quantities of medieval pottery were also present in 29 of the retents, much of which is small and heavily abraded and probably residual, apart from a small number of larger sherds of Late medieval Reduced ware, probably from their original contexts. Similarly, the majority of post-medieval pottery, present in nine contexts, was also small and abraded. A number of contexts contained sherds of pottery too small or worn to positively attribute to any date range.

- 6.2.9 A number of iron and copper alloy objects were also recovered from the retents. While many were heavily corroded and not identifiable they included buttons, pins and pin fragments, tack fragments and a possible coin or token. A smaller number of possible lead artefacts were also found, although these were difficult to identify. Metal working waste, particularly from the working of iron, was present in many samples, principally as different types of slag, but also as small amounts of prill and hammerscale. Typically the quantities found were too small to suggest large-scale iron working in the vicinity of the site. Material apparently derived from lead working was also found in two samples, apparently in the form of lead dross. Mortar was present in 13 samples, mostly contexts of a later date, which perhaps indicates it was not widely in use in the earliest phases. Glass from the retent samples also belonged to the later phases. Two samples produced small fragments of clay pipe; however, these were too small to positively identify or date. The single lithic fragment is a translucent brown flint with the appearance of debitage; it is the only item to suggest any form of prehistoric activity on or in the vicinity of the site so its significance is unclear. It may even be intrusive from one of the deposits of gravel used to backfill the modern service trenches.
- 6.2.10 **Samples quality and potential:** the cereal grains and seeds associated with their cultivation are in general not present in large numbers. Overall this assemblage indicates plants growing in a damp area of marginal, neglected ground but there is some potential for further analysis of these deposits, if only to learn more about the local environment, and the likelihood that the waterlogged conditions might preserve other objects.
- 6.2.11 Sample 28, taken from context (233), warrants further analysis to gain more understanding on the species of oat and barley it contained. By looking in more depth at the sample we will be able to determine the type of oat grown at the site and also investigate how the crop may have been cleaned. Comparisons can then be made to similar assemblages in the UK. There is also an abundance of charcoal from this sample, which includes roundwood. Further analysis of these charcoal fragments will aid in determining the arboreal taxa selected for fuel and provide information on the local woodland relative to the site. It is therefore recommended that further analysis work be undertaken.
- 6.2.12 The presence of possible pea and millet at the site would be of interest given their sparseness in the archaeological record. It is recommended that further identification of the assemblages from samples 58 and 72 is undertaken to determine whether these are what we have in the samples and confirm their presence at the site.
- 6.2.13 Further analysis of the faunal bone is recommended which may identify species and could provide further information on the economy of the site and the types of animal being consumed.

6.3 Archive Quantification and Curation

6.3.1 **Quantification of paper archive:** the site archive from the evaluation and excavation comprises the following elements:

• Context indices	17
• Context records	345
• Drawing indices	2
• Working drawings	3
• Grid plan	1
• Plans/sections on drawing film	45
• Day record sheets	7
• Small finds index	1
• Sample index	1
• Environmental sample record	83
• Object record index	1
• Photographic record indices	11
• Colour print 35mm negatives (strips)	93
• Colour print photographs	365

6.3.2 **Quantification of physical archive:** at present the majority of the finds and samples are stored at Greenlane Archaeology's office at 2 Albrights Yard, Theatre Street, Ulverston, Cumbria, LA12 7AQ. The following finds and samples are currently stored at other locations:

- Animal bones: Headland Archaeology (Ireland) Ltd, Unit 1, Wallingstown Business Park, Little Island, Cork;
- Flots and sub-samples from waterlogged samples: Headland Archaeology (UK) Ltd, 13 Jane Street, Edinburgh, EH6 5HE;
- Timber: York Archaeological Trust for Excavation and Research Ltd, 47 Aldwark, York, YO1 7BX;
- Clay tobacco pipe: Peter Davey, Close Corvalley, Old Windmill Road, The Curraghs, Ballaugh, Isle of Man, IM7 5BJ.

6.3.3 The finds comprise the following:

- Two boxes of medieval pottery;
- Two boxes of animal bone;
- One box of post-medieval pottery;
- One box of other finds (metal, stone, clay pipe, leather).

6.3.4 The residue and flots retrieved from the processed samples are expected to comprise a single box. There are at present 81 10-litre buckets of unprocessed samples representing remaining, which represent 44 individual sample numbers.

6.3.5 **Quality:** the quality of the finds and processed samples has already been discussed in *Sections 6.1* and *6.2*. The quality of the data contained in the

paper and digital archive is considered to be good; it is internally consistent, indexed, and complete. All the appropriate details are recorded for each context and feature including their relationships to other contexts.

- 6.3.6 **Curation:** there are no specific curation or conservation issues relating to the paper archive. The majority of the finds also have no curation issues although, if they were to be retained, the metal would need to be packaged in acid-free foam to prevent further deterioration, and the timber would need to continue to be stored in refrigerated conditions. Following assessment by the specialist, since it was considered unlikely that any other information could be gained from further analysis, and because Kendal Museum is unlikely to accept waterlogged material, the leather has already been carefully dried out. The flots and retents from the processed non-waterlogged samples have no specific curation or conservation issues but the waterlogged sub-samples would either have to continue to be stored in refrigerated water or dried out. By the far the largest element of the archive, in terms of volume, are the remaining buckets of unprocessed environmental samples. If these are to be retained for any length of time, since they are currently in white plastic buckets, they would need to be covered in thick black plastic to prevent the growth of mould and seeds.

7. Excavation Discussion

7.1 Introduction

- 7.1.1 Excavation of the site has revealed four basic phases of activity which are briefly summarised below. The phasing has largely been constructed from pottery fabric types and in many cases the mixed assemblages encountered in many deposits has made this difficult. The presence of a thick deposit of subsoil across a majority of the site has at least meant that much of the medieval archaeology has remained largely undisturbed, and in one particular area, within the arms of ditch **417**, stratified deposits spanning the first three phases was preserved.
- 7.1.2 The broad phases of activity at the site are not atypical for the area and similar phases were evident at the Maude Street site just to the south of this excavation (OA North 2004, 4).

7.2 Phase 1 – 1100-1400

- 7.2.1 This is the first phase of activity evident at the site and represents the initial clearance of vegetation and the marking out of plot boundaries, subsequent activity includes pitting for clay extraction, the digging of rubbish pits, the re-cutting of the southern plot boundary and the infilling of quarry pits with rubbish and possibly cess. There were no structural features from this phase although it would seem likely that the clay extraction was directly related to construction on the plots' street frontage, especially given that the southern boundary ditch/hedge starts some distance west of the street. Overall a clear picture of the development of this part of Kendal has been established, and a good assemblage of medieval pottery fabrics was recovered that may aid future work in Kendal.
- 7.2.2 The most northerly boundary **413** is clearly a plot boundary and extends for a minimum distance of 30m west of Stricklandgate, Todd's map of 1787 would suggest that the total length of this plot was around 42m. Boundary **401/403** was located roughly 11m to the south of **413** and this would seem like a reasonable width for a burgage plot, although there appears to be no other sites in Kendal where two boundaries have been excavated to verify this. It must be noted that this boundary starts some 14m westwards of Stricklandgate and only runs westwards for a further 13m, this may well suggest that there were properties existing or planned for the street frontage by this time. The presence of a later Phase 1 pottery fabric in the southern linear **403** may indicate that this is a re-cut of **401** which may have been made redundant by the quarrying activity at its western end. The onset of quarrying may explain the 'L'-shaped ditch **417** which has a longer date range than the east/west boundary, this date range is in keeping with the date ranges for the pottery from the fills of the quarry pits which cover Phases 1 and 2. It is possible that this boundary separated the pitting to the west, from the rear of street front properties to the east, as there was a noticeably higher concentration of pitting to the west of this boundary. Interestingly the southern boundary is evident on all the maps illustrated in Figures 2 and 3, while the northern boundary does not seem to be present before the 1853 map. The presence of these boundaries into the 19th century does further suggest that they represent earlier 'fossilised' burgage plot boundaries (see OA North 2004, 34 and Newman 1988, 47).

7.2.3 The earliest pits on the site are the two rubbish pits **[141, 284]** which can both be dated to between 1200 and 1350. The start of clay extraction on the site appears to fall within this date range also and is represented by the group of pits **[249, 244, 297, 251 and 383]**, many of the other pits ascribed to this phase were more difficult to date. Pit **[276]**, **[186]** and **[191]** are somewhat confusing, it would seem likely that they would also have been extraction pits dating from this phase as they fall within the area marked out by the Phase 1 ditches **403** and **417**, and seem to respect the edges of the earlier pit group. Pottery from the fills does, however, suggest that they belong in Phase 2.

7.3 Phase 2 – 1400-1700

7.3.1 This phase provides the first evidence for structures on the site which are known to exist in this phase from Speed's map of 1611 (Figure 2), if properties that pre-date this phase did exist they are likely to have been located on the street frontage which was not excavated. A larger quantity of domestic refuse was recorded from the fills of features in this phase also suggesting occupation of the site, and a number of features contained evidence for the varied industrial activities in the vicinity.

7.3.2 The main structural evidence came from the substantial posthole **[258]** which appears to represent the rear of a property that would have fronted onto Stricklandgate. From pit **[276]** fragments of roofing slates were recovered and these were also found in the backfill of the well found within the evaluation trench which contained Phase 2 pottery. The fills of **[276]** also contained burnt limestone fragments that probably represent mortar or plaster production, mortar itself was also recovered from environmental samples of this pits fills, along with part burnt peat, brick fragments, daub and bracken which may have been used as an insulating material. Nails were also recovered from a number of features in this phase and the continuation of clay extraction suggested by pits **[155, 162, 205, 171 and 125]** further suggests construction.

7.3.3 Evidence for light industrial activity in this phase came from both hand excavation and environmental samples, this comprised leather off-cuts, lead dross, prill and slag, and wool fibres. The hearth tax (1671) shows that Stricklandgate had the highest number of shearmen, dyers and mercers living and presumably working there, and suggests that the woollen industry was then still being organised on a relatively small, cottage industry level (Marshall 1975, 194). Feature **[283]** contained charcoal and an abundant quantity of oat grain and rare quantities of bread/club wheat and barley. The presence of many grains still contained within their hulls, together with spikelet and culm (straw) fragments, provides some indication of cereal processing. While these activities can be tied down to the site itself it is probable that they were occurring in the immediate vicinity illustrating the increasing development of this part of the town in the late medieval period. The abundance of large and freshly broken bunghole cistern fragments in specific features, most notably **[218, 283, and 276]**, does give rise to the possibility that they were being manufactured locally. Further analysis of these pots and comparisons with other assemblages from Kendal may shed more light on this possibility.

7.4 Phase 3 – Late 17th and 18th century

7.4.1 During this time several new trends emerge, there appears to be a concerted effort to consolidate the ground surface **[146, 131, 129/223]**, and many earlier pits are backfilled/capped with limestone rubble **[155, 162, 205, 171 and 125]**

in preparation for the new buildings evident on Todd's plan of 1787. All the features that actually date from this phase are located further from the street frontage as the front of the yards become more densely occupied. Two structures were also recorded, one of which showed evidence for light industrial activity at the site in the form of a metal workshop. Contexts **(200** and **152/246** also contained sawn cattle and sheep horn cores and horse bones that indicate slaughtering, horn working and possibly tanning in the vicinity.

7.5 Phase 4 – 19th century

- 7.5.1 This phase of activity was represented by foundation trenches in the northern part of the site, the evaluation phase (Greenlane Archaeology 2008b) revealed more structures of this date which can be easily matched to structures shown on the 19th century maps.

8. Potential for analysis

8.1 Introduction

8.1.1 The quantity and quality of the finds and samples has been covered in *Section 6*. The following sections examine the original research aims, present updated research aims, and sets out the potential for analysis of the archive based on these research aims. Following this section a project design, covering the methodology for analysis, publication, and the production of the research archive, is included as *Appendix 10*.

8.2 Original and updated research aims

8.2.1 **Original research aims:** based on the results of the evaluation (Greenlane Archaeology 2008b) the excavation was deemed to have the potential to address a number of academic research aims (see *Appendix 1, Section 4.1.3*):

1. To contribute to the typology of medieval fabric types in Kendal;
2. To contribute to an understanding of the environment of medieval Kendal and provide information on key points such as past land use, vegetation, and exploitation of resources;
3. To contribute to an understanding of medieval health and diet;
4. To contribute to an understanding of the extent, development, and morphology of the town during the medieval period.

8.2.2 These were subsequently considered in relation to the relevant elements of the research context and agenda, as defined by Newman (2006) and Newman and Newman (2007), which allowed series of site-specific hypotheses to be defined. These are presented in the original project design for the excavation (*Appendix 2, Sections 2 and 3*).

8.2.3 **Updated research aims:** this report has addressed Aims 2 and 3 as fully as it can and therefore these are not appropriate research aims for further analysis. However, Aim 1 is still an appropriate research aim for the project since more information can be extracted from the medieval pottery. In particular, in the absence of a detailed established list of fabric types for Kendal there is a need to further describe and analyse the fabrics, and illustrate the forms present. In addition, the later medieval fabrics have the potential for further analysis in terms of their relationship to the post-medieval pottery types in order to better understand their development and dating, which in turn will inform the understanding of the site.

8.2.4 There is also the potential, through both the discussion of the pottery and the site as a whole, to contribute more to Aim 4. However, the absence of extensively published accounts of previous work carried out in Kendal means that the contribution to Aim 4 may be quite limited in scope. The site-specific hypotheses can also all be further examined through the consideration of the results of the excavation in terms of the wider archaeology of Kendal and the likely function and phasing of the features encountered.

8.2.5 Based on the assessment of the medieval pottery, analysis could contribute data towards several stated research aims from the *Regional Research Framework* (Brennand 2007). Updated research aims in relation to original research Aim 1 are:

Updated Research Aim 1a: establish closely dated artefact sequences across the region, linked to absolute dating (Newman and Newman 2007, 97).

The medieval pottery from this site can contribute to this due to the relatively large size of the assemblage, the apparent continuity from the gritty wares to the transitional wares, and the presence of significant quantities of sherds which show the form of the vessels. Although it was hoped that absolute dating would be possible on the site, a lack of coins, and timber present not being suitable for dendrochronology, mean that this is not possible. There is still the potential for radiocarbon dating from the environmental samples, but it is not thought that this will significantly refine the date ranges for the pottery. So, in order to contribute to this aim the site-specific research aims, together with the data required, are:

- To illustrate fully the **forms** of the medieval pottery of different fabrics – *this will allow possible functions to be identified in some cases, such as with bunghole cisterns, and so will contribute towards artefact sequences;*
- To describe the different medieval pottery **fabrics** present in the assemblage, within the already established ware types, for example the different gritty ware fabrics present on the site – *this will allow comparisons to be made in future with fabrics on other sites in Kendal and the surrounding area, and therefore contribute towards closely dated fabric sequences, in cases where absolute dates are associated with the same fabrics on other sites;*
- To present information on the stratigraphic **relationships** between different medieval and later pottery fabrics – *this will help to establish which fabrics, and therefore which artefacts, were in contemporary use, and contribute towards artefact sequences.*

Updated Research Aim 1b: identify and investigate pottery kiln sites and the links between producers and consumers (Newman and Newman 2007, 113):

The medieval pottery from the site can contribute to this since the assemblage is likely to represent many pottery kiln sites, and if these are identified in the future, this will contribute towards the consumer data for these production centres and therefore provide a more detailed understanding of trade patterns. The same data is required as with updated research aim 1a.

8.2.6 Based on the assessment of the site as a whole, together with the medieval pottery, the results of the evaluation and excavation could contribute data towards several stated research aims from the *Regional Research Framework* (Brennand 2007). Updated research aims in relation to original research Aim 4 are:

Updated Research Aim 4a: examine the activity within the backplots of medieval Kendal (Newman and Newman 2007, 104)

The excavation encountered features within the backplots of what would appear to be three burgage plots in Kendal. Therefore the examination of these features will contribute data towards the above research aim, building on the information already contained in this report. So, in order to contribute to this aim the site-specific research aims, together with the data required, are:

- Improve the relative dating of features - *as stated above there is a lack of absolute dates from the site and so the analysis of the pottery and improvement in understanding of the relative dates of the different features that this will bring will be crucial in better understanding the morphology of the site, which will in turn aid the understanding of Kendal as a whole;*
- Examine the relationships between features, their form, function, and contents - *the purpose of many of the features is uncertain, but a closer analysis of them should enable this to be better understood, which will in turn aid the understanding, through comparison with other sites where possible, of the morphology of the town. A consideration of their contents, in terms of both finds and environmental remains, will also aid their interpretation and provide information regarding, for example, industrial and domestic activities. The form of the features is also key, in particular examining the position of likely property boundaries, their relationship with other features, and evidence for continuation into the post-medieval and modern period;*
- Compare the results of the excavation to other sites and consider other historical sources - *where available the information acquired during previous archaeological work should be examined, particularly with regard to the morphology and arrangement of features. Evidence from historical sources may also aid the interpretation of the few post-medieval features encountered, which, although arguably not as significant as the medieval, may be more readily explained and may connect to earlier activities taking place on the site.*

8.3 Potential of the research archive for analysis

- 8.3.1 **Finds:** as outlined in Section 6 and stated in Section 8.2.3 above, the medieval pottery assemblage has considerable potential for analysis, and is considered by the specialist to be of regional significance. In particular the later types, namely the reduced Greenware and Midlands-type purple ware, which are exceptional in their size, quantity, and condition. Further analysis of these ware types could aid the understanding of the transition from medieval to post-medieval ceramic traditions, which represents a primary research aim in the study of medieval ceramics. In general with all of the medieval pottery, and in the absence of a standardised fabric type for Kendal (with the exception of the basic series devised for Cumbria by MacCarthy and Brooks (1992)), there is a need to more fully described and categorise the fabric types, which would include the production of illustrations of forms and comparison to other material recorded in Kendal.
- 8.3.2 Of the other finds categories, only the bone has been recommended for further analysis by the specialist. However, although this might be beneficial in itself it does not contribute to any of the original research aims as the vast majority of the bones recovered during the excavation were recovered from post-medieval contexts. It is therefore recommended that it be retained as part of the research archive but not analysed in any further detail at this stage.
- 8.3.3 **Samples:** of the samples three in particular were recommended for analysis, although there was considered to be some potential for further analysis of the environmental remains from the whole site, if only to learn more about the local environment. However, during the excavation a very large number of environmental samples were taken, the assessment of which has contributed a significant amount of information towards the original research aims. None of the samples assessed were considered exceptional in terms of the volume

or diversity of the remains present, and although these samples have been recommended for analysis the quantity to be analysed is very small and has limited merit in terms of the wider understanding of the site or its context. It is therefore recommended that all of the assessed environmental remains be retained as part of the research archive.

- 8.3.4 **Paper archive:** the information that could be extracted from the paper archive has been made use of in the discussions of the phasing and stratigraphy within this report. The archaeological remains on the site were well-preserved and of reasonable number, but they were not exceptional when compared to other medieval sites excavated in Kendal. It is therefore considered unlikely that any additional information could be extracted from further analysis that would elucidate the original research aims. The paper archive does, however, form the primary record of the excavation, and information from it, primarily that already included in this report and the site database, will be extensively utilised in both the production of the publication text and the interpretation of the site required for the ceramic analysis.

9. Bibliography

9.1 Primary and Cartographic Sources

- CRO(K) WSMB/K 82a 1872 *Plan of Proposed Lines of New Road – Sandes Avenue*
- Hoggarth, H, 1853 *Plan of the Town of Kendal, from an Actual Survey*
- Ordnance Survey, c1859a *Kendal Sheet 38.8.2*, 1:500
- Ordnance Survey, c1859b *Kendal Sheet 38.8.3*, 1:500
- Ordnance Survey, 1859 *Westmorland Sheet 38.8*, 1:2500
- Ordnance Survey, 1898 *Westmorland Sheet 38.8*, revised 1897, 1:2500
- Ordnance Survey, 1912 *Westmorland Sheet 38.8.NW*, revised 1912, 1:1250
- Ordnance Survey, 1938 *Westmorland Sheet 38.8*, revised 1938-1939, 1:2500
- Ordnance Survey, 2002 *The English Lakes South-Eastern Area: Windermere, Kendal & Silverdale*, Explorer **OL7**, 1:25000
- Speed, J, 1611 *Plan of Kendal*
- Todd, J, 1787 *A Plan of Kendal, from an Actual Survey*
- Wood, J, 1833 *Plan of Kendal*

9.2 Secondary Sources

- Brennand, M, 2006 *The Archaeology of North West England an Archaeological Research Framework of North West England: Volume 1 Resource Assessment*, Archaeology North West, **8**, Manchester
- Brennand, M, 2007 *Research and Archaeology in North West England an Archaeological Research Framework of North West England: Volume 2 Research Agenda and Strategy*, Archaeology North West, **9**, Manchester
- Brooks, CM, 2000 The Medieval and Post-Medieval Pottery, in RM Newman, NJ Hair, CLE Howard-Davis, CM Brooks, and A White, Excavations at Penrith Market, 1990, *Trans Cumberland Westmorland Antiq Archaeol Soc*, **100**, 105-130
- Brown, DH, 2007 *Archaeological Archives: A Guide to Best Practice in Creation, Compilation, Transfer, and Curation*, IFA, Reading
- Cappers, RTJ, Bekker, RM, and Jans, JEA, 2006 *Digital Seed Atlas of the Netherlands*, Groningen
- Clapham, AR, Tutin, TG, and Moore, DM, 1962 *Flora of the British Isles*, 2nd edn, Cambridge
- Collingwood, WG, 1904 An Anglian Cross-Fragment at Kendal, *Trans Cumberland Westmorland Antiq Archaeol Soc*, 2nd ser, **4**, 330-333
- Countryside Commission, 1998 *Countryside Character, Volume 2: North West*, Cheltenham
- CCC (Cumbria County Council) and EH (English Heritage), 2002 *Extensive Urban Survey, Archaeological Assessment Report: Kendal*, unpubl rep
- Curwen, JF, 1900 *Kirkbie-Kendall*, Kendal

- David, R, 1987 The Slate Quarrying Industry in Westmorland: Part One: The Valley of Troutbeck, Kentmere and Longsleddale, *Trans Cumberland Westmorland Antiq Archaeol Soc*, 2nd ser, **87**, 215-236
- Ellis, C, 2002 Excavation of Two Ditches and a Medieval Grain Drying Kiln, Inverness, Highland, *Proc Soc Antiq Scotland*, **132**, 425-437
- English Heritage, 1991 *The Management of Archaeological Projects*, 2nd edn, London
- English Heritage, 2001 *Centre for Archaeology Guidelines: Archaeometallurgy*, Swindon
- Faull, ML, and Stinson, M, 1986 Yorkshire, in J Morris (ed), *Domesday Book*, **30**, Chichester
- Fletcher, E, 1975 *Digging up Antiques*, Bootle
- Gibbon, P 1986 Docker Moor Medieval Pottery: Work in Progress, *Contrebis*, **12**, 41-46
- Greenlane Archaeology 2008a 130-136 Stricklandgate, Kendal, Cumbria: *Archaeological Desk-Based Assessment*, unpubl rep
- Greenlane Archaeology 2008b 130-136 Stricklandgate, Kendal, Cumbria: *Archaeological Evaluation*, unpubl rep
- Hatherley, C, 2006 *Main Street Cornhill-on-Tweed, Northumberland: An Interim Report and Post-Excavation Assessment of an Archaeological Excavation*, unpubl rep, Headland Archaeology Ltd
- Holden, T, 2006 The Corn-Drying Kilns at Hoddom, in C Lowe, *Excavations at Hoddom, Dumfriesshire: an Early Ecclesiastical Site in South-West Scotland*, Soc Antiq Scotland, Edinburgh, 100-113
- Howard-Davies, C, 1996 The Worked Stone, in J Lambert (ed), *Transect Through Time: The Archaeological Landscape of the Shell North Western Ethylene Pipeline (English Section)*, Lancaster Imprints **1**, 160-163
- Institute of Field Archaeologists (IFA), 2001 *Standard and Guidance for Archaeological Field Evaluation*, revised edn, Reading
- Kirkby, DP, 1962 Strathclyde and Cumbria: a Survey of Historical Development to 1092, *Trans Cumberland Westmorland Antiq Archaeol Soc*, 2nd ser, **62**, 77-94
- Laing, L, 1975 The Origins and Affinities of Chester Medieval Cooking Pots, in, PJ Davey (ed) *Medieval Pottery from Excavations in the North West: Material from the Chester Conference of November 1975*, Institute of Extension Studies, Liverpool
- Marshall, JD, 1975 Kendal in the Late Seventeenth and Eighteenth Centuries, *Trans Cumberland Westmorland Antiq Archaeol Soc*, 2nd ser, **65**, 188-258
- Masser, AP, 2006 The Medieval Village of Rickerby: Excavations at Rickerby House, 2001-2, *Trans Cumberland Westmorland Antiq Archaeol Soc*, 3rd ser, **6**, 385-389
- McCarthy, MR and Brooks, CM, 1992 The Establishment of a Medieval Pottery Sequence in Cumbria, England, in D Gaimster and M Redknap (ed), *Everyday and Exotic Pottery from Europe: Studies in Honour of John G Hurst*, Oxford, 21-37
- Medieval Pottery Research Group, 2001 *Minimum Standards for the Processing, Recording, Analysis and Publication of Post-Roman Ceramics*, MPRG Occ Paper, **2**, London

- Mellor, M, 1994 *Medieval Ceramic Studies in England: a Review for English Heritage*, London
- Moseley, F (ed), 1978 *The Geology of the Lake District*, Yorkshire Geological Society, occ publ 3, Leeds
- Munby, J, 1985 Medieval Kendal: the First Borough Charter and its Connexions, *Trans Cumberland Westmorland Antiq Archaeol Soc*, 2nd ser, **85**, 95-114
- Newman, R, 1988 Archaeology in Kendal, 1987-8, *Contrebis*, **14**, 44-50
- Newman, C, 2006 The Medieval Period Resource Assessment, in M Brennand (ed), *The Archaeology of North West England. An Archaeological Research Framework for North West England: Volume 1 Resource Assessment*, Archaeology North West **8**, Manchester, 115-144
- Newman, RM, Hair, NJ, Howard-Davis, CLE, Brooks, CM, and White, A, 2000 Excavations at Penrith Market, 1990, *Trans Cumberland Westmorland Antiq Archaeol Soc*, **100**, 105-130
- Newman, R, and McNeil, R, 2007a The Industrial and Modern Period Research Agenda, in M Brennand (ed), *Research and Archaeology in North West England an Archaeological Research Framework for North West England: Volume 2 Research Agenda and Strategy*, Archaeology North West **9**, Manchester, 133-158
- Newman, R, and McNeil, R, 2007b The Post-Medieval Period Research Agenda, in M Brennand (ed), *Research and Archaeology in North West England an Archaeological Research Framework for North West England: Volume 2 Research Agenda and Strategy*, Archaeology North West **9**, Manchester, 115-132
- Newman, C, and Newman, R, 2007 The Medieval Period Research Agenda, in M Brennand (ed), *Research and Archaeology in North West England. An Archaeological Research Framework for North West England: Volume 2 Research Agenda and Strategy*, Archaeology North West **9**, Manchester, 95-114
- Oxford Archaeology North (OA North), 2004 *Yards 110 and 112 Stricklandgate, Kendal, Cumbria: Archaeological Excavation Assessment Report*, unpubl rep
- Pevsner, N, 1967 *The Buildings of England: Cumberland and Westmorland*, London
- RCHME, 1936 *An Inventory of the Historical Monuments in Westmorland*, London
- Rutter, JA and Davey, PJ, 1980 Clay Pipes from Chester, in PJ Davey, *The Archaeology of the Clay Tobacco Pipe III: Britain: the North and West*, British Archaeological Reports, British Series, **78**, Oxford, 41-272
- Schweingruber, FW, 1982 *Microscopic Wood Anatomy*, Zurich
- Smith, AH, 1967 *The Place Names of Westmorland Part 1: Introduction, River- and Lake-Names, Road-Names, The Barony of Kendal*, English Place-Names Soc, **42:1**, Cambridge
- Stace, C, 1997 *New Flora of the British Isles*, 2nd edn, Cambridge
- Timpany, S, 2006 *Environmental Assessment of Samples from the Upper Forth Crossing, Kincardine*, unpubl rep, Headland Archaeology Ltd
- Tyson, B, 1998 Transportation and the Supply of Construction Materials: An Aspect of Traditional Building Management, *Vernacular Architecture*, **29**, 63-81
- Tyson, B, 2000 Management Attitudes Towards Reusing Materials in Traditional Cumbrian Buildings, *Vernacular Architecture*, **31**, 32-44

White, A, 2000 Pottery Making at Silverdale, *Trans Cumberland Westmorland Antiq Archaeol Soc*, 2nd ser, **100**, 285-291

White, SD, 2004 The Dynamics of Regionalisation and Trade: Yorkshire Clay Tobacco Pipes c1600-1800, in Davey, PJ, *The Archaeology of the Clay Tobacco Pipe XVIII*, British Archaeological Reports, British Series, **374**, Oxford

Winchester, AJL, 1979 *Cumbrian Historic Town Survey: Kendal*, unpubl rep

Appendix 1: Project Brief

BRIEF FOR AN ARCHAEOLOGICAL EXCAVATION AT 130-136 STRICKLANDGATE, KENDAL, CUMBRIA

Issued by the

County Historic Environment Service

Environment Unit, Economy, Culture and Environment



Date of Brief: 11 June 2008

This Design Brief is only valid for 1 year after the above date. After this period the County Historic Environment Service should be contacted. Any specification resulting from this Brief will only be considered for the same period.

1. SITE DESCRIPTION AND SUMMARY

Site:	130 – 136 Stricklandgate, Kendal
Grid Reference:	SD 5145 9305
Planning Application No.:	5/08/0070
Scope of Development:	Erection of a hotel and restaurant, and extensions to existing
Scope of Archaeological Excavation:	700 square metres

Detailed specifications and tenders are invited from appropriately resourced, qualified and experienced archaeological contractors to undertake the archaeological project outlined by this Brief and to produce a report on that work. The work should be under the direct management of either an Associate or Member of the Institute of Field Archaeologists, or equivalent, and any response to this Brief should follow IFA Standard and Guidance for Archaeological Field Excavations, 2001. No fieldwork may commence until approval of a specification has been issued by the County Historic Environment Service.

2. PLANNING BACKGROUND

- 2.1 Cumbria County Council's County Historic Environment Service (CCCHES) has been consulted by South Lakeland District Council regarding a planning application for the erection of a hotel and restaurant, and extensions to existing buildings at 130 – 136 Stricklandgate, Kendal.
- 2.2 The site has been the subject of an archaeological desk-based assessment (Greenlane Archaeology, 2008, *130 – 136 Stricklandgate, Kendal, Cumbria, Archaeological Desk-Based Assessment*, unpublished report) and archaeological evaluation (Greenlane Archaeology, 2008, *Former Craghills Garage, 130 – 136 Stricklandgate, Kendal, Cumbria, Archaeological Evaluation*, unpublished interim statement) and this brief must be read in conjunction with these reports. The results of the evaluation indicate that significant medieval archaeological remains survive in one area of the site and these will be destroyed by the proposed development. Consequently, an archaeological mitigation scheme comprising the excavation of these remains within an area of 700 square metres is required before the construction works commence.
- 2.3 This archaeological programme forms part of a condition on planning consent and is in accordance with guidance given in Planning Policy Guidance note 16 (Archaeology and Planning) and with policy C19 of the South Lakeland Local Plan.

3. ARCHAEOLOGICAL BACKGROUND

- 3.1 The site is located on the edge of the later medieval and early post medieval town, as shown by Speed's map of Kendal dated 1611. Archaeological investigations on the opposite side of Maude Street, at 104 - 112 Stricklandgate, revealed remains of medieval activity in the backplots of dwellings fronting Stricklandgate.
- 3.2 The results of the evaluation at 130 – 136 Stricklandgate have revealed a series of medieval rubbish pits with pottery dating between the 12th and 17th centuries. A medieval well was also discovered. The evidence suggests that the area was used for domestic activity by the residents of Stricklandgate, although there is some indication that limited industry also took place in the vicinity. This is the first excavated confirmation that the medieval town extended this far north along Stricklandgate and may be an indication that the town was a similar scale during this period to that shown on Speed's map of 1611. Of particular significance, is the range of medieval pottery recovered, which included Cistercian ware, and the very well preserved organic remains in one of the pits.

4. SCOPE OF THE PROJECT

4.1 Objectives

- 4.1.1 To preserve by record the archaeological evidence contained within the area on the attached plan and to attempt a reconstruction of the history and use of the site.
- 4.1.2 Reference should be made to the resource assessment, agenda and strategy documents for the archaeological research framework for the North West of England (Brennand, M, 2006, *The Archaeology of North West England an Archaeological Research Framework of North West England: Volume 1 Resource Assessment*, Archaeology North West, 8, Manchester & Brennand, M, 2007, *Research and Archaeology in North West*

Client: Lake District Estates Co Ltd

England An Archaeological Research Framework of North West England: Volume 2 Research Agenda and Strategy, Archaeology North West, 9, Manchester).

4.1.3 The project has the potential to address a number of academic aims including, although this is by no means exhaustive list:

- ❖ To contribute to a typology of medieval pottery fabrics in Kendal;
- ❖ To contribute to an understanding of the environment of medieval Kendal and provide information on key points such as past land use, vegetation, and exploitation of resources;
- ❖ To contribute to an understanding of the medieval health and diet;
- ❖ To contribute to an understanding of the extent, development and morphology of the town during the medieval period.

4.1.4 To inform wider regional, national and period based research frameworks.

4.2 *Work Required* *Archaeological Excavation*

4.2.1 The archaeological excavation of the area illustrated in the attached plan which is 700 square metres in extent. It is understood that the excavation will be undertaken in two phases. Sufficient resource must be available for this programme of work and a contingency to cover for unexpected discoveries or poor weather conditions.

4.2.2 Initially, demonstrably modern overburden may be undertaken using a mechanical excavator fitted with a wide toothless ditching blade and working under archaeological supervision.

4.2.3 The area should be hand cleaned to define the archaeological features and a base plan produced at an appropriate scale.

4.2.4 All identified archaeological features within the stripped area will be archaeologically excavated by hand. Archaeological hand excavations will continue to the depth of natural deposits. Any discrete archaeological features which extend beyond the areas agreed for excavation may need to be investigated beyond these areas. Decisions regarding any such features will be made by the County Historic Environment Service following monitoring and a suitable contingency should be included in the project design. A detailed record must be made of the stratigraphic sequence of the site, in accordance with Institute of Field Archaeologists and English Heritage guidelines.

4.2.5 Where safe to do so, all discrete features should, in normal circumstances, be fully excavated but should in any case not be less than 50% of the whole. Under no circumstances is the percentage of sampling of archaeological features to be determined solely by resource limitations.

4.2.6 The use of metal detectors on site to aid recovery of artefacts is encouraged.

4.2.7 All finds (artefacts and ecofacts) visible during excavation should be collected and processed, in accordance with Institute of Field Archaeologists and English Heritage guidelines.

4.2.8 Specialist advice for sampling for scientific dating, geoarchaeology and soil science, biological analysis, artefact and ecofact conservation and analysis, and analysis of technological residues, ceramics, and stone must be included in the project planning stage and based on the field evaluation results. The sampling strategy may be subject to variation during the excavation and further advice from specialists, in the field, should be sought, if necessary. Where there is evidence for industrial activity, including 'domestic' ovens and hearths, macroscopic residues should be collected by hand and soil samples taken.

4.2.9 English Heritage's regional Archaeological Science Advisor (Sue Stallibrass, email: Sue.Stallibrass@liverpool.ac.uk telephone: 0151 794 5046) should be consulted prior to the commencement of fieldwork to allow for an opportunity to comment on, and observe in the field, the proposed strategy for scientific sampling.

4.2.10 Care must be taken in dealing with human remains and the appropriate Department for Constitutional Affairs and environmental health regulations followed. The County Historic Environment Service and the local Coroner must be informed immediately human remains are discovered. Where human remains are encountered, it is important that the post-excavation assessment contains an analysis and statement for the future retention of the assemblage, including options for reburial.

- 4.2.11 An up to date copy of the Unit excavation manual must be on deposit with the County Historic Environment Service before the project commences.

Post-excavation analysis

- 4.2.12 A *post-excavation assessment* (Management of Archaeological Projects 2 Assessment) must be undertaken within six months of the completion of fieldwork. This should include an initial finds and environmental assessment and review of site data. It will identify the scope of the post-excavation work and result in a detailed timetable and cost for the post-excavation analysis. An interim site narrative should also be provided.
- 4.2.13 Following the completion of above, the full post-excavation programme should be implemented through to archive report and publication. This should be completed within two years of the end of the fieldwork stage of the project.
- 4.2.14 All specialists must be named in the project design (see below) and they must have agreed in writing to their involvement with the project. All artefacts must be conserved and stored in accordance with *'First Aid for Finds'* during the post-excavation assessment and analysis.

5. SPECIFICATION

- 5.1 Before the project commences a specification must be submitted to, and approved by, the County Historic Environment Service.
- 5.2 Proposals to meet this Brief should take the form of a detailed specification prepared in accordance with the recommendations of *The Management of Archaeological Projects*, 2nd ed. 1991, and must include:
- ❖ A description of the excavation sampling strategy and recording system to be used
 - ❖ A description of the finds and environmental sampling strategies to be used
 - ❖ A description of the post excavation and reporting work that will be undertaken
 - ❖ A research design which sets out the site specific objectives of the archaeological works
 - ❖ Details of key project staff, including the names of the project manager, site supervisor(s), finds and environmental specialists and any other specialist sub-contractors to be employed
 - ❖ Details of on site staffing, expressed in terms of person days
 - ❖ A timetable for the fieldwork and post-excavation assessment, with a projected timetable for the post-excavation analysis and publication
- 5.3 Any significant variations to the specification must be agreed by the County Historic Environment Service in advance.

6. REPORTING AND PUBLICATION

- 6.1 The archaeological work should result in an interim report, this should include as a minimum:
- ❖ A site location plan, related to the national grid
 - ❖ A front cover/frontispiece which includes the planning application number and the national grid reference of the site
 - ❖ A concise, non-technical summary of the results
 - ❖ A description of the methodology employed, work undertaken and outline of the results obtained
 - ❖ A list of, and spot dates for, any finds recovered
 - ❖ A description of any environmental or other specialist work undertaken and outline of the results obtained
 - ❖ The dates on which the project was undertaken
- 6.2 Three copies of this report should be deposited with the County Historic Environment Record within six months of completion of fieldwork. This will be on the understanding that the report will be made available as a public document through the County Historic Environment Record.
- 6.3 The results of the excavation should be submitted to the Transactions of the Cumberland and Westmorland Antiquarian Society within one year of completion of fieldwork.
- 6.4 A copy of the full archive report should be submitted to the County Historic Environment Service within two years of the completion of the fieldwork stage of the project.

- 6.5 Cumbria HER is taking part in the *Online Access to Index of Archaeological Investigations (OASIS)* project. The online OASIS form at <http://ads.ahds.ac.uk/project/oasis> must therefore also be completed as part of the project. Information on projects undertaken in Cumbria will be made available through the above website, unless otherwise agreed.
- 6.6 The involvement of the County Historic Environment Service should be acknowledged in any report of publication generated by this project.

7. THE ARCHIVE

- 7.1 An archive must be prepared in accordance with the recommendations in Brown, DH, 2007, *Archaeological Archives A Guide To Best Practice In Creation, Compilation, Transfer and Curation*, Archaeological Archives Forum. Arrangements must be made for its long term storage and deposition with an appropriate repository. A copy shall also be offered to the National Monuments Record.
- 7.2 The landowner should be encouraged to transfer the ownership of finds to a local or relevant specialist museum. In this case Kendal Museum is the most likely repository. The museum's requirements for the transfer and storage of finds should be agreed before the project commences.
- 7.3 The County Historic Environment Service must be notified of the arrangements made.

8. PROJECT MONITORING

- 8.1 One weeks notice must be given to the County Historic Environment Service prior to the commencement of fieldwork.
- 8.2 Fieldwork will be monitored by the Historic Environment Officer on behalf of the local planning authority.

9. FURTHER REQUIREMENTS

- 9.1 All aspects of the excavation shall be conducted in accordance with the Institute of Field Archaeologist's *Code of Conduct* and the IFA's *Standard and Guidance for Archaeological Field Excavations*.
- 9.2 It is the policy of the County Historic Environment Service to ensure that the results of archaeological work in Cumbria are made available to the public through a variety of mediums. It is expected that the presentation of the site is appropriate through the issue of a press release.
- 9.3 It is the archaeological contractor's responsibility to establish safe working practices in terms of current health and safety legislation, to ensure site access, and to obtain notification of hazards (eg. services, contaminated ground, etc.). Before commencing work a risk assessment must be carried out to ensure all potential risks are minimised. **The County Historic Environment Service bears no responsibility for the inclusion or exclusion of such information within this Brief or subsequent specification.**

10. FURTHER INFORMATION

For further information regarding this Brief, contact

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Appendix 2: Project Design

FORMER CRAGHILLS GARAGE, 130-136 STRICKLANDGATE, KENDAL, CUMBRIA

Archaeological Excavation Project Design



Client: Lake District Estates Co Ltd

June 2008

Planning Application Ref. 5/08/0070

1. Introduction

1.1 Project Background

1.1.1 **Circumstances of the project:** Greenlane Archaeology was approached by Lake Districts Estates Co Ltd, hereafter 'the client', through their architect Tony Hills of Damson Design, with regard to the provision of archaeological services at the former Craghills Garage site, 130-136 Stricklandgate, Kendal, Cumbria (centred on NGR SD 5145 9305). Following the submission of a planning application for the construction of a new hotel and extension of existing buildings an archaeological assessment of the site was required by South Lakeland District Council. The initial phase of this was a desk-based assessment, which was produced by Greenlane Archaeology in March 2008 (Greenlane Archaeology 2008a). This was followed by the excavation of a series of evaluation trenches across the site, which was completed in May 2008 (Greenlane Archaeology 2008b). As a result of the discoveries and the apparent potential of the site a brief for an excavation was produced by the Historic Environment Officer at Cumbria County Council in June 2008 (CHES 2008).

1.1.2 **Desk-based assessment results:** the desk-based assessment revealed that the site is situated at the north end of the medieval burgage plots running along the west side of Stricklandgate. The early maps showed that the far west side of the site had originally been open fields, and large parts of the rest of the area had been gardens, although it had gradually been built on during the 19th century. In the early 20th century many of the previous buildings were swept away prior to the construction of a garage, including those fronting Stricklandgate, and a succession of fuel tanks was installed along the street front. The site was still considered, however, to have a high potential for archaeological remains to be present, although the degree of disturbance from later buildings was considered likely to have affected their survival. Further work in the form of an archaeological evaluation was therefore recommended.

1.1.3 **Evaluation results:** the evaluation largely confirmed the results of the desk-based assessment; the area to the far west of the proposed development site was essentially devoid of any features of archaeological interest, with the exception of a large ditch, which seems to correspond to the position of a garden feature shown on 19th century maps. Similarly, a trench positioned perpendicular to Maude Street, although revealing some artefacts and a soil horizon of medieval date did not produce any significant remains. In the area immediately to the rear of properties along Stricklandgate, however, a considerable number of pits and other negative features containing large quantities of medieval pottery were encountered, one of which also contained well-preserved organic remains. Immediately adjacent to Stricklandgate the area was heavily disturbed by fuel tanks and modern services, but a stone built well, also of medieval date, was present.

1.1.6 **Archaeological Work in the Site Environs:** an archaeological evaluation and subsequent excavation carried out on the opposite side of Maude Street (LUAU 2001; OA North 2004) revealed similar concentrations of pits and stone lined features ranging from medieval to post-medieval date in a similar position to the rear of Stricklandgate. Smaller pieces of work in the general area have also uncovered medieval finds and deposits demonstrating the presence of material from the period across this end of Stricklandgate, but these have generally been smaller scale investigations with limited results.

2 Research context

2.1 Resource assessment

2.1.1 The resource assessment for the archaeological research framework for the North West of England (Newman 2006) states that of the towns within Cumbria, with the exception of Carlisle, Kendal has received the most attention since the mid-1980s (*op cit*, 126). It summarises the results of the major excavations within Kendal, which remain as yet unpublished, as follows. 'Two relatively large areas have been excavated, one on either side of Stricklandgate... and a further major area in Highgate, together with two further areas to

the south. Where street frontages have been available for investigation, evidence has been produced for a planned layout from the 14th century or earlier. At Stricklandgate, a complete sequence of structures from the 14th century onwards were recorded some 13m from the street frontage... Medieval buildings were built of timber or cob walls, and stone was not introduced until the early post-Medieval period. Some evidence for industrial use has been found, including a hearth close to the street frontage of Stricklandgate, and a kiln of unknown purpose close to the back of a burgage plot' (*ibid*).

2.1.2 The importance of medieval pottery is highlighted by the resource assessment, in particular it emphasises the gaps in the current knowledge. It states that 'further evidence is required to identify distribution zones [of pottery production sites]. Well-stratified occupation deposits and independent dating means are required to identify the time spans during which these sites were in production' (*op cit*, 137). It acknowledges that a medieval pottery sequence exists for Kendal, although it remains unpublished (*op cit*, 138), and indeed pottery from Kendal has been identified as one of the four suggested groupings of material from Cumbria (*op cit*, 140).

2.2 Research agenda

2.2.1 The research agenda and strategy which followed the above-mentioned resource assessment (Newman and Newman 2007) enlarged upon the stated current position and potential, and identified various relevant initiatives, covering research needs for medieval urban settlement sites, as well as associated artefacts, ecofacts, and environmental and industrial deposits.

2.2.2 **Dating:** 'A lack of published finds assemblages... has hampered the development of precise chronologies for material culture, and therefore dating by association of many medieval sites in the North-West' (*op cit*, 95). 'The most widely used and most useful form of absolute dating in the medieval period is dendrochronology, although archaeomagnetic dating is becoming more widespread' (*op cit*, 96). 'Unfortunately, the dendrochronology curve is less well established in the region for the medieval period than it is for the Roman' (*op cit*, 97). Among the initiatives relevant to dating were the following: 'Establish closely dated artefact sequences across the region, linked to absolute dating' (*ibid*; 5.1). 'Improve the dendrochronology sequence for the region, with more samples taken from standing buildings as well as excavated preserved wooden objects' (*ibid*; 5.2). 'Routine analysis of datable building materials to gain information on both building industry technology and the nature of woodland industries and management.' (*op cit*, 113; 5.39).

2.2.3 **Waterlogged remains:** 'The historically wetter climate... makes the region especially important for the recovery of medieval organic artefacts and environmental remains. Consequently, the North West has good potential for the recovery of everyday items which are not usually preserved on most archaeological sites, and provide evidence, not only for daily life, but also for coppice management and woodland crafts.' (*op cit*, 97).

2.2.4 **Industries:** 'in general there is a lack of regional data about urban industrial processes' (*op cit*, 103). 'In addition to the numerous known woollen and linen cloth processing sites, there are urban waterlogged deposits with conditions for preserving flax fibres. Such conditions can also preserve other organic, animal-derived, manufactured products like leather goods. There are many issues surrounding the processing of animal carcasses and the manufacture of animal derived products such as shoes, bone pins and combs. Was production centralised in towns and the products supplied to the consumer through a distribution network, or was processing and manufacture undertaken within every sizeable rural community, as seems to be the case with textiles?' (*op cit*, 112). Among the initiatives relevant to dating was the following: 'Investigations of urban-based industries, using the full panoply of available scientific techniques to provide information on developing technologies and on the role of towns as centres of production' (*op cit*, 113, 5.42).

2.2.5 **Pottery:** there is a relative lack of medieval pottery kiln sites in the North-West. 'Linked with a lack of well-stratified and independently dated finds assemblages, it is not surprising then that the production, distribution and consumption of pottery in the region is poorly understood overall.' (*op cit*, 112). 'The extent and use of imported pottery from outside

the region and abroad is unclear. Other fruitful areas of research include the distribution of Cistercian and other transitional pottery types in the 15th and 16th centuries' (*op cit*, 113).

2.2.6 Sediment sampling: 'Very little is known about the living conditions of ordinary townspeople. Adequate environmental sampling is required to gather data on health and nutrition and to relate this to living conditions' (*op cit*, 104). Among the initiatives relevant to dating were the following: 'Adequate palaeoenvironmental and bulk soil sampling strategies should be formulated for all medieval urban archaeological projects' (*op cit*, 104; 5.20). 'Site-based palaeoenvironmental sampling should be supplemented by geoarchaeological investigations for micro-organisms, as well as mineral and chemical analysis of sediments' (*op cit*, 97, 5.3).

2.2.7 Location and character: '[Archaeology] can examine the differences between towns and market villages. Some settlements retained both urban and rural characteristics with one part of the settlement forming the borough and another part being held by non-burghal forms of tenure... Archaeological investigation can look for differences in material culture between these different holdings within the same settlement and explore questions about the development of urban identities and perceptions of urban life' (*op cit*, 103). Among the initiatives relevant to dating were the following: 'There is a need to examine the street frontages in medieval towns as well as the back plots' (*op cit*, 104; 5.14). 'Artefact studies contrasting well dated urban assemblages with those from nearby contemporary rural sites and contrasting high status site assemblages with those from ordinary sites. This should enable insights into different patterns of interaction and breadth of contacts between different social groups' (*op cit*, 114; 5.46).

3. Hypotheses and Research Aims

3.1 Hypotheses

3.1.1 From the limited information available from the evaluation, the following hypotheses about the site can be formulated.

3.1.2 *The sequence of events begins with the first identifiable anthropogenic activity being features, such as rubbish pits, associated with the establishment of the burgages along Stricklandgate in the 13th century.* This could be tested by the acquisition of as many of absolute dates as possible, and a close attention to the stratigraphic relationships on site. These can then be used to help provide more reliable dates for the pottery and other finds.

3.1.3 *There is evidence for two distinct phases of activity in the medieval period, one from the 12th – 13th century and one from the 14th – 17th century; do these indicate a period of abandonment, perhaps related to historical events, or is there evidence for continuous occupation? Similarly, is there a distinct difference in occupation, such as a period of abandonment or reorganisation, between the end of the medieval period and the beginning of the post-medieval?* This could again be tested by a close attention to the stratigraphy and detailed dating. Any deposits that suggest abandonment or evidence for destruction should be closely examined.

3.1.4 *The features encountered suggest a largely domestic situation, with no specific evidence for large-scale industrial activity.* This could be tested by detailed examination of samples from features, and scientific testing of industrial residues.

3.1.5 *The position of the site, at the northern edge of the medieval town, means that it might have developed differently to other parts of Kendal.* This could be tested by comparison with other excavations carried out in Kendal to see if there are any apparent patterns dependant on, for example, location and proximity to the market place and other centres of importance.

3.2 Research Aims

3.2.1 The objective from the project brief is to attempt a reconstruction of the history and use of the site (CHES 2008, 2; 4.1.1) while also addressing some of the research questions

outlined in *Section 2*. These, combined with the predicted remains, have informed the specialists selected for the project team (see 5.1-5.5).

4. Predicted remains

4.1 Introduction

4.1.1 Excavation costs have been based on the remains that are likely to be recovered during the excavation, which have in turn been predicted from the results of the evaluation, and on the results of the nearby site of Yards 110 and 112 Stricklandgate. Since there is a contingency for unexpectedly complex remains, as required by the brief, an attempt must be made to define the predicted remains. It is also necessary to state what is expected to be found on the excavation in order to demonstrate the appropriateness of the specialists selected as part of the project team.

4.2 Features, deposits, and stratigraphy

4.2.1 For prediction purposes, a simple model was adopted for calculating the likely number and type of features. Taking into account the total excavation area (700 square meters) and the density of the features identified within that area during the evaluation (nine in an area of 51 square meters), and assuming the same density of features across the excavation area the number of distinct features predicted is approximately 123. However, since it is anticipated that the features are likely to be present in clusters, one of which was revealed within one of the evaluation trenches, the total number of features is likely to be considerably less than this. It is anticipated that the vast majority of the features will be pits, but ditches, walls, and surfaces may also be present. It is expected that a low proportion, no more than 10%, of the pits will contain waterlogged remains, and that all of the features will be of medieval or later date. Stratigraphic relationships between features and deposits, some complex, are anticipated to be evident across much of the excavation area. The pits in particular are likely to be grouped in a manner that suggests that they belonged to separate burgrave plots, an arrangement that was also identified during excavations at Yards 110 and 112 Stricklandgate.

4.2.2 The contingency for unexpectedly complex remains will be invoked on the basis of features, deposits, and stratigraphy if the remains present on site differ from those outlined in paragraph 4.2.1.

4.3 Artefacts

4.3.1 Based on the results of the evaluation, it is predicted that medieval pottery, and post-medieval pottery, glass, clay tobacco pipe, ceramic building material, iron, and lead, will be recovered during the excavation. It is predicted that much of the medieval pottery will be in large fragments and will not be much abraded.

4.3.2 In order to have appropriate specialists in place should the need arise, other categories of artefacts have been considered, including bone, stone, wood, and leather. Since the presence of these artefacts on site would imply unexpectedly rich or complex remains, the contingency would be invoked if they, or other artefacts not listed in paragraph 4.3.1, were present.

4.4 Ecofacts

4.4.1 Based on the results of the evaluation, small quantities of charred plant remains are expected to be recovered from samples of the majority of the negative features identified. In addition animal bone is also likely to be present in many of the deposits. Waterlogged plant remains are also likely to be present in some features, and other preserved organic matter such as insect remains and micro organisms are probable.

4.4.2 In order to have appropriate specialists in place should the need arise, other categories of ecofacts have been considered, including marine and terrestrial mollusca and wood. Since the presence of these ecofacts on site would imply unexpectedly rich or complex

remains, the contingency would be invoked if they, or other ecofacts not listed in paragraph 4.4.1, were present.

4.5 Human remains

4.5.1 Based on the results of the evaluation, no human remains are expected to be encountered during the excavation. However, in order to have an appropriate specialist in place should the need arise, they have been considered. Since the presence of human remains would imply unexpectedly complex remains, the contingency would be invoked if they were present.

5. Methodology

5.1 Project planning

5.1.1 One of the key components of the project planning which preceded the formulation of the current project design was the creation of a team of specialists to advise and provide services as necessary. Specialists have been chosen based on the predicted remains (see Section 4, above). Although many of the types of analysis listed below are unlikely to be necessary, liaising with the specialists at this stage means that artefacts and samples can be treated appropriately so that as wide a range of techniques remain an option should they be required.

5.2 Artefacts

5.2.1 **Medieval pottery:** Ian Miller at Oxford Archaeology North in Lancaster will assess any medieval pottery recovered during the excavation. He is experienced in this field, and has assessed pottery from other sites in Kendal and elsewhere in the region, including for several previous projects carried out by Greenlane Archaeology.

5.2.2 **Post-medieval pottery and glass:** Jo Dawson of Greenlane Archaeology will assess any post-medieval pottery and glass recovered during the excavation. She has carried out a large number of assessments on similar material for sites in the north-west of England and Scotland.

5.2.3 **Clay tobacco pipe:** Peter Davey will assess any clay tobacco pipe recovered during the excavation. He is an expert in this field, having edited and contributed to numerous British Archaeological Report volumes on the subject. He has agreed in writing (by e-mail) to be part of the project team.

5.2.4 **Metal, bone, stone, and wood:** Ian Panter, principal conservator at York Archaeological Trust, will assess all other artefacts not covered by 5.2.1 to 5.2.3, above, in particular any of medieval date. In addition he will advise on and carry out conservation and x-ray of artefacts where considered necessary.

5.2.5 **Leather:** Quita Mould of Barbican Research Associates will be contacted with regard to the assessment of preserved leather artefacts.

5.3 Ecofacts

5.3.1 **Plants:** Tim Holden of Headland Archaeology has confirmed in writing (by e-mail) that Scott Timpany, also of Headland Archaeology, can assess any plant remains recovered (both charred and waterlogged, including pollen). He will also be consulted about identifying tree species in charcoal.

5.3.2 **Animal bone:** Auli Tourunen of Headland Archaeology has confirmed that she can advise on sampling for bone, and can carry out bone assessments. She has agreed in writing (by e-mail) to be part of the project team.

5.3.3 **Mollusca:** Stephen Carter, also of Headland Archaeology, will be contacted regarding the assessment and identification of snails, and the writing up of a mollusc report.

5.3.4 **Micro organisms:** Tim Holden (see 5.3.1) has confirmed that he or his staff can assess any micro organisms or other cess-related material present in environmental samples taken during the excavation.

5.3.5 **Insects:** Tim Holden (see 5.3.1) has confirmed that he or his staff can assess any insect remains present in environmental samples taken during the excavation.

5.3.6 **Wood:** Ian Panter (see 5.2.4) has been consulted regarding wooden ecofacts, including tree species identification and ecofact assessment.

5.4 Scientific Analysis and Dating

5.4.1 **Dendrochronology:** Ian Tyers of Dendrochronological Consultancy Ltd has agreed in writing (by email) to provide dendrochronological dating services.

5.4.2 **Archaeomagnetic dating:** David Greenwood of the Department of Archaeological Science at Bradford University has been contacted with regard to the provision of archaeomagnetic dating services and has stated in writing (by e-mail) that they could be part of the project team, dependent on timetabling constraints.

5.4.3 **Geoarchaeology:** Steve Lancaster of Headland Archaeology will be consulted regarding geoarchaeology and soil science.

5.4.4 **Industrial residues:** Effie Photos-Jones of Scottish Analytical Services for Art and Archaeology has agreed in writing (by email) to carry out scientific analysis of industrial residues.

5.4.5 **Radiocarbon dating:** Gordon Cook of the Scottish Universities Environmental Research Centre (SUERC) will be consulted on radiocarbon dating of charred plant remains (such as charcoal, hazelnuts, and cereals).

5.5 Human Remains

5.5.1 Malin Horst of York Osteoarchaeology, has been consulted regarding the assessment of human bone. She has agreed in writing (by e-mail) to be part of the project team.

5.6 Excavation

5.6.1 It is anticipated that the excavation will take 180 person days on site. The area to be stripped is 700 square metres, in the location defined on the plan attached to the CHES 2008 brief. It is anticipated that the work will take place in two phases covering two adjacent areas of the site.

5.6.2 The excavation methodology will be as follows:

- Any demonstrably modern overburden will be removed by machine under supervision by staff from Greenlane Archaeology, until the first deposit beneath it is reached. The site will then be cleaned and a base plan produced prior to the excavation of any evident features;
- All deposits below the modern overburden will be examined by hand in a stratigraphic manner, using shovels, mattocks, or trowels as appropriate for the scale;
- The position of any features, such as ditches, pits, or latrines, will be recorded, and these will be investigated in order to establish their full extent, date, and relationship to any other features. Discrete negative features such as pits will be examined by 100% excavation, and negative linear features by 25% excavation;
- All recording of features will include hand-drawn plans and sections, typically at a scale of 1:20 and 1:10, respectively, and photographs in both colour print and colour digital format;
- All deposits, drawings, and photographs will be recorded on Greenlane Archaeology *pro forma* record sheets, which are included in the company's excavation manual (Greenlane Archaeology 2007);

- All finds will be recovered for further assessment. Should significant quantities of finds be encountered an appropriate sampling strategy will be devised;
- All faunal remains will also be recovered by hand during the excavation, but where it is considered likely that there is potential for the bones of fish or small mammals to be present appropriate volumes of samples will be taken for sieving;
- Bulk samples of 40 to 60 litres in volume (or 100% for smaller features) will be collected from stratified undisturbed deposits and will particularly target negative features (pits, latrines, and ditches) and occupation deposits such as hearths and floors, as well as buried soil horizons. Bulk samples of at least 20 litres will be taken from waterlogged deposits;
- Any features or deposits requiring specialist sampling or assessment on site, such as geoarchaeology, dendrochronology, and archaeomagnetic dating will be left *in situ* once identified so that they can be examined prior to removal;
- If any human remains are discovered CCCHES will be immediately informed as will the local coroner. Removal of the remains this will require a Home Office licence, under Section 25 of the Burial Act of 1857, which will be applied for should the need arise;
- Any objects defined as 'treasure' by the Treasure Act of 1996 (HMSO 1996) will be immediately reported to the local coroner and secured stored off-site, or covered and protected on site if immediate removal is not possible;
- The excavation area will be left exposed following excavation, and will be passed on to the appropriate contractors without reinstatement of excavated material once the archaeological remains have been appropriately dealt with and recorded.

5.6.3 Should any unexpectedly complex or rich remains (see Section 4) be encountered during the excavation these will immediately be brought to the attention of the CCCHES. In addition, any discrete archaeological features that are revealed to extend outside the excavation area may also need to be investigated; any decisions regarding the need to record such features will be made by CCCHES following site monitoring. These will be subject to the contingency costs set out in the schedule of rates forming part of these contracts.

5.7 Post-excavation

5.7.1 **Non-organic artefacts:** non-organic artefacts, other than metal and glass, will be washed and air dried; metal and glass will be dry-brushed and air dried to prevent deterioration. All artefacts will then be bagged in self-seal bags with write-on panels and will be sent to the appropriate specialists for assessment.

5.7.2 **Organic artefacts:** for any waterlogged organic artefacts advice would be sought from the conservator, Ian Panter, and then artefacts would be sent to him for assessment. Non-waterlogged organic artefacts will be washed, air-dried, and bagged, unless advice from the conservator indicates that treatment should be different. They will then be sent to the appropriate specialists for assessment.

5.7.3 **Ecofacts:** hand-collected waterlogged and non-waterlogged ecofacts would be treated as set out in 5.7.2, above. Ecofacts present in samples would be assessed as part of the sample assessments (see 5.7.4 and 5.7.5, below), and where necessary would be separated from the rest of the sample to be assessed by the appropriate specialist.

5.7.4 **Bulk samples:** for assessment purposes, a minimum of 10 litres of each non-waterlogged bulk sample would be processed, with further processing occurring as part of the analysis phase. Non-waterlogged samples would be floated with the flots drained through two sieves (250µm and 500µm), and the residue would be washed through a 1mm nylon mesh. Flots would be air dried and sent to the environmental specialist, Scott Timpany, for assessment. Residues would be sorted for environmental remains, as well as any other material that is apparent. Deposits that could benefit from radiocarbon dating will be identified prior to processing and suitable material will be collected.

5.7.5 **Specialist assessment:** any materials, for example suitable wood specimens or industrial residues, which have been retrieved for the appropriate specialist, will be sent for assessment.

5.7.6 **Post-excavation assessment:** all artefacts, ecofacts, and samples, or a representative sample thereof, will be assessed as part of the post-excavation assessment, as will the site records and other data. The finds, samples, and the rest of the site archive from the evaluation will be considered at the same time. Recommendations will be made for further work, and a revised project design with new research aims will be produced, together with costs for proposed analysis and publication.

5.8 Analysis, publication, and archive

5.8.1 This will all be covered in the post-excavation assessment and revised project design.

5.9 Report

5.9.1 The results of the excavation will be compiled into a post-excavation assessment report, which will include the following sections:

- A front cover including the appropriate national grid reference (NGR);
- A concise non-technical summary of results, including the date the project was undertaken and by whom;
- Acknowledgements;
- Project Background;
- Methodology, including a description of the specialist work undertaken;
- Original Hypotheses and Research Aims;
- Excavation Results, including descriptions of any deposits identified, their extent, form and potential date, and initial site narrative;
- Assessment of Results, including all aspects of the site archive, including finds, and environmental data, and samples;
- Curation and Conservation – requirements and recommendations for all aspects of the site archive;
- Potential for Analysis – covering the potential of all aspects of the site archive;
- Updated Hypotheses and Research Aims;
- Project Design for Further Analysis;
- Publication Outline;
- Analysis Resources and Programming, including task list;
- Bibliography;
- Appendices, including project brief, project design, context list, sample lists, and assessment tables and catalogues;
- Illustrations at appropriate scales including:
 - a site location plan related to the national grid;
 - a plan showing the location of the site in relation to nearby structures and the local landscape;
 - plans and sections of the excavated features, as appropriate;
 - photographs of the excavation, including both detailed and general shots of features of archaeological interest;

- illustrations of individual artefacts as appropriate.

5.10 Public involvement

5.10.1 In order to provide information to the public, particularly those in the Kendal area, a press release will be produced following the excavation, covering the results of the work, in conjunction and agreement with the client. This will be issued to the Westmorland Gazette. Dependent on the results of the excavation, talks will also be given to local societies.

6. Greenlane Archaeology

6.1 Company Information

6.1.1 Greenlane Archaeology is a private limited company based in Ulverston, Cumbria, and was established in 2005 (Company No. 05580819). Its directors, Jo Dawson and Daniel Elsworth, have a combined total of over 16 years continuous professional experience working in commercial archaeology, principally in the north of England and Scotland. Greenlane Archaeology is committed to a high standard of work, and abides by the Institute of Field Archaeologists' (IFA) Code of Conduct.

6.2 Project Staffing

6.2.1 The project will be managed by **Jo Dawson (MA (Hons), AIFA)** or **Dan Elsworth (MA (Hons), AIFA)** depending on timetabling. Since graduating from the University of Glasgow in 2000 with a joint honours degree in Archaeology and Mathematics, Jo has worked continuously in commercial archaeology. Her professional career started at Glasgow University Archaeological Research Division (GUARD), for whom she worked for six months, following which she worked for Headland Archaeology, in Edinburgh, for two years, and for Oxford Archaeology North, in Lancaster, for three years. During this time she has been involved in a range of different archaeological projects, and, over the past few years, has concentrated on desk-based assessments and environmental impact assessments, as well as finds reports. She has extensive experience of both planning and pre-planning projects, and has undertaken assessments of all sizes. Since jointly establishing Greenlane Archaeology in 2005 with Daniel Elsworth, she has managed many archaeological projects in Cumbria, including a recent large excavation in Barrow-in-Furness. She has considerable experience dealing with finds and samples, and has co-ordinated post-excavation work on several projects.

6.2.2 Dan Elsworth graduated from the University of Edinburgh with an honours degree in Archaeology in 1998, and began working for Lancaster University Archaeology Unit in 1999, which became Oxford Archaeology North in 2001. During his time there he worked on a wide variety of projects, eventually specialising in building recording, survey and desk-based assessment. After establishing Greenlane Archaeology in 2005 he has continued to work on similar projects, but has also undertaken archaeological evaluations and excavations, and managed several projects. He has a particular interest in the archaeology of north-west England, especially South Cumbria, and has completed private research into a number of subjects relating to it.

6.2.3 The excavation will be supervised by **Samuel Whitehead (BSc (Hons), MA)**. Sam graduated from the University of Liverpool in 1994 with an honours degree in Archaeology, and has more than seven years continuous professional experience in commercial archaeology, much of which was in a supervisory capacity. He has extensive experience of excavations, evaluations, and watching briefs, as well as report writing and illustration production.

6.2.4 All artefacts will be processed by Greenlane Archaeology (for specialists see Section 5, above).

6.2.5 Environmental samples and faunal remains will be processed by Greenlane Archaeology (for specialists see Section 5, above).

7. Work timetable

7.1 Following approval of this project design and exchange of contracts, Greenlane Archaeology will be available to commence the project on **1st July 2008**, or at a date convenient to the client. It is envisaged that the project will involve tasks carried out in the following order:

- **Task 1:** archaeological excavation;
- **Task 2:** post-excavation work, including processing of finds and production of draft post-excavation assessment report and illustrations;
- **Task 3:** feedback, editing and production of final post-excavation assessment report (within six months of completion of fieldwork).

Analysis and publication will follow, within the timeframes set out in the project brief, once the post-excavation assessment report has been approved by CHES.

8. Other matters

8.1 Access

8.1.1 Access to the site will be organised through co-ordination with the client and/or their agent(s).

8.2 Health and Safety

8.2.1 Greenlane Archaeology carries out risk assessments for all of its projects and abides by its internal health and safety policy and relevant legislation. Health and safety is always the foremost consideration in any decision-making process.

8.3 Insurance

8.3.1 Greenlane Archaeology has professional indemnity insurance to the value of **£250,000**. Details of this can be supplied if requested.

8.4 Environmental and Ethical Policy

8.4.1 Greenlane Archaeology has a strong commitment to environmentally- and ethically-sound working practices. Its office is supplied with 100% renewable energy by Good Energy, uses ethical telephone and internet services supplied by the Phone Co-op, is even decorated with organic paint, and has floors finished with recycled vinyl tiles. In addition, the company uses the services of The Co-operative Bank for ethical banking, Naturesave for environmentally-conscious insurance, and utilises public transport wherever possible. Greenlane Archaeology is also committed to using local businesses for services and materials, thus benefiting the local economy, reducing unnecessary transportation, and improving the sustainability of small and rural businesses.

9. Bibliography

CHES (County Historic Environment Service), 2008 *Brief for an Archaeological Excavation at 130-136 Stricklandgate, Kendal, Cumbria*, unpubl

Institute of Field Archaeologists (IFA), 2001 *Standard and Guidance for Archaeological Excavation*, revised edn, Reading

Greenlane Archaeology, 2008a *130-136 Stricklandgate, Kendal, Cumbria: Archaeological Desk-Based Assessment*, unpubl rep

Greenlane Archaeology, 2008b *130-136 Stricklandgate, Kendal, Cumbria: Archaeological Evaluation*, unpubl rep

LUAU, 2001 *Yard 110, Stricklandgate, Kendal, Cumbria: Archaeological Evaluation*, unpubl rep

Newman, C, 2006 The Medieval Period Resource Assessment, in M Brennan (ed), *The Archaeology of North West England. An Archaeological Research Framework for North West England: Volume 1 Resource Assessment*, Archaeology North West **8**, Manchester, 115-144

Newman, C, and Newman, R, 2007 The Medieval Period Research Agenda, in M Brennan (ed), *Research and Archaeology in North West England. An Archaeological Research Framework for North West England: Volume 2 Research Agenda and Strategy*, Archaeology North West **9**, Manchester, 95-114

OA North, 2004 *Yards 110 and 112 Stricklandgate, Kendal, Cumbria: Archaeological Excavation Assessment Report*, unpubl rep

Appendix 3: Summary Context List

Cxt	Feature type	Feat. No.	Cxt. type	Interpretation	Sec.	Plan	Phase
100	Foundation	0	Layer	Levelling layer for tarmac surface	12	4, 8	
101	Foundation	107	Fill	Backfill of construction cut [107] for wall 102	12	8	4
102	Wall	107	Structure	Wall footing	12	8	4
103	Deposit	199	Layer	Subsoil	12	8	
104	Pit	105	Fill	Shallow stone fill of [105]	12	8	4
105	Pit	105	Cut	Base or shallow pit or robbed out cut	12	8	4
106	Foundation	107	Fill	Main foundation deposit for wall [107], below 101	12	8	4
107	Wall	107	Cut	Construction cut for wall 102	12	8	4
108	Pit	405	Fill	Layer of stone filling shallow depression [405]	12	4, 8	
109	Pit	109	Cut	Small, circular pit base, cuts fills of [120]	14	8	
110	Pit	109	Fill	Sole fill of [109]	14	8	
111	Deposit	199	Layer	Subsoil	13	8	
112	Pit	113	Fill	Fill of shallow 'L'-shaped cut	13	8	
113	Pit	113	Cut	Possibly base of construction cut/trench	13	8	
114	Pit	113	Cut	Possibly base of construction cut/trench		8	
115	Deposit	0	Layer	Made ground/levelling	13	8	
116	Deposit	0	Layer	Re-deposited natural between 111 and 115	13	8	
117	Service trench	117	Cut	Pipe trench cuts [120], concrete in base	15	8	
118	Service trench	117	Fill	Upper backfill of [117], re-deposited natural	15	8	
119	Service trench	117	Fill	Concrete in base of [117], pipe housing?	15	8	
120	Pit	120	Cut	Sub-circular pit cut by [117] and truncated by [109]	15	8	3
121	Pit	120	Fill	Upper backfill of stone in pit	15	8	3
122	Pit	120	Fill	Lower infill of pit	15	8	3
123	Pit	125	Fill	Upper fill of pit	16	7	2
124	Pit	125	Fill	Lower stony fill of pit	16	7	2
125	Pit	125	Cut	Shallow circular flat bottomed pit	16	7	2
126	Deposit	0	Layer	Loose gravelly sand over layer 167		6	3
127	Deposit	199	Layer	Subsoil		7	0
128	Pit	129	Fill	Firm with Fe/charcoal (consolidation) deposit	17, 18	7	3
129	Pit	129	Cut	Shallow amorphous cut / erosion hollow	17, 18	7	3

Cxt	Feature type	Feat. No.	Cxt. type	Interpretation	Sec.	Plan	Phase
130	Layer	131	Fill	Stony consolidation layer	17	7	3
131	Layer	131	Cut	Shallow circular cut / erosion hollow	17	7	3
132	Ditch	414	Fill	Upper ditch fill of [135]	17	7	1
133	Void						
134	Void						
135	Ditch	413	Cut	Plot boundary	17	7	1
136	Deposit	0	Layer	Stony consolidation layer contemporary with 137 and 126		6	3
137	Deposit	0	Layer	Stony consolidation layer contemp with 136 and 126		6	3
138	Deposit	0	Layer	Charcoal rich layer contemporary with 167, over 168		6	3
139	Pit	600	Fill	Upper fill of [141]	19	7	1
140	Pit	600	Fill	Lower fill of [141]	19	7	1
141	Pit	600	Cut	Rounded rubbish pit	19	7	1
142	Pit	129	Fill	Lower fill under 128	18	7	3
143	Pit	144	Fill	Sole fill of [144]	21	7	
144	Pit	144	Cut	Small irregular pit	21	7	
145	Pit	406	Fill	Stony consolidation deposit in erosion hollow	22	7	3
146	Wall	419	Structure	Large slabs with mortar prob forming threshold		2	3
147	Layer	419	Structure	Mortar deposits on 146 and 151		2	3
148	Floor	419	Structure	Apparent flooring, iron/pot/shell within cobbles		2	3
149	Floor	419	Structure	As 148 with no iron/pot/shell		2	3
150	Layer	419	Layer	Iron encrustation on floor cobbles		2	3
151	Wall	419	Structure	Wall base on west side with 147		2	3
152	Deposit	419	Fill	Fill of [209], east construction cut trench for 419	38	2	3
153	Pit	155	Fill	Upper slate rich fill of [155]	23	7	3
154	Pit	155	Fill	Lower fill more mineral fill of [155]	23	7	2
155	Pit	155	Cut	Shallow oval rubbish pit	23	7	2
156	Posthole	157	Fill	Fill of post-medieval posthole	24	6	3
157	Posthole	157	Cut	Small post-medieval posthole	24	6	3
158	Ditch	414	Fill	Main mineral infill of cut [159]	25	7	1
159	Ditch	413	Cut	Cut [159], most easterly	25	7	1

Cxt	Feature type	Feat. No.	Cxt. type	Interpretation	Sec.	Plan	Phase
160	Pit	162	Fill	Upper fill/stone capping of pit [162]	25	7	3
161	Pit	162	Fill	Main fill, pit [162]	25	7	2
162	Pit	162	Cut	Pit cut - fill 161 suggests cess pit	25	7	2
163	Pit	162	Fill	Re-deposited natural in south side pit [162]	25	7	2
164	Ditch	414	Fill	Re-deposited natural in south side ditch [159]	25	7	1
165	Pit	166	Fill	Fill of small pit	26	7	1
166	Pit	166	Cut	Pit cut, partly truncated by evaluation trench 4	26	7	1
167	Deposit	0	Layer	Charcoal rich layer contemporary with 138, above 168		6	3
168	Deposit	0	Layer	Heavily burnt deposit associated with 138 and 167		6	3
169	Deposit	0	Layer	Peat like deposit over 138, below 137		6	3
170	Pit	171	Fill	Main and stony fill of pit [171]	28	10	3
171	Pit	171	Cut	Large circular pit cut	28	10	2
172	Pit	171	Fill	Shallow inwash deposit in pit [171] base	28	10	2
173	Ditch	417	Cut	North terminus, filled by 175	46	6	1
174	Void						
175	Ditch	416	Fill	Fill of ditch cut [173]	46	6	1
176	Pit	420	Fill	Upper fill/cap of [177/193]	35	1	3
177	Pit	420	Cut	Large rectangular pit, possibly structural	35	1	3
178	Pit	178	Cut	Sub-circular stone lined pit	29	2	3
179	Pit	178	Fill	Stony infill of [178]	29	2	3
180	Void						
181	Void						
182	Pit	360	Cut	Shallow pit - looks natural	46	6, 7	1
183	Pit	360	Fill	Fill of [182]	46	6, 7	1
184	Pit	276	Fill	Secondary fill of [186], part of [276] complex	34, 60	6	2
185	Pit	276	Fill	Primary fill of [186], part of [276] complex	34, 60	6	2
186	Pit	276	Cut	Cut at north end of [276] complex appears contemporary	34	6	2
187	Pit	191	Fill	Upper pit fill, stoney but not capped	34	6, 7	2
188	Void						
189	Pit	191	Fill	Middle fill	34	6, 7	2
190	Pit	191	Fill	Charcoal rich lower fill	34	6, 7	2
191	Pit	191	Cut	Large sub-circular, probably contemporary with [186/276]	34	6, 7	2

Cxt	Feature type	Feat. No.	Cxt. type	Interpretation	Sec.	Plan	Phase
192	Deposit	420	Fill	Subsoil like fill of [193], below layer 176	35	1	3
193	Pit	420	Cut	Curvilinear 'ditch' associated with [177/202]	35	1	3
194	Deposit	420	Fill	Subsoil like lower fill of [177], below layer 195	35	1	3
195	Deposit	420	Fill	Subsoil like upper fill of [177], below layer 176		1	3
196	Void						
197	Pit	178	Fill	Stone lining of [178], below 179		2	3
198	Pit	178	Fill	Slate slabs at base of [178] associated with 197		2	3
199	Deposit	199	Layer	Subsoil includes 103, 111, 127, 214 and 215	12, 13, 36, 42	5	0
200	Pit	201	Fill	Stone fill of [201]	36	5	3
201	Pit	201	Cut	Rectangular pit	36	5	3
202	Posthole	420	Fill	Stony fill of [203]		1	3
203	Posthole	420	Cut	Posthole associated with probable foundations [193/177]		1	3
204	Void						
205	Pit	205	Cut	Large circular, very stony fills, cuts [183]	46	6	2
206	Pit	205	Fill	Upper very stony fill of [205]	46	6	3
207	Ditch	414	Fill	Fill of ditch	39	7	1
208	Ditch	413	Cut	Northern property boundary	39	7	1
209	Foundation	419	Cut	Construction cut for east foundation trench, structure 419	38	2	3
210	Void						
211	Void						
212	Pit	276	Fill	Secondary fill, south end	68	6	2
213	Void						
214	Deposit	199	Layer	Subsoil over pit [225]	42	5	
215	Deposit	199	Layer	As 214 except over pit [218] to the west	42	5	
216	Pit	218	Fill	Discrete deposit/dump within pit	42	5	2
217	Pit	218	Fill	Re-worked/mixed deposits with charcoal	42	5	2
218	Pit	218	Cut	Large, shallow sub-rectangular pit	42	5	2
219	Pit	221	Structure	Brickwork in pit [221]		6	3
220	Pit	221	Fill	Backfilled with natural around brick structure		6	3
221	Pit	221	Cut	Pit appears to truncate 419, possibly related		6	3

Cxt	Feature type	Feat. No.	Cxt. type	Interpretation	Sec.	Plan	Phase
222	Pit	223	Fill	Stony consolidation in shallow pit, as 128	41	7	3
223	Pit	223	Cut	Shallow pit/hollow, as [129]	41	7	3
224	Pit	225	Fill	Fill of shallow pit/hollow, under 214	42	5	1
225	Pit	225	Cut	Pit/erosion hollow, like [218]	42	5	1
226	Pit	229	Fill	Stony fill of natural pit	44	5	
227	Pit	205	Fill	Basal fill of large circular pit	46	6	2
228	Foundation	419	Fill	Fills [245], W trench for structure 419	84	2	3
229	Pit	229	Cut	Irregular small natural pit filled by 226	44	5	
230	Pit	218	Fill	Erosion related re-deposited natural on west side	42	5	2
231	Pit	221	Structure	Slate slab in base of pit, below 219		6	3
232	Pit	283	Fill	Upper fill large shallow pit/erosion hollow [283]	55, 63, 70	5	2
233	Pit	283	Fill	Charcoal layer in [283] separating 232 and 282	55, 63, 70	5	2
234	Pit	205	Fill	Upper fill of large circular pit [205]	46	6	3
235	Pit	205	Fill	Erosion of pit cut/slump near base	46	6	2
236	Pit	218	Fill	Fill of [237] at south end 218 - possibly separate pit		5	2
237	Pit	218	Cut	Shallow pit/erosion hollow, possibly same as [218]		5	2
238	Pit	240	Fill	Upper of three fills in pit [240]	48	9	1
239	Pit	240	Fill	Middle fill of [240]	48	9	1
240	Pit	240	Cut	Shallow oval pit/hollow	48	9	1
241	Void						
242	Void						
243	Pit	244	Fill	Consolidation layer of stone in/over pit [249/244]	69	6	1
244	Pit	244	Cut	Large circular pit with re-deposited natural hump in base	69	6	1
245	Foundation	419	Cut	West construction cut for 419, as [209], filled by 228	84	2	3
246	Foundation	419	Fill	Group fill no. for 228 and 152		2	3
247	Pit	244	Fill	Fill/lense in mid-upper part of pit [244]	69	6	1
248	Pit	249	Fill	Main fill of curvy ditch/pit 249, below 243	69	6	1

Cxt	Feature type	Feat. No.	Cxt. type	Interpretation	Sec.	Plan	Phase
249	Pit	249	Cut	Curvilinear pit slopes east-west-north, possibly, associated with [244]	69	6	1
250	Pit	251	Fill	Layer of stone in/over pit [251], possibly as 243	69	6	1
251	Pit	251	Cut	Large shallow pit, cuts [244]	69	6	1
252	Pit	244	Fill	Main/mid fill	69	6	1
253	Void						
254	Pit	254	Cut	Possible natural, cuts [182]and possibly [173]	46	6	1
255	Pit	254	Fill	Upper fill of two, stony	46	6	1
256	Pit	257	Fill	Fill of probable pit, truncated by [297]	67	6	1
257	Pit	257	Cut	Truncated feature, possibly associated with [383]	67	6	1
258	Posthole	258	Cut	Large posthole with packing and timber	53	10	2
259	Posthole	258	Fill	Fill exterior to main packing stones	53	10	2
260	Posthole	258	Fill	Timber post	53	10	2
261	Posthole	258	Fill	Well arranged packing stone around post	53	10	2
262	Posthole	258	Fill	Degraded element of post 260 - sampled	53	10	2
263	Pit	263	Cut	Small sub-circular pit	50	6	2
264	Pit	263	Fill	Stony fill of small pit [263]	50	6	2
265	Void						
266	Void						
267	Pit	276	Fill	Upper clay cap/tertiary backfill of [186/276]	34, 60	6	2
268	Pit	276	Fill	Lower clay cap/tertiary of [186/276]	34, 60	6	2
269	Pit	276	Fill	Tertiary backfill of [186/276]	34, 60	6	2
270	Pit	225	Cut	Irregular cut, possibly natural, possibly as [225]	48	5	1
271	Pit	225	Fill	Main (tertiary) fill of [270]	48	5	1
272	Pit	225	Fill	Secondary fill [270]	48	5	1
273	Pit	225	Fill	Primary/erosion deposit, largely re-deposited natural	48	5	1
274	Pit	225	Fill	Spacially separated but same as 273	48	5	1
275	Pit	240	Fill	Lower of three fills, some re-deposited natural from cut	48	5	1
276	Pit	276	Cut	Large sub-rectangular pit	34, 57, 60, 68	6	2

Cxt	Feature type	Feat. No.	Cxt. type	Interpretation	Sec.	Plan	Phase
277	Void						
278	Void						
279	Void						
280	Void						
281	Pit	251	Fill	Main/basal fill under 250	69	6	1
282	Pit	283	Fill	Lower of three fills		5	2
283	Pit	283	Cut	Large shallow hollow/pit, cuts [302/342]		5	2
284	Pit	284	Cut	Large deep pit, many layers/fills		9	1
285	Void	0					0
286	Pit	284	Fill	Discrete basal fill/dump, under 337	51	9	1
287	Pit	284	Fill	Main primary fill, over 337	51	9	1
288	Pit	284	Fill	Organic lense/layer over 287	51	9	1
289	Pit	284	Fill	Lense/layer over 288	51	9	1
290	Pit	284	Fill	Lense/layer over 289	51	9	1
291	Pit	284	Fill	Mineral fill over 290	51	9	1
292	Pit	284	Fill	Upper mineral fill, over 291	51	9	1
293	Void						
294	Pit	297	Fill	Charcoal rich, possibly intrusive pit fill	67	6	
295	Pit	297	Fill	One of three lower/primary fills	67	6	1
296	Pit	297	Fill	One of 3 lower/primary fills	67	6	1
297	Pit	297	Cut	Large circular pit probably associated with [276/244]	67, 68	6	1
298	Pit	297	Fill	Upper fill of pit	67, 68	6	
299	Pit	300	Fill	Sole fill of shallow irregular shaped pit	56	8	2
300	Pit	300	Cut	Stony fill of [300]	56	8	2
301	Void						
302	Pit	302	Cut	Circular fairly shallow pit cut by [283] to North	63	6	1
303	Ditch	414	Fill	Ditch fill [304], North property boundary	58	3	1
304	Ditch	413	Cut	North property boundary	58	3	1
305	Pit	302	Fill	Upper pit fill	63	5	1
306	Pit	302	Fill	Lower pit fill	63	5	1
307	Pit	308	Fill	Fill of small circular pit	59, 62	10	1
308	Pit	308	Cut	Small circular pit, cut by [309]	59, 62	10	1
309	Pit	310	Cut	Fill of small and shallow circular pit	62	10	1
310	Pit	310	Fill	Small pit, cuts [308]	62	10	1

Cxt	Feature type	Feat. No.	Cxt. type	Interpretation	Sec.	Plan	Phase
311	Pit	312	Fill	Stony pit fill under layers 138/167 - 169 - 137	61	6	1
312	Pit	312	Cut	Shallow circular pit	61	6	1
313	Pit	244	Fill	Middle fill of [244] as 247/252	69	6	1
314	Pit	244	Fill	Lower basal fill around re-depo nat hump 421	69	6	1
315	Pit	257	Fill	Stony fill, poss relates to ditch 400/[401]	67	6	3
316	Void						
317	Pit	276	Fill	Primary fill, as 318,321,185,322,325,327,328,344.	60	6	2
318	Pit	276	Fill	Primary fill, as 317,321,185,322,325,327,328,344.	60	6	2
319	Void						
320	Void						
321	Pit	276	Fill	Primary fill, as 317,318,185,322,325,327,328,344.	60	6	2
322	Pit	276	Fill	Primary fill, as 317,318,185,321,325,327,328,344.	57	6	2
323	Pit	276	Fill	Very organic lense/layer in fill 322-sampled	57	6	2
324	Pit	276	Fill	Secondary fill, as 326, 184, 345-347	57	6	2
325	Pit	276	Fill	Secondary fill, as 317,318,185,321,322,327,328, 344.	57	6	2
326	Pit	276	Fill	Secondary fill, as 324, 184, 345-347	57	6	2
327	Pit	276	Fill	Secondary fill, as 317,318,185,321,322,325,328,344.	57	6	2
328	Pit	276	Cut	Primary fill, as 317,318,185,321,322,325,327,344	57	6	2
329	Void						
330	Pit	276	Fill	Tertiary (upper backfill) gravelly layer	57	6	2
331	Pit	276	Fill	Tertiary (upper backfill)	57	6	2
332	Pit	276	Fill	Tertiary (upper backfill) lower clay capping	57	6	2
333	Pit	276	Fill	Tertiary (upper backfill) upper clay capping	57	6	2
334	Pit	334	Cut	Small flat bottomed sub-circular pit, west edge of [276]	57	6	2
335	Pit	334	Fill	Lower fill of [334]	57	6	2
336	Void						
337	Pit	284	Fill	Re-deposited natural in pit base, over 286, under 287	51	9	1

Cxt	Feature type	Feat. No.	Cxt. type	Interpretation	Sec.	Plan	Phase
338	Pit	297	Fill	Mid fill of pit containing wood lense 352	67	6	
339	Pit	297	Fill	Mid fill of pit - stony	67	6	1
340	Pit	297	Fill	One of three basal fills - re-deposited natural	67	6	1
341	Pit	342	Fill	Small pit truncated by [283] on east side	70	5	2
342	Pit	342	Fill	Small pit, possibly natural in origin	70	5	2
343	Pit	276	Fill	Tertiary (upper backfill) clay layer as 332	68	6	2
344	Pit	276	Fill	Primary fill, as 317,318,185,321,322,325,328,327.	68	6	2
345	Pit	276	Fill	Secondary fill, as 324, 326, 184, 346, 347.	68	6	2
346	Pit	276	Fill	Secondary fill, as 324, 326, 184, 345, 347.	68	6	2
347	Pit	276	Fill	Secondary fill, as 324, 326, 184, 345, 346.	68	6	2
348	Pit	349	Fill	Fill of small pit-contains bones	72	10	2
349	Pit	349	Cut	Sub-circular pit, cut by ditch terminus [412]	72	10	2
350	Ditch	400	Fill	Southern plot boundary/division [351]	78	10	1
351	Ditch	401	Cut	Shallow boundary marker with assoc hedge to S.	78	10	1
352	Pit	297	Fill	Wood lense within fill	67, 68	6	
353	Pit	297	Fill	Lower fill below 352 evident in S.68	68	6	1
354	Void						
355	Void						
356	Pit	358	Fill	Fill of irregular shaped pit/nat hollow	71	6	1
357	Pit	358	Fill	Fill of irregular shaped pit/nat hollow	71	6	1
358	Pit	358	Cut	Irregular shaped pit/nat hollow	71	6	1
359	Pit	360	Fill	Sole fill of truncated pit	71	6	1
360	Pit	360	Cut	Truncated pit/natural hollow	71	6	1
361	Ditch	416	Fill	Upper fill of 'L'-shaped ditch [362]	71, 73	6	1
362	Ditch	417	Cut	'L'-shaped ditch	71, 73	6	1
363	Ditch	402	Fill	Fills [364], prob hedge line to south of 400	78	10	1
364	Ditch	403	Cut	Probable hedge line to south of [401]	78	10	1
365	Pit	365	Cut	Circular pit	76	6	3
366	Pit	365	Fill	Stoney pit fill	76	6	3
367	Ditch	416	Fill	Primary fill of 'L'-shaped ditch [362]	73	6	1

Cxt	Feature type	Feat. No.	Cxt. type	Interpretation	Sec.	Plan	Phase
368	Pit	276	Fill	Tertiary (upper backfill), charcoal at South end	68	6	2
369	Ditch	417	Cut	'L'-shaped ditch	79	6	1
370	Ditch	416	Fill	Fill of 'L'-shaped ditch [369]	79	6	1
371	Pit	372	Fill	Clay fill of large pit	83	6	1
372	Pit	372	Cut	Round pit, many stones	83	6	1
373	Ditch	416	Fill	Fills [376], 'L'-shaped ditch	80	6	1
374	Pit	372	Fill	Fill containing large stones	83	6	1
375	Pit	372	Fill	Dark 'peaty' material	83	6	1
376	Ditch	417	Cut	'L'-shaped ditch	80	6	1
378	Ditch	416	Fill	Fills [379]	82	6	1
379	Ditch	417	Cut	West terminus of 'L'-shaped ditch	82	6	1
380	Ditch	400	Fill	Fills [381]	82	6	1
381	Ditch	401	Cut	Southern plot boundary/division	82	6	1
382	Pit	383	Fill	Deposit truncated by pit [276] at North	87	6	2
383	Pit	383	Cut	Possible pit, relation unclear with [385/257]	87	6	2
384	Ditch	400	Fill	Part of linear [400]?relation unclear with [383]	87	6	1
385	Ditch	401	Cut	Filled by 384	87	6	1
386	Ditch	402	Fill	Fills [387] poss hedge line	80	6	1
387	Ditch	403	Cut	Possible hedge line	80	6, 10	1
388	Ditch	400	Fill	Fills [389]	80	6, 10	1
389	Ditch	401	Cut	Southern plot boundary/division	80	6, 10	1
390	Ditch	416	Fill	Fill of [391]	85	6	1
391	Ditch	417	Cut	'L'-shaped ditch	85	6	1
392	Ditch	400	Fill	Fill of [392]	85	6	1
393	Ditch	401	Cut	Southern plot boundary/division	85	6	1
394	Void						
395	Void						
396	Ditch	402	Fill	Fill of [397]	86	6	1
397	Ditch	403	Cut	West end of hedge line	86	6	1
398	Void						
399	Void						
400	Ditch	400	Fill	Group no. for fills of Southern plot boundary/division		6, 10	1
401	Ditch	401	Cut	Group cut no. for Southern plot boundary/division		6, 10	1
402	Ditch	402	Fill	Group no. for fills of hedge line South of [401]		6, 10	1
403	Ditch	403	Cut	Group cut no. for hedge line South of [401]		6, 10	1

Cxt	Feature type	Feat. No.	Cxt. type	Interpretation	Sec.	Plan	Phase
404	Pit	276	Fill	Group no for re-deposited natural capping layer		6	2
405	Pit	405	Cut	Shallow hollow filled by stony layer 108	12	4, 8	
406	Pit	406	Cut	Shallow hollow filled by stony layer 145	22	7	3
407	Foundation	407	Fill	Backfill associated with construction cut [107]	13	8	4
408	Pit	254	Fill	Lower fill of two	46	6	1
409	Pit	205	Fill	Lower fill, erosion/stabilisation	46	6	1
410	Pit	334	Fill	Lower of 2 fills in small pit	57	6	2
411	Ditch	400	Fill	Fill of [412]	72	10	1
412	Ditch	401	Cut	Eastern terminus of Southern plot boundary/division	72	10	1
413	Ditch	413	Fill	Group cut no. for Northern plot boundary/division		3, 7	1
414	Ditch	414	Cut	Group no. for fills of Northern plot boundary/division		3, 7	1
415	Pit	276	Fill	Tertiary fill (upper backfill)	68	6	2
416	Ditch	416	Fill	Group number for fills of 'L'-shaped ditch		6	1
417	Ditch	417	Cut	Group cut number for 'L'-shaped ditch		6	1
418	Void						
419	Floor	419	Structure	Includes 146,148,150,151,[245/209], & 246		2, 6	3
420	Pit	420	Structure	Includes 176,195,194,192,202,[203/177/193]	35	1	3
421	Pit	244	Fill	Re-deposited natural at base of quarry pit	69	6	1

Appendix 4: Summary Finds List

Table: All the hand-collected finds except the bone which is recorded in the tables within *Appendix 6*. This table is generated from a database, which contains additional information. The date ranges are expressed as start and end dates in 50 year blocks for ease of manipulation in the database.

(Key: CBM = ceramic building material)

NB Start and end dates have been left blank for finds which are not closely datable.

Cxt	Find type	Fabric type	Start Date	End Date	Qty
104	Pottery	Northern Gritty ware	1100	1250	1
104	Pottery	Fine Buff Sandy ware	1200	1400	1
106	Pottery	Northern Gritty ware	1100	1250	1
121	Metal	Cu/CuA object			1
121	Pottery	Northern Gritty ware	1100	1250	1
121	Pottery	Fine black-glazed red earthenware	1650	1950	1
123	Pottery	Later Northern Gritty ware	1200	1350	2
123	Pottery	Sandy ware	1200	1350	1
124	Pottery	Reduced Greenware	1400	1600	2
127	Pottery	Northern Gritty ware	1100	1250	1
128	Metal	Industrial waste			2
128	Pottery	Sandy ware	1500	1700	1
130	Building Material	Mortar			2
130	Pottery	Reduced Greenware	1400	1600	1
130	Pottery	Fine brown-glazed red earthenware	1650	1950	1
130	Stone	Limestone			1
131	Marine shell	Cockle			1
132	Metal	Fe object			1
132	Pottery	Northern Gritty ware	1100	1250	5
132	Pottery	Reduced Greenware	1400	1600	1
136	Pottery	Black-glazed red earthenware	1650	1950	15
136	Pottery	Mottledware	1650	1750	1
136	Pottery	Slipware	1650	1750	1
136	Stone	Building Slate			2
137	CBM	Brick	1750	2000	1
137	Glass	Green	1750	1850	1
137	Pottery	Brown-glazed red earthenware	1650	1950	1
138	Pottery	Sandy ware	1200	1350	3
138	Pottery	Reduced Greenware	1400	1600	1
138	Pottery	Coarse red Slip-coated buff-coloured earthenware	1650	1750	1
138	Wood	Wood			1
139	Pottery	Northern Gritty ware	1100	1250	2
142	Pottery	Northern Gritty ware	1100	1250	1
148	Pottery	Black-glazed red earthenware	1650	1950	2
148	Pottery	Brown-glazed red earthenware	1650	1950	7
148	Pottery	Slipware	1650	1750	1
148	Pottery	White earthenware	1750	1950	8
148	Pottery	Porcelain	1750	1800	5

Cxt	Find type	Fabric type	Start Date	End Date	Qty
148	Pottery	Jasperware (?)	1750	2000	2
152	Ceramic	Toy marble	1750	1950	1
152	Clay pipe	Clay pipe	1650	1750	4
152	Glass	Green	1750	1800	11
152	Marine shell	Cockle			1
152	Metal	Industrial waste			3
152	Metal	Cu/CuA object			2
152	Pottery	Reduced Greenware	1400	1600	1
152	Pottery	Black-glazed red earthenware	1650	1950	34
152	Pottery	Brown-glazed red earthenware	1650	1950	40
152	Pottery	Coarse red Slip-coated buff-coloured earthenware	1650	1750	5
152	Pottery	Fine black-glazed red earthenware	1650	1950	2
152	Pottery	Red slip-coated buff coloured earthenware	1650	1700	1
152	Pottery	Glazed white slip-coated red earthenware	1650	1750	1
152	Pottery	Red earthenware	1650	1950	6
152	Pottery	Slipware	1650	1750	1
152	Pottery	Yellow-ware	1650	1750	2
152	Pottery	Brown salt-glazed earthenware	1650	1750	2
152	Pottery	White salt-glazed stoneware	1700	1800	4
152	Pottery	Tin-glazed earthenware	1700	1800	2
152	Pottery	White earthenware	1750	1950	2
152	Pottery	Pearlware	1750	1850	1
153	Pottery	"Silverdale" Reduced Greenware	1400	1600	2
153	Pottery	Brown-glazed red earthenware	1650	1950	1
153	Pottery	Brown salt-glazed earthenware	1650	1750	3
153	Pottery	Buff-coloured earthenware	1750	1950	1
154	Pottery	Northern Gritty ware	1100	1250	1
154	Pottery	Sandy ware	1200	1350	1
154	Stone	Limestone			1
156	CBM	Drain	1850	1950	2
156	Glass	Very light turquoise	1850	1950	1
156	Glass	Colourless	1850	1950	1
156	Metal	Industrial waste			1
156	Pottery	Brown-glazed red earthenware	1650	1950	2
156	Pottery	Self-glazed buff coloured earthenware	1650	2000	1
156	Pottery	Yellow-ware	1650	1750	1
156	Stone	Slate pencil	1800	1950	1
158	Pottery	Northern Gritty ware	1100	1250	1
168	Clay pipe	Clay pipe	1600	1700	1
168	Pottery	Black-glazed red earthenware	1650	1950	13
170	Pottery	Mottledware	1650	1750	2
175	Pottery	Sandy ware	1200	1350	1
176	Glass	Green	1700	1750	4
176	Pottery	Reduced Greenware	1400	1600	1
176	Pottery	White-slip coated orange earthenware	1650	1750	2
176	Pottery	Red slip-coated buff coloured earthenware	1650	1700	3
176	Pottery	Glazed white slip-coated red earthenware	1650	1750	1
176	Pottery	Self-glazed buff coloured earthenware	1650	2000	2
176	Pottery	Brown salt-glazed earthenware	1650	1750	4

Cxt	Find type	Fabric type	Start Date	End Date	Qty
176	Pottery	Tin-glazed earthenware	1700	1800	1
176	Pottery	Porcelain	1750	1800	1
177	Clay pipe	Clay pipe	1800	1900	1
177	Marine shell	Cockle			4
177	Pottery	Black-glazed red earthenware	1650	1950	31
177	Pottery	Brown-glazed red earthenware	1650	1950	1
177	Pottery	Red slip-coated buff coloured earthenware	1650	1700	3
177	Pottery	White salt-glazed stoneware	1700	1800	3
177	Pottery	White earthenware	1750	1950	3
179	Clay pipe	Clay pipe	1800	1900	1
179	Glass	Green	1800	1850	10
179	Metal	Industrial waste			4
179	Pottery	Black-glazed red earthenware	1650	1950	9
179	Pottery	Brown-glazed red earthenware	1650	1950	4
179	Pottery	Fine brown-glazed buff-coloured earthenware	1650	1750	1
179	Pottery	Mottledware	1650	1750	10
179	Pottery	Self-glazed buff coloured earthenware	1650	2000	5
179	Pottery	Stoneware	1700	1950	3
179	Pottery	White earthenware	1750	1950	15
179	Pottery	Pearlware	1750	1850	9
179	Pottery	White earthenware	1800	1900	1
185	Pottery	Later Northern Gritty ware	1200	1350	7
187	Pottery	Northern Gritty ware	1100	1250	2
187	Pottery	Later Northern Gritty ware	1200	1350	1
187	Pottery	Reduced Greenware	1400	1600	3
189	Pottery	Northern Gritty ware	1100	1250	6
189	Pottery	Later Northern Gritty ware	1200	1350	1
189	Pottery	Reduced Greenware	1400	1600	1
190	Pottery	Northern Gritty ware	1100	1250	3
190	Pottery	Later Northern Gritty ware	1200	1350	4
190	Pottery	Sandy ware	1200	1350	5
190	Pottery	Partially Reduced ware	1250	1400	1
190	Pottery	Light green glazed light orange earthenware	1300	1400	2
190	Pottery	Reduced Greenware	1400	1600	1
190	Pottery	Fine Purpleware	1500	1700	2
192	Glass	Green	1750	1850	1
192	Pottery	Black-glazed red earthenware	1650	1950	7
192	Pottery	Tin-glazed earthenware	1700	1800	1
194	Glass	Green	1750	1850	2
194	Metal	Industrial waste			2
194	Metal	Fe object			1
194	Pottery	"Silverdale" Reduced Greenware	1400	1600	1
194	Pottery	Black-glazed red earthenware	1650	1950	3
194	Pottery	Mottledware	1650	1750	2
194	Pottery	White-slip coated orange earthenware	1650	1750	4
194	Pottery	Red slip-coated buff coloured earthenware	1650	1700	1
194	Pottery	Tin-glazed earthenware	1700	1800	1
195	Glass	Green	1700	1850	1

Cxt	Find type	Fabric type	Start Date	End Date	Qty
195	Pottery	Black-glazed red earthenware	1650	1950	1
199	Pottery	Reduced Greenware	1400	1600	1
199	Pottery	"Silverdale" Reduced Greenware	1400	1600	4
200	Pottery	Black-glazed red earthenware	1650	1950	3
200	Pottery	Fine brown-glazed red earthenware	1650	1950	3
200	Pottery	Mottledware	1650	1750	2
200	Pottery	Self-glazed red earthenware	1650	1950	1
206	Pottery	Reduced Greenware	1400	1600	2
206	Pottery	Black-glazed red earthenware	1650	1950	1
206	Pottery	Brown-glazed red earthenware	1650	1950	1
206	Pottery	Fine brown-glazed red earthenware	1650	1950	1
206	Pottery	Mottledware	1650	1750	1
207	Metal	Fe object			1
207	Pottery	Northern Gritty ware	1100	1250	5
207	Pottery	Sandy ware	1200	1350	2
207	Pottery	Partially Reduced ware	1250	1400	1
212	Pottery	Northern Gritty ware	1100	1250	1
212	Pottery	Reduced Greenware	1400	1600	12
212	Pottery	"Silverdale" Reduced Greenware	1400	1600	37
212	Pottery	Self-glazed red earthenware	1650	1950	2
212	Stone	Building Slate			1
214	Pottery	Northern Gritty ware	1100	1250	1
214	Pottery	Reduced Greenware	1400	1600	1
215	Pottery	Reduced Greenware	1400	1600	3
215	Pottery	"Silverdale" Reduced Greenware	1400	1600	2
216	Pottery	Later Northern Gritty ware	1200	1350	1
216	Pottery	Reduced Greenware	1400	1600	9
217	Pottery	Partially Reduced ware	1250	1400	1
217	Pottery	Reduced Greenware	1400	1600	11
217	Pottery	Yellow-ware	1650	1750	5
217	Stone	Limestone			1
217	Stone	Whetstone			1
222	CBM	Brick	1750	2000	2
222	Glass	Very light turquoise	1850	1950	1
222	Marine shell	Cockle			1
222	Pottery	Northern Gritty ware	1100	1250	1
222	Pottery	Fine Purpleware	1500	1700	1
222	Pottery	Fine brown-glazed red earthenware	1650	1950	1
224	Pottery	Northern Gritty ware	1100	1250	2
224	Pottery	Sandy ware	1200	1350	1
227	CBM	Drain	1850	1950	1
227	Pottery	Northern Gritty ware	1100	1250	1
227	Pottery	Later Northern Gritty ware	1200	1350	1
228	Glass	Green	1750	1850	11
228	Metal	Industrial waste			3
228	Metal	Cu/CuA object			1
228	Pottery	"Silverdale" Reduced Greenware	1400	1600	3
232	Building Material	Mortar			1
232	Metal	Industrial waste			1
232	Metal	Fe object			8

Cxt	Find type	Fabric type	Start Date	End Date	Qty
232	Pottery	Northern Gritty ware	1100	1250	7
232	Pottery	Later Northern Gritty ware	1200	1350	5
232	Pottery	Sandy ware	1200	1350	2
232	Pottery	Partially Reduced ware	1250	1400	2
232	Pottery	Reduced Greenware	1400	1600	10
232	Pottery	"Silverdale" Reduced Greenware	1400	1600	2
232	Pottery	Brown-glazed red earthenware	1650	1950	2
232	Pottery	Fine brown-glazed red earthenware	1650	1950	2
233	Metal	Industrial waste			1
233	Pottery	Sandy ware	1200	1350	3
233	Pottery	Reduced Greenware	1400	1600	6
236	Pottery	Northern Gritty ware	1100	1250	1
236	Pottery	Reduced Greenware	1400	1600	1
238	Pottery	Northern Gritty ware	1100	1250	4
238	Pottery	Sandy ware	1200	1350	1
238	Pottery	Reduced Greenware	1400	1600	1
238	Pottery	Brown-glazed red earthenware	1650	1950	1
243	Pottery	Northern Gritty ware	1100	1250	9
243	Pottery	Later sandy ware	1250	1400	2
243	Pottery	Reduced Greenware	1400	1600	2
243	Stone	Limestone			1
246	Clay pipe	Clay pipe	1700	1750	2
246	Glass	Green	1750	1800	2
246	Pottery	Fine Purpleware	1500	1700	3
246	Pottery	Black-glazed red earthenware	1650	1950	21
246	Pottery	Brown-glazed red earthenware	1650	1950	67
246	Pottery	Coarse red Slip-coated buff-coloured earthenware	1650	1750	2
246	Pottery	Agateware	1650	1900	1
246	Pottery	Mottledware	1650	1750	12
246	Pottery	Red slip-coated buff coloured earthenware	1650	1700	9
246	Pottery	Red earthenware	1650	1950	2
246	Pottery	Slipware	1650	1750	7
246	Pottery	Brown salt-glazed earthenware	1650	1750	1
246	Pottery	Black-glazed buff-coloured earthenware	1650	1750	2
246	Pottery	White salt-glazed stoneware	1700	1800	10
246	Pottery	Tin-glazed earthenware	1700	1800	2
246	Pottery	Porcelain	1750	1800	1
246	Pottery	Creamware	1750	1800	1
248	Pottery	Northern Gritty ware	1100	1250	6
248	Pottery	Sandy ware	1200	1350	3
248	Pottery	Partially Reduced ware	1250	1400	1
248	Stone	Limestone			1
250	Pottery	Northern Gritty ware	1100	1250	3
250	Pottery	Later Northern Gritty ware	1200	1350	1
250	Pottery	Later sandy ware	1250	1400	1
250	Stone	Limestone			1
252	Pottery	Northern Gritty ware	1100	1250	2
252	Pottery	Sandy ware	1200	1350	1
256	Pottery	Northern Gritty ware	1100	1250	6

Cxt	Find type	Fabric type	Start Date	End Date	Qty
256	Pottery	Later Northern Gritty ware	1200	1350	3
256	Pottery	Sandy ware	1200	1350	1
256	Pottery	Fine Purpleware	1500	1700	2
256	Pottery	Brown-glazed red earthenware	1650	1950	1
262	Pottery	Partially Reduced ware	1250	1400	1
262	Pottery	Reduced Greenware	1400	1600	1
264	Pottery	Reduced Greenware	1400	1600	1
271	Pottery	Sandy ware	1200	1350	4
275	Metal	Industrial waste			1
281	Pottery	Later Northern Gritty ware	1200	1350	5
281	Stone	Limestone			1
282	Pottery	Reduced Greenware	1400	1600	1
287	Pottery	Northern Gritty ware	1100	1250	6
287	Pottery	Sandy ware	1200	1400	1
289	Pottery	Northern Gritty ware	1100	1250	1
289	Pottery	Sandy ware	1200	1350	2
290	Pottery	Sandy ware	1200	1350	2
291	Pottery	Northern Gritty ware	1100	1250	2
291	Pottery	Later Northern Gritty ware	1200	1350	8
292	Pottery	Northern Gritty ware	1100	1250	4
292	Pottery	Later Northern Gritty ware	1200	1350	1
292	Pottery	Sandy ware	1200	1350	19
292	Pottery	Brown-glazed red earthenware	1650	1950	1
294	Pottery	Galena Glazed Reduced Greenware	1400	1600	1
294	Pottery	Black-glazed red earthenware	1650	1950	1
295	Pottery	Sandy ware	1200	1350	1
296	Pottery	Northern Gritty ware	1100	1250	1
298	Metal	Industrial waste			1
298	Pottery	Northern Gritty ware	1100	1250	10
298	Pottery	Later Northern Gritty ware	1200	1350	2
298	Pottery	Sandy ware	1200	1350	1
298	Pottery	Partially Reduced ware	1250	1400	1
298	Pottery	Reduced Greenware	1400	1600	5
298	Pottery	Fine black-glazed red earthenware purpleware	1500	1700	1
299	Pottery	Sandy ware	1200	1350	1
299	Pottery	Reduced Greenware	1400	1600	1
305	Glass	Very light turquoise	1800	1950	1
305	Pottery	Northern Gritty ware	1100	1250	13
305	Pottery	Later Northern Gritty ware	1200	1350	1
305	Pottery	Later sandy ware	1250	1400	2
306	Metal	Fe object			2
307	Pottery	Northern Gritty ware	1100	1250	2
311	Burnt peat	Burnt peat			1
311	Pottery	Northern Gritty ware	1100	1250	3
311	Pottery	Sandy ware	1200	1350	1
311	Pottery	Partially Reduced ware	1250	1400	1
311	Pottery	"Silverdale" Reduced Greenware	1400	1600	1
311	Stone	Limestone			1
313	Pottery	Northern Gritty ware	1100	1250	1

Cxt	Find type	Fabric type	Start Date	End Date	Qty
314	Pottery	Northern Gritty ware	1100	1250	1
322	Pottery	Northern Gritty ware	1100	1250	1
322	Pottery	Later Northern Gritty ware	1200	1350	1
322	Pottery	Sandy ware	1200	1350	2
322	Pottery	Reduced Greenware	1400	1600	1
323	Metal	Industrial waste			1
323	Pottery	Later Northern Gritty ware	1200	1350	1
324	Pottery	Reduced Greenware	1400	1600	6
327	Pottery	Sandy ware	1200	1350	1
331	Pottery	Northern Gritty ware	1100	1250	1
331	Pottery	Reduced Greenware	1400	1600	4
331	Pottery	"Silverdale" Reduced Greenware	1400	1600	1
331	Pottery	Fine Purpleware	1500	1700	1
331	Stone	Limestone			1
333	Pottery	Reduced Greenware	1400	1600	1
335	Pottery	Reduced Greenware	1400	1600	2
337	Pottery	Sandy ware	1200	1400	3
337	Pottery	Sandy ware	1200	1350	3
341	Pottery	Northern Gritty ware	1100	1250	1
341	Pottery	Sandy ware	1200	1350	1
341	Pottery	Partially Reduced ware	1250	1400	1
341	Pottery	Reduced Greenware	1400	1600	1
344	Pottery	Reduced Greenware	1400	1600	1
345	Pottery	Reduced Greenware	1400	1600	1
347	Pottery	Reduced Greenware	1400	1600	7
347	Stone	Building Slate			1
348	Metal	Fe object			2
348	Pottery	Northern Gritty ware	1100	1250	4
348	Pottery	Later Northern Gritty ware	1200	1350	1
348	Pottery	Fine Purpleware	1500	1700	1
350	Pottery	Northern Gritty ware	1100	1250	10
350	Pottery	Sandy ware	1200	1350	2
350	Pottery	Partially Reduced ware	1250	1400	1
352	Pottery	Sandy ware	1200	1350	1
356	Pottery	Northern Gritty ware	1100	1250	3
359	Pottery	Northern Gritty ware	1100	1250	1
359	Pottery	Partially Reduced ware	1250	1400	1
359	Pottery	Reduced Greenware	1400	1600	1
361	Metal	Industrial waste			1
364	Pottery	Northern Gritty ware	1100	1250	7
364	Pottery	Later Northern Gritty ware	1200	1350	5
364	Pottery	Reduced Greenware	1400	1600	1
366	Building Material	Mortar			1
366	Pottery	Brown-glazed red earthenware	1650	1950	1
366	Pottery	Fine brown-glazed red earthenware	1650	1950	5
366	Pottery	White earthenware	1750	1950	2
366	Pottery	Pearlware	1750	1850	1
366	Pottery	Creamware	1750	1800	3
368	Pottery	Brown-glazed red earthenware	1650	1950	1
370	Pottery	Northern Gritty ware	1100	1250	5

Cxt	Find type	Fabric type	Start Date	End Date	Qty
370	Pottery	Reduced Greenware	1400	1600	1
371	Pottery	Northern Gritty ware	1100	1250	2
373	Pottery	Northern Gritty ware	1100	1250	6
373	Pottery	Later Northern Gritty ware	1200	1350	1
373	Pottery	Partially Reduced ware	1250	1400	3
373	Pottery	Reduced Greenware	1400	1600	1
378	Pottery	Northern Gritty ware	1100	1250	2
380	Pottery	Northern Gritty ware	1100	1250	2
381	Pottery	Fine Purpleware	1500	1700	2
382	Pottery	Fine Purpleware	1500	1700	1
384	Pottery	Northern Gritty ware	1100	1250	2
390	Pottery	Fine Purpleware	1500	1700	22
402	Metal	Industrial waste			1
402	Pottery	Northern Gritty ware	1100	1250	2
402	Pottery	Reduced Greenware	1400	1600	1
416	Pottery	Reduced Greenware	1400	1600	2

Appendix 5: Clay Pipe Report

Table 1: Clay pipe data.

Cxt	SF	B	S	M	Date	Heel/ Spur	64	Bur	X	M4	Rim	TT	TF	P	T	M	Dec/Modification	Fig	Comments
152		1			1700-1730		6			0	C							A	
152			1				7												
152			3				5												
152			1		1690-1720		5							RS	R	S	roller stamp	B	?Chester pinnacle & dot type
168			1				8												
177			2				5												
177			2				4												
179			2				4												
179			2				4												
194		1			18th century					0	C							C	
228		1			?														
228			1				7												
228			3				5												
246		1			18th century					0	C							E	
246		1			?18th cent					0	C								
246			1				6												
246			1				5												
246			1		1690-1720		5							RS	R	S	roller stamp and stem stamp	D	?Chester pinnacle & dot; ?Queen Anne
U/S		1			1650-1670		7			4	B			H	R	S		F	Yorkshire Bulbous; stamp illegible

See White 2004 for key.

Appendix 6: Faunal Assessment

Table 1: List of species present in the sample.

Context	106	110	123	124	126	128	128	136	137	137	137	137	138	138	138	138	148	150	150	152	152	152	152
Sample		1			2	3	3		4	4			13	13			12	11	11	23	23		
RT		x			x	x	x		x	x			x	x			x	x	x	x	x		
Cattle			x								x	x				x	x					x	x
Sheep/goat			x		x			x								x	x				x		x
Pig																							
Horse																						x	
Bird			x					x								x					x		
Other																					X		
Burnt		x		x	x		x			x	x			x	x					x		x	
Comments																					Fish	two horse scapulae	cattle horn core

Context	152	153	153	154	154	165	167	167	168	168	170	177	179	183	183	183	183	184	184	185	187	189	
Sample		5	5	6	6	7	14	14	18					24	24			38	38				
RT			x	x	x	x	x	x	x						x	x			x	x			
Cattle		x																	x				
Sheep/goat		x											x									x	
Pig													x										
Horse		x											x										
Bird																							
Other																							
Burnt				x		x	x		x						x	x				x	x		
Comments		cattle and sheep																					
		horn cores,																					
		sheep core sawn																					

Context	189	190	190	190	190	192	195	200	202	206	206	207	212	212	217	217	217	222	224
Sample		17	17							20	20	20	74		21				
RT		x	x								x	x			x				x
Cattle		x					x	x							x				x
Sheep/goat								x							x				
Pig																			
Horse																			
Bird																			x
Other						x													
Burnt		x		x		x						x	x	x		x		x	x
Comments		large mammal				possibly		sheep and cattle							one fragment				
		vert cerv				human?		horn core,							of pottery				
								cattle core sawn											

Context	227	228	232	232	232	233	233	233	239	243	243	243	243	246	247	247	248	248	250	252	252	252	256	262	264	264
Sample			26			28				24	29				30	30	52			53	53				32	36
RT			x			x				x	x				x	x	x				x	x			x	x
Cattle		x			x		x	x	x			x	x	x			x	x					x			
Sheep/goat		x		x													x	x	x							
Pig																										
Horse		x																								
Bird																										
Other																										
Burnt			x	x	x	x		x		x				x		x					x			x		x
Comments						one burnt																				
						fragment																				

Appendix 7: Metal Conservation Assessment

1. AIMS AND OBJECTIVES

This report aims to meet the requirements of MAP2 (English Heritage, 1991) to produce a stable site archive (Phase 2: Fieldwork). This has involved X-radiography and an assessment of the condition, stability and packaging of the finds excavated by Greenlane Archaeology.

The potential of this assemblage for further analysis and research is also discussed (MAP2 Phase 3: Assessment). The condition of the various classes of material is summarised, indicators of preservation are noted, and recommendations for further work identified.

2. DESCRIPTION

18 recorded finds were sent for assessment, comprising:

Iron	10
Copper Alloy	5
Lead Alloy	2
Stone	1

15 recorded finds were X-rayed, and 1 plate (X7092) produced.

3. METHODOLOGY

All iron and selected non-ferrous metal finds were X-rayed using standard YAT procedures and equipment. One sheet of film was used and given a reference number in the YAT Conservation Laboratory series. The X-ray number was written on the packaging of each object X-rayed, and each X-ray image was labelled with the relevant recorded find or context number. The X-ray plates have been packaged in acid-free archival envelopes.

All finds were examined under binocular microscope at X20 magnification (alongside the X-radiographs). The material identifications were checked and observations made on the condition and stability of the finds.

4. CONDITION ASSESSMENT SUMMARY

Iron – The iron objects range in condition from fair to poor, to poor, with the majority being in the poor category. The volume of corrosion products present also varies from medium thin to medium thick, however there are no signs of active corrosion at the present time. The X-rays show a variable amount of core metal survival although many of the objects show signs of mineralisation, in some cases very extensive mineralisation and internal cracking.

Copper Alloy – The copper alloy objects range in condition from a fair to poor, to poor, with the majority being in the fair to poor category. The X-ray shows that in general there is relatively little core metal survival. Although some of the objects from context 148 have spots of active corrosion the remaining copper alloy finds all appear stable at this point in time.

Lead Alloy – The lead alloy objects are in a fair to poor and poor condition with cracking chipping, surface losses, iron staining and areas of active corrosion all present to varying degrees.

Stone – The only stone object present was a whetstone in a relatively good condition. Despite the present of some large pre-existing chips and iron staining the object is completely stable.

5. STATEMENT OF POTENTIAL

Unfortunately there appears to be relatively little evidence present to suggest that the finds assessed have any great potential significance with regard to date, technology, craft and/or industry.

6. PACKING AND LONG TERM STORAGE

Packaging on arrival at the lab

All the finds arrived at the lab apparently undamaged, due to their surrounding layer of bubble wrap; additionally protection was given to the copper alloy finds due to their placement within a Stewart box. However virtually all the finds are in need of additional support within their finds bags or crystal boxes and provision of a suitably desiccated environment.

Long-Term Storage

In order for the finds to be suitable for long term storage some of the packaging materials will require changing, for example the bubble wrap and tissue paper used should be replaced with stable archival and acid-free materials such as jiffy foam and acid-free tissue paper. Furthermore, a layer of jiffy foam should be placed within all the finds bags and crystal boxes in order to provide support and padding for the contained finds. The iron finds should be stored in a desiccated environment at less than 15% Relative Humidity (RH), with the copper and lead alloy finds stored in a similar environment although with an RH of less than 35%. These environments, particularly the desiccated environments, will need to be monitored and maintained in a suitably sealed environment.

REFERENCES

1. English Heritage, Management of Archaeological Projects, 1991.

Assessment Tables

Key: S = Sample

Iron

X-ray	S No.	Cxt	Assessment
7092	24	183	<p>Labelled as Fe object, consists of two fragments with no obvious joins, although a relatively fresh break is present in the smaller fragment. Medium corrosion products present with light covering of soil. No signs of active corrosion. <u>X-ray</u> shows relatively little to virtually no metal left with mineralisation of the objects cores. Overall condition is poor.</p> <p>Recommendation: no further action.</p>
7092	26	232	<p>Labelled as Fe object, currently in two pieces although fresh break is present. Medium to thin corrosion products present with light covering of soil. Very small amount of surface cracking visible. No signs of active corrosion. <u>X-ray</u> shows some internal cracking along side areas of mineralisation, relatively little metal remaining. Overall condition is fair to poor.</p> <p>Recommendation: no further action.</p>
7092	33	282	<p>Labelled as Fe object. Medium thin corrosion products present with covering layer of soil. Some small surface cracks visible, no signs of active corrosion. <u>X-ray</u> shows virtually no metal remaining, although there are two very small areas where slightly more metal appears to remain. Overall condition is poor.</p> <p>Recommendation: no further action.</p>
7092	54	366	<p>Labelled as Fe object, although appears to be a nail. Medium to thick corrosion products present with light covering of soil. Very small amount of surface cracking, but no signs of active corrosion. <u>X-ray</u> shows heavy mineralisation with virtually no metal remaining although a smallish area does appear to contain more metal than the surrounding area. Overall condition is poor.</p> <p>Recommendation: no further action.</p>
7092		132	<p>Labelled as Fe object, although appears to be a nail. Thick layer of corrosion products present. No signs of active corrosion. <u>X-ray</u> shows some limited internal cracking around the head of the nail, with heavy mineralisation of the shank. Overall condition is fair to poor.</p> <p>Recommendation: no further action.</p>
7092		194	<p>Labelled as Fe object. Medium to thick corrosion products present with a covering of soil and numerous adhered pebbles obscuring areas of the objects surface. Multiple cracks in the objects surface are visible. No signs of active corrosion. <u>X-ray</u> shows a relatively solid central core, although there is internal cracking and the edges of the object show mineralisation. Overall condition is fair to poor.</p> <p>Recommendation: no further action.</p>
7092		207	<p>Labelled as Fe object, although appears to be a nail. Medium thick corrosion products present with covering of soil. No signs of active corrosion. <u>X-ray</u> shows a little more metal remaining in the head than the shank which is heavily mineralised. Overall condition is fair to poor.</p> <p>Recommendation: no further action.</p>

X-ray	S No.	Cxt	Assessment
7092		232	<p>Labelled as Fe object, however appears to be one unidentified object, one complete nail and six additional nail fragments. All appear to have medium thick corrosion products present with a light covering in soil in some cases. There are no signs of active corrosion, nor do any breaks appear fresh. <u>X-ray</u> shows a variable amount of metal present with the unidentified object and the heads of the two largest nails having a reasonable amount of metal remaining, the additional fragments have little to in some cases virtually no metal remaining. All show signs of mineralisation, although only the complete nail shows extensive internal cracking. Overall condition is poor.</p> <p>Recommendation: no further action.</p>
7092		306	<p>Labelled as Fe object, although appears to be a nail. Currently in two pieces however there is a fresh break with a relatively good join, the exposed break edges show there to be virtually no core remaining. There are no signs of active corrosion. <u>X-ray</u> shows there to be relatively little metal remaining, the object is heavily mineralised. Overall condition is poor.</p> <p>Recommendation: no further action.</p>
7092		348	<p>Labelled as Fe object, although possibly two nails. The small of the two has medium thin corrosion products present with the other extensively covered by corrosion incorporating several small stones. Neither show signs of active corrosion. <u>X-ray</u> shows little metal remaining in either object, with particularly heavy mineralisation of the larger of the two. Overall condition is poor.</p> <p>Recommendation: no further action.</p>

Copper Alloy

X-ray	S No.	Cxt	Assessment
7092	12	148	<p>Labelled Cu? Pin and Button. The pin and button are both CuA objects. The button appears complete with a small amount of triangular surface decoration visible around the edge of the slightly convex side of the button. The button is lightly covered with soil, although there are small obvious areas of surface loss as well as spots of active corrosion. The pin is partially encased in the corrosion products of a fragmentary iron object, also present is a fragment of shell. The pin appears to have a thin layer of corrosion present with only one very small chip exposing the underlying metal present near the encased head of the pin. <u>X-ray</u> shows virtually no metal remaining with regard to the button. There is relatively little metal remaining in the pin, although there does appear to be a greater amount of metal present where the pin is encased. The fragment of Fe object is very heavily mineralised with virtually no metal remaining. Overall condition is fair to poor.</p> <p>Recommendation: no further action.</p>

X-ray	S No.	Cxt	Assessment
7092	12	148	<p>Labelled as Cu objects. The objects appear to be a partial button, an incomplete coin or token as well as an assortment of fragments at least six of which appear to be pin or tack fragments. The button is missing just under half its flat surface. Although there are CuA and Fe corrosion products present, particularly on the back of the object, there are no signs of active corrosion and it is possible to see the flat face of the button which although slightly abraded appears in relatively fair condition. The token and other fragments all show signs of surface loss and spots of active corrosion. <u>X-ray</u> shows the button to have an even core with a reasonable amount of metal remaining. The remaining token and fragments all have very little to virtually no metal remaining. Overall condition ranges from fair to poor.</p> <p>Recommendation: no further action.</p>
7092		121	<p>Labelled as Cu object. Object is incomplete and distorted with a number of cracks and fresh breaks clearly visible. The exterior surface is extensively abraded, although the remains of several lines of punched dot decoration are still visible. There is a small amount of soil present on the exterior and more noticeably the interior surface of the object. Though there are some areas of a light green corrosion there does not appear to be any active corrosion at this time. The corrosion products present are thicker on the interior of the object although generally the corrosion products form a relatively thin layer. <u>X-ray</u> shows there to be relatively little metal remaining. Overall condition is fair to poor.</p> <p>Recommendation: no further action</p>
7092		152	<p>The objects appear to be a button and a piece of flat sheet. The button although covered with soil has a very noticeable area of surface loss as well as some spots of active corrosion on its convex surface. Again although the concave side is obscured by soil some Fe corrosion is present. The sheet is again covered in a layer of soil which obscures much of the objects surface, although it is clear that one end is distorted and cracked with some material loss. Although some corrosion is visible there are no signs of active corrosion. The edges of the CuA sheet appear to be surrounded by Fe corrosion, similarly there are no signs of active corrosion. <u>X-ray</u> shows the button to have a reasonable amount of metal remaining although the core is slightly uneven, there is no evidence of surface decoration visible. The sheet however has very little to virtually no metal remaining. Surface decoration may be present however the exact nature of this decoration is not clear. Overall condition is fair to poor.</p> <p>Recommendation: no further action.</p>
7092		228	<p>Labelled as Cu object. The object appears complete although extensively covered in soil and some small stones. Some corrosion products are visible however there are no signs of active corrosion. <u>X-ray</u> shows a variable amount of metal remaining with areas of mineralisation. One edge appears noticeable brighter than the rest of the object, although there are no signs of surface decoration or other information visible. Overall condition is fair to poor.</p> <p>Recommendation: no further action.</p>

Lead Alloy

Sample Number	Context	Assessment
12	148	<p>Three fragments, with no obvious joins. All show evidence of chipping and surface loss with surface cracking also visible. Variable amounts of iron staining present with some spots of active corrosion. Overall condition is fair to poor.</p> <p>Recommendation: no further action.</p>
67	347	<p>Labelled Litharge cake (Pb rich)) Justine Bayley (EH) confirms that it isn't litharge cake. The object is currently in seven fragments with a number of fresh breaks visible. There is extensive surface cracking present as well as areas of surface loss and active corrosion. The objects surface and break edges are also relatively friable. There is also a very small amount of surface soil present across the object. Overall condition is poor. Object looks to be a possible container.</p> <p>Recommendation: no further action unless cleaning will aid identification.</p>

Stone

SF	Context	Assessment
1	217	<p>Labelled as whetstone. Large chips to both sides of the stone. The smooth side is noticeably darker than the rest of the object, with numerous small abrasions visible. General light covering of iron staining. Overall condition is good.</p> <p>Recommendation: no further action</p>

Appendix 8: Assessment of Wood

1. INTRODUCTION

One piece of waterlogged timber was delivered to the Conservation Laboratory on 13th August 2008 for assessment and a second on 6th November the same year.

2. AIMS AND OBJECTIVES

This report aims to meet the requirements of MAP2, Phase 3, Assessment of Potential for Analysis, (English Heritage, 1991). The work carried out has been the cleaning and examination of the objects submitted and an assessment of their condition. An evaluation of the potential for further investigation is included, with recommendations and costs for long term stabilisation.

3. PROCEDURES

In each case the artefact was delivered to the laboratory wet packed, double bagged in plastic sheeting secured with adhesive tape. The first pieces had subsequently been wrapped in a long cardboard box with padding, secured with drafting tape for delivery by courier to YAT. All pieces were removed from their packaging, washed under cold running water to remove adhering burial deposits and repacked in sealed lengths of layflat tubing for temporary storage after examination and species identification.

4. CONDITION

The wood had been preserved through burial in a waterlogged anoxic environment. It appears that these conditions were maintained in all contexts in which the material survived up to the time of excavation. There is no surviving sapwood and the remaining surfaces are heavily eroded, partly by water, partly by microbial action, perhaps suggesting that the waterlogging has not been entirely permanent.

5. LISTING

Wood species identifications follow Schweingruber (1982). All dimensions in millimetres.

Identification	Description	Species identification
Context 260	Timber in two non refitting sections. Both are halved, with irregular grain, a few small knots and no surviving sapwood. All surfaces heavily eroded. Both ends broken away and missing. Neither timber fits end to end with the other. First piece 687 l, 146 w, 51 th. Second piece 658 l, 157 w, 82 th.	Both pieces <i>Quercus spp.</i>
Context 322	Section of roundwood, stem and side shoot present, bark present. Both ends lightly charred. No working marks present. 104 l, 29 dia.	<i>Corylus avellana L.</i>

Corylus avellana L.-
Quercus spp. -

Hazel.
Oaks. Sub species not determinable

6. DISCUSSION

The two pieces of timber 260 are in all likelihood two parts of the same piece of wood. The best fit which can be made is one which has the pith face of each fitting against that of the other, making this a boxed heart timber, but there is insufficient surviving wood grain to confirm this. The timber is medium to fast grown, giving about 30-40 heartwood

rings at best. This is probably insufficient to allow for dating by dendrochronology and as no heartwood/sapwood boundary or sapwood itself is present the result would only be an estimated felling date at best. Nothing about the timber or its known treatment to date would preclude sampling for ^{14}C dating, if that were required.

The section of roundwood from 322 is a charred offcut and probably represents debris from a fire. Again it is not possible to date this by dendrochronology but there is enough wood present for ^{14}C dating.

7. RECOMMENDATIONS AND FURTHER WORK:

No further examination is required. A woodworking technology report would essentially be a rewrite of the contents of this assessment report and would only be necessary if further information on the provenance and character of the timber came to light.

8. REFERENCE

Schweingruber, FW (1982) Microscopic Wood Anatomy Zurich

Appendix 9: Environmental Samples

Table 1: Environmental samples

Sample	Context	Volume (litres)	Description
1	110	5	Fill of 109
2	126	10	Burnt layer
3	128	40	Fill of 129
4	137	40	Probable stabilising layer
5	153	10	Fill of 155
6	154	10	Fill of 155
7	165	10	Fill of 166
8	169	40	Peat deposit
9	158	40	Fill of 159
10	161	30	Fill of 162
11	150	20	Possible surface
12	148	20	Possible surface of industrial waste
13	138	60	Burnt layer
14	167	40	Burnt layer
15	185	40	Fill of 186
16	189	20	Fill of 191
17	190	30	Fill of 191
18	168	40	Burnt layer
19	222	30	Fill of 223
20	206	20	Fill of 205
21	217	20	Fill of 218
22	224	20	Fill of 225
23	152	20	Fill of 209
24	183	20	Fill of 182
25	175	10	Fill of 173
26	232	20	Fill of 283
27	239	10	Fill of 240
28	233	20	Fill of 283
29	243	30	Fill of 244
30	247	10	Fill of 244
31	262	20	Fill of 258
32	264	10	Fill of 263
33	282	20	Fill of 283
34	288	40	Fill of 284
35	294	40	Fill of 297
36	269	5	Fill of 186
38	184	20	Fill of 186
41	323	40	Fill of 276 , lens within 322
42	322	40	Fill of 276
43	313	20	Fill of 244
44	311	20	Fill of 312
45	323	1	Sub-sample of 323 , as sample 41
46	341	5	Fill of 342
47	298	30	Fill of 297
48	296	10	Fill of 297
49	361	10	Fill of 362
50	367	10	Fill of 362
51	281	20	Fill of 251
52	248	10	Fill of 249
53	252	20	Fill of 244
54	366	10	Possible hearth material
55	352	1	Wood lens within 297
56	314	20	Fill of 244
57	350	20	Fill of 351
58	370	20	Fill of 369
59	344	40	Fill of 276
60	347	10	Fill of 276
61	373	20	Fill of 376

Sample	Context	Volume (litres)	Description
62	364	10	Fill of 363
63	343	20	Fill of 276
65	345	30	Fill of 276
66	346	20	Fill of 276
67	347	20	Fill of 276
68	368	20	Lens within 212
69	330	10	Fill of 276
70	331	10	Fill of 276
71	326	10	Fill of 276
72	333	10	Fill of 276
73	327	10	Fill of 276
74	328	10	Fill of 276
75	324	10	Organic fill of 276
76	325	10	Fill of 276
78	375	1	Peat fill of 372
79	212	30	Possible capping layer at south end of 276

Tables 2: Volume and contents of retents (Key: + = 1-9, ++ = 10-20, +++ = 21-50, ++++ = >51)

Sample number	1	2	3	4	5	6	7	8	9
Bone (Burnt)	+	++		++	+++	+	++	++	++
Bone (Unburnt)			++	+	+++	+		+++	
Charcoal	++	++++	+++	+++	+	++	++	++++	+++
Cinders	+								++
Marine shell									
Nutshell (<i>Corylus avellana</i>)									
Charred organic									
Uncharred organic								+(leaves)	
Other organic									
Burnt limestone									
CBM									
Cu object									
Clay pipe									
Daub									
Fe Object									+(nail?)
Glass									+
Mortar				++					++
Pottery (Medieval)	+	+	+				+	+	+
Pottery (Post-medieval)	+								
Pottery (Unidentified)				+	++				
Hammerscale									+
Prill									+
Slag	+		+			+	+	+	+++
Other inorganic									

Sample number	10	11	12	13	14	15	16	17	18
Bone (Burnt)		+		++	+++	++	++	++	+
Bone (Unburnt)		+	+	+	+	+	+	+	
Charcoal		+++		++++	+++	+++	+++	+++	++
Cinders		+++		+++		+++	+		
Marine shell		+	++						
Nutshell (<i>Corylus avellana</i>)									
Charred organic						+(oats)			
Uncharred organic									+(wood)
Other organic									
Burnt limestone									
CBM									
Cu alloy object			+						

Sample number	10	11	12	13	14	15	16	17	18
Clay pipe			+		+++				
Daub									
Fe Object							+(nail)		
Glass		+	++		+		+		
Mortar		++++	++++			+	++		++
Pottery (Medieval)						+	+	+	
Pottery (Post-medieval)		+	+++						
Pottery (Unidentified)									
Hammerscale						+	+		
Prill		+				+	+		
Slag						+++	+++		+
Other inorganic			++(1 button?, Cu alloy fragments inc. 3 pins) & 3 pb fragments				+(Cu alloy pin?)		

Sample number	19	20	21	22	23	24*20L sample wet-sieved	25	26	27
Bone (Burnt)	+++	++	+++	++	+++	+		++	++
Bone (Unburnt)	+++	+			++	+			++++
Charcoal	+++	+++	+++	+++	+++	+++	++	+++	++++
Cinders	+++	++				+++	+		
Marine shell	+	+			+++				
Nutshell (<i>Corylus avellana</i>)		+	+						
Charred organic									
Uncharred organic	+(roots)								++ (leaves)
Other organic					+				
Burnt limestone									
CBM					+				
Cu object									
Clay pipe								+	
Daub									
Fe Object	+(nails)					+(unspecified)		+(unspecified)	+(nail)
Glass		+		+	++				
Mortar	+++			+	+++			+	
Pottery (Medieval)	+	+	+	+			+	+	+
Pottery (Post-medieval)	+	+			+++			+	
Pottery (Unidentified)						+			
Hammerscale	+								
Prill	++	+	+			+			
Slag	+++	++	+	+	+	++	+	+	+
Other inorganic									+(flint debitage)

Sample number	28	29	30	31	32	33	34	35	36
Bone (Burnt)	+++	+	+	++	++	+	++	+	++
Bone (Unburnt)	+++	+	++++	++	+++			++	++
Charcoal	+++ +	++	+	++++	++++	++	++++	++	+++
Cinders				+++		+			
Marine shell		+							
Nutshell (<i>Corylus avellana</i>)							+		+
Charred organic							+(oats) ++++ (burnt peat)	+(wood)	
Uncharred organic							+++ (roots) ++++ (leaves) +(seeds)		
Other organic									
Burnt limestone	+								
CBM									
Cu alloy object									
Clay pipe									
Daub									
Fe Object							+(unspecified)	+(unspecified)	
Glass									
Mortar		+		+			+		
Pottery (Medieval)	+			+			+	+	
Pottery (Post-medieval)									
Pottery (Unidentified)		+	+		+	+			
Hammerscale							+		
Prill				+					
Slag	+++	+	+	+++	+	+	+		+
Other inorganic			+(roof slate)			+(vitrified material)			

Sample number	38*20L sample wet-sieved	41	42	43	44	45	46	47	48
Bone (Burnt)	+	++	++	++	+		+	+	+
Bone (Unburnt)	+			+++					
Charcoal	++++	++	++++	++	++++	+	+	++	+++
Cinders	++		+++				+		+
Marine shell									
Nutshell (<i>Corylus avellana</i>)	+	+	+						
Charred organic		+(seeds)	+(oats) +++ (burnt peat)						
Uncharred organic		++ (wood)	++++ (seeds) ++++ (twigs)						

Sample number	38*20L sample wet-sieved	41	42	43	44	45	46	47	48
Other organic			+(wool)						
Burnt limestone				+					
CBM									
Cu alloy object									
Clay pipe									
Daub									
Fe Object									
Glass									
Mortar	+								
Pottery (Medieval)	+	+	+	+	+		+		
Pottery (Post-medieval)								+	
Pottery (Unidentified)	+								
Hammerscale			+						
Prill			+				+		+
Slag	++		++++			++		+	+
Other inorganic					+(limestone)				

Sample number	49	50	51	52	53	54	55	56	57
Bone (Burnt)	++	+	+	+	++	+	+	+	+
Bone (Unburnt)	+	+	++		+	+	+++	+	+
Charcoal	+++	+++	+++	++	++	+++	+++	++	+++
Cinders	+			+	+	++	+		+
Marine shell						++			
Nutshell (<i>Corylus avellana</i>)			+		+				+
Charred organic							+++ (burnt peat)		
Uncharred organic							+(seeds)		+(roots)
Other organic									
Burnt limestone									
CBM									
Cu alloy object									
Clay pipe									
Daub									
Fe Object						+(unspecified)			
Glass						+			
Mortar						++++			
Pottery (Medieval)	+	+	+	+					+
Pottery (Post-medieval)						+			
Pottery (Unidentified)									
Hammerscale									
Prill		+	+						+
Slag	+	+	+	+	+	+	++		+
Other inorganic									

Sample number	58	59	60	61	62	63	65	66	67
Bone (Burnt)	+	++	+	+	+	+	+	+	++
Bone (Unburnt)		+			++		++		+
Charcoal	+++	+++	+++	+++	++++	++	++++	+++	++++
Cinders					+		+++		
Marine shell									
Nutshell (<i>Corylus avellana</i>)				+			+		
Charred organic			++(b- urnt peat)			+(seeds)	++++ (burnt peat)	+(burnt peat)	+++ (burnt peat)
Uncharred organic			++ (wood)		+(roots)		+(leaves) ++(seeds)		+(wood)
Other organic							+(wool)		
Burnt limestone									+
CBM									
Cu alloy object									
Clay pipe									
Daub									
Fe Object									
Glass									
Mortar					+				
Pottery (Medieval)	+	+		+	+	+			+
Pottery (Post- medieval)									
Pottery (Unidentified)									
Hammerscale									
Prill							+		
Slag				+	++		+		+(Pb)
Other inorganic				+(uni dentif ied)					

Sample number	68	69	70	71	72	73	74	75	76
Bone (Burnt)	++++	+	++	+	++	+	+	+	+
Bone (Unburnt)			++		+	+	+	+	+
Charcoal	++++	++	+++	++	+++	++	++	+++	++
Cinders		+						+++	
Marine shell									
Nutshell (<i>Corylus avellana</i>)			+		+			+	+
Charred organic	++(burnt peat)		++(burnt peat)					+(oat)	
Uncharred organic								+(leaves)	
Other organic									
Burnt limestone	+	++++				+	+		
CBM									
Cu alloy object									
Clay pipe									
Daub		+++							
Fe Object								+(nail)	
Glass									
Mortar		++			+		+	+	+
Pottery (medieval)					+	+			
Pottery (Post-									

Sample number	68	69	70	71	72	73	74	75	76
medieval)									
Pottery (Unidentified)							+		
Hammerscale									
Prill	+				+	+			
Slag	+	+			+	+	+	+(Pb residue?)	
Other inorganic	+(roof slate)	+(roof slate)					+(roof slate)		

Sample number	78	79
Bone (Burnt)		+
Bone (Unburnt)		
Charcoal	++	++++
Cinders		
Marine shell		
Nutshell (<i>Corylus avellana</i>)		+
Charred organic		
Uncharred organic		
Other organic		
Burnt limestone		
CBM		
Cu object		
Clay pipe		
Daub		
Fe Object		
Glass		
Pottery (medieval)		+
Pottery (Post-medieval)		+
Pottery (Unidentified)		
Hammerscale		
Prill		+
Slag		+
Other inorganic		

Table 3: Volume of flots and contents

(this table is split into two, with the second half just preceded by the sample numbers, without repeating the flot volume information)

Key: + = rare, ++ = occasional, +++ = common and ++++ = abundant

NB charcoal over 1cm is suitable for identification and AMS dating; underlined plant names refer to uncharred plant remains

Sample Number	Total flot Vol (ml)	<i>Triticum aestivo-compactum</i>	<i>Avena</i> sp.	<i>Hordeum vulgare</i>	<i>Cerealia</i> indet.	Other plant remains
1	10					
2	50					<u>Brassica nigra</u> +
3	30					<u>Rubus fruticosus</u> ++, <u>Fumaria</u> sp. +
4	<10					
5	<10					
6	<10	+				
7	25	+				<u>Rumex</u> sp. +
8	100					
9	110					
10	15					
11	30					<u>Viola</u> sp. +
13	100		+			
14	-					
14	100		+			
15	30					<u>Urtica dioica</u> +, <u>Rubus fruticosus</u> +
16	35					<u>Viola</u> sp. ++, <u>Sambucus nigra</u> +, <u>Rubus fruticosus</u> +
17	10					
18	15				+	<u>Chenopodium</u> sp +
18	-					
19	20					<u>Rubus fruticosus</u> +
20	<10					
21	20	+				<u>Rubus fruticosus</u> ++++, <u>Carex</u> sp. +, <u>Urtica urens</u> +, <u>Hyocyanus nigra</u> ++
22	25					<u>Urtica dioica</u> ++++, <u>Galeopsis</u> sp. +, <u>Rubus fruticosus</u> +
23	<10					<u>Urtica dioica</u> +
24	50					<u>Rumex</u> sp + <u>Chenopodium</u> sp. +, <u>Fabaceae</u> sp. +
25	10				+	
26	25		+	+		<u>Viola</u> sp. +, <u>Urtica dioica</u> +++, <u>Rubus fruticosus</u> ++
27	25		+	+		<u>Persicaria lapithifolia</u> +, <u>Rubus fruticosus</u> ++, <u>Viola</u> sp. +, <u>Urtica dioica</u> +
28	50	+	++++	+	++	<u>Poaceae</u> sp. +, <u>Rubus fruticosus</u> +
29	30					
30	<10					
31	20					
32	60	+	+	+		
33	25					
34	1200			+		
35	50					<u>Urtica dioica</u> +, <u>Viola</u> sp. +
36	25					
38	10					
41	-					
43	10					<u>Rubus fruticosus</u> +, <u>Viola</u> sp. +
44	90		+			<u>Chenopodium</u> sp. ++, <u>Persicaria</u> sp. +, <u>Fabaceae</u> sp. +
45	10					
46	10					
47	50					<u>Viola</u> sp. +, <u>Rubus fruticosus</u> +
48	25					<u>Viola</u> sp. +, <u>Urtica dioica</u> +, <u>Persicaria lapithifolia</u> +
49	40					<u>Brassica</u> sp. +, <u>Chenopodium</u> sp. +
50	20				+	
51	10		+			<u>Carex</u> sp. +, <u>Urtica dioica</u> ++, <u>Chenopodium</u> sp. +, <u>Sonchus</u> sp. +, <u>Viola</u> sp. +

Sample Number	Total flot Vol (ml)	<i>Triticum aestivo-compactum</i>	<i>Avena</i> sp.	<i>Hordeum vulgare</i>	<i>Cerealia</i> indet.	Other plant remains
52	10					<i>Rubus fruticosus</i> +
53	10					<i>Rumex</i> sp. +, <i>Viola</i> sp. ++, <i>Urtica dioica</i> +++
54	15					<i>Betula pendula</i> +, <i>Rubus fruticosus</i> +
55	75					<i>Chenopodium</i> sp. +, <i>Viola</i> sp. +, <i>Carex</i> sp. +
56	15					<i>Carex</i> sp. +, <i>Chenopodium</i> sp. +
57	130		+		+	
58	25		+			<i>Fumaria</i> sp. +, <i>Plantago lanceolata</i> +, cf. <i>Psium</i> sp. +, <i>Carex</i> sp. +
59	75					<i>Urtica dioica</i> +++++, <i>Carex</i> sp. ++, <i>Ranunculus</i> sp. +, <i>Viola</i> sp. +, <i>Stellaria</i> sp. +
60	25		+			<i>Rumex</i> sp. +, <i>Chenopodium</i> sp. ++, <i>Carex</i> sp. +++
61	<10	+				<i>Chenopodium</i> sp. +, <i>Urtica dioica</i> +++
62	40					<i>Urtica dioica</i> +++++, <i>Chenopodium</i> sp. +, <i>Geum</i> sp. +
63	10					<i>Carex</i> sp. +, <i>Chenopodium</i> sp. ++, <i>Persicaria lapithifolia</i> +
63	-					
65	200					<i>Carex</i> sp. ++, <i>Rubus fruticosus</i> ++, <i>Chenopodium</i> sp. +
66	10					<i>Chenopodium</i> sp. +
67	50					<i>Carex</i> sp. +, <i>Urtica dioica</i> +, <i>Persicaria lapithifolia</i> +, <i>Chenopodium</i> sp. ++
68	70		+			<i>Persicaria lapithifolia</i> +
69	-					
69	<10					
70	20					<i>Chenopodium</i> sp. ++
71	10					<i>Chenopodium</i> sp. +
72	10					<i>Rumex</i> sp. +, <i>Fumaria</i> sp. +, <i>Brassica</i> sp. +, cf. <i>Panicum</i> sp. +, <i>Urtica dioica</i> ++
73	10			+		<i>Viola</i> sp. +
74	<10					<i>Urtica urens</i> +
75	105					<i>Chenopodium</i> sp. +++++, <i>Brassica nigra</i> +++++, <i>Sambucus nigra</i> +
76	15					<i>Chenopodium</i> sp. +, <i>Urtica dioica</i> +++++, <i>Viola</i> sp. +, <i>Galeopsis</i> sp. +
78	35					
79	50					<i>Viola</i> sp. +, <i>Urtica dioica</i> +, <i>Chenopodium</i> sp. +

Sample Number	Mammal Bone	Marine shell	Metalic waste	Daub	Brick	Iron Pan	Charcoal Quantity	Charcoal Max size (cm)	Material available for AMS	Comments
1							++++	<1		Charcoal includes roundwood
2							++++	2	Charcoal	Charcoal includes root wood
3							+++	1.2	Charcoal	Charcoal includes roundwood
4							++	<1		
5										Cinder +
6							+	<1		Cereal grain very abraded and broken
7							++++	1	Charcoal	Culm fragments, possible evidence of crop processing
8	++ + burnt						++++	2	Charcoal	
9		+					++++	<1		
10							+++	<1		
11							+	<1		Cinder +++

Sample Number	Mammal Bone	Marine shell	Metalic waste	Daub	Brick	Iron Pan	Charcoal Quantity	Charcoal Max size (cm)	Material available for AMS	Comments
13	+						++++	1.7	charcoal	Charcoal includes roundwood, culm fragments present, cinder ++, unburnt bone +
14						+++ +				Retent sample of natural Iron panning
14							++++	2.4	Charcoal	Charcoal includes roundwood and culm fragments
15	+						++++	<1		
16							++++	1.5	Charcoal	
17							++	1	Charcoal	Roundwood, culm fragments present
18							+++	1	Charcoal	
18						+++ +	++	<1		Retent sample of natural Iron panning
19			+				+++	<1		Prill +, Coal ++
20							+++	<1		
21							+++	1	Charcoal	Cereal grain degraded
22							+++	1	Charcoal	
23										Cinder +++
24							++++	2.7	Charcoal	Charcoal includes roundwood
25							+++	1	Charcoal	
26							++++	1.6	Charcoal	Charcoal contains root wood, culm fragments present
27	++++						++++	<1	Mammal bone	
28							++++	1.5	Charcoal, charred cereal grain	Lemma and palea fragments present together with evidence of crop processing
29							++	<1		Cinder +, coal +, fishbone +
30							++	<1		
31							++	<1		
32	+						++	2	Charcoal	
33							++	1.2	Charcoal	
34							++	3	Charcoal	
35							+	<1		Cinder +++
36							++++	1.2	Charcoal	Charcoal includes roundwood, prill +
38							+++	2	Charcoal	Charcoal includes roundwood
41										Uncharred seed (modern) present
43							++	<1		
44							++++	1	Charcoal	
45										Archaeologically sterile
46										Archaeologically sterile
47	+						+++	1.5		Unburnt bone +
48							+	1	Charcoal	
49							+++	1	Charcoal	Unburnt bone +
50							+++	2	Charcoal	Charcoal includes roundwood
51							+++	<1		

Sample Number	Mammal Bone	Marine shell	Metalic waste	Daub	Brick	Iron Pan	Charcoal Quantity	Charcoal Max size (cm)	Material available for AMS	Comments
52							++	<1		
53							+++	1	Charcoal	Culm fragments present
54							++	<1		Coal +, cinder +
55							++++	<1		Possible wool in this sample
56							+++	<1		Culm fragments present, cinder +
57							++++	<1	Charred cereal	
58							++++	1	Charcoal	Charcoal includes roundwood
59							++	2	Charcoal	Cinder +
60							+++	<1		Some Avena grain still in hull
61							+	<1		Cereal grain very abraded
62							++++	<1		
63							+	1	Charcoal	Cinder +
63										Sample of charred seed however seeds were uncharred - modern.
65							++++	3	Charcoal	
66							++	2	Charcoal	Charcoal includes roundwood
67							++	2	Charcoal	Cinder +++
68							++++	2	Charcoal	Charcoal includes roundwood, cereal grain abraded, cinder +++
69				+++	+					Sample of daub and brick fragments
69										Archaeologically sterile
70							++++	2.3	Charcoal	Charcoal includes roundwood
71							++	<1		
72							++++	1	Charcoal	Charcoal includes roundwood
73							++++	<1		Cereal grain abraded
74							++	<1		
75	++++						+++	<1	Mammal bone	Cinder +
76							+++	1	Charcoal	Cinder +
78										Archaeologically sterile
79	+						++++	1.7	Charcoal	Unburnt bone +

Table 4: Volume of waterlogged samples and contents (Key: + = rare, ++ = occasional, +++ = common, ++++ = abundant). NB charcoal over 1cm is suitable for identification and AMS dating.

Sample Number	41	41	42	-
Context Number	323	323	322	322
Total flot Vol (ml)	100	50	100	
Plant remains	<i>Carex sp.</i>	+++	+	+
	<i>Chenopodium sp.</i>	++	+	+
	<i>Juncus sp.</i>	+++		
	<i>Persicaria lapithifolia</i>	++++	++	+
	<i>Ranunculaceae sp.</i>	++	+	+
	<i>Stellaria sp.</i>	++++		+
	<i>Urtica dioica</i>	++		++
	<i>Viola sp.</i>	++		
Pottery		+		
Mammal Bone				
Burnt Bone		+	+	
Marine Shell				
Beetle Fragments	+			
Moss Fragments		+	+	
Wood Fragments	++++		+	+
Corylus Nutshell			+	+
Charcoal	Quantity	++++	++++	++
	Max size (cm)	2	1.5	<1
Material available for AMS	Charcoal, Waterlogged plant	Charcoal, Waterlogged plant	Waterlogged plant	
Comments			Contains leaf fragments+	Individual sample for identification

Appendix 10: Analysis, Publication, and Research Archive Project Design

130-136 STRICKLANDGATE, KENDAL, CUMBRIA

Archaeological Analysis, Publication, and Production of Research
Archive Project Design



Client: Lake District Estates Co Ltd

May 2009

Planning Application Ref. 5/08/0070

1. Introduction

1.1 Project Background

1.1.1 **Circumstances of the project:** Greenlane Archaeology was approached by Lake Districts Estates Co Ltd, hereafter 'the client', through their architect Tony Hills of Damson Design, with regard to the provision of archaeological services at the former Craghills Garage site, 130-136 Stricklandgate, Kendal, Cumbria (centred on NGR SD 5145 9305). Following the submission of a planning application for the construction of a new hotel and extension of existing buildings an archaeological assessment of the site was required by South Lakeland District Council. The initial phase of this was a desk-based assessment, which was produced by Greenlane Archaeology in March 2008 (Greenlane Archaeology 2008a). This was followed by the excavation of a series of evaluation trenches across the site, which was completed in May 2008 (Greenlane Archaeology 2008b). As a result of the discoveries and the apparent potential of the site, an excavation was required, which was carried out by Greenlane Archaeology in July and August 2008 (Greenlane Archaeology 2009). This project design covers the post-excavation analysis, publication, and research archive production to be carried out following the post-excavation assessment of the results of the excavation.

1.1.2 **Desk-based assessment results:** the desk-based assessment revealed that the site is situated at the north end of the medieval burgage plots running along the west side of Stricklandgate. The early maps showed that the far west side of the site had originally been open fields, and large parts of the rest of the area had been gardens, although it had gradually been built on during the 19th century. In the early 20th century many of the previous buildings were swept away prior to the construction of a garage, including those fronting Stricklandgate, and a succession of fuel tanks was installed along the street front. The site was still considered, however, to have a high potential for archaeological remains to be present, although the degree of disturbance from later buildings was considered likely to have affected their survival. Further work in the form of an archaeological evaluation was therefore recommended.

1.1.3 **Evaluation results:** the evaluation largely confirmed the results of the desk-based assessment; the area to the far west of the proposed development site was essentially devoid of any features of archaeological interest, with the exception of a large ditch, which seems to correspond to the position of a garden feature shown on 19th century maps. Similarly, a trench positioned perpendicular to Maude Street, although revealing some artefacts and a soil horizon of medieval date did not produce any significant remains. In the area immediately to the rear of properties along Stricklandgate, however, a considerable number of pits and other negative features containing large quantities of medieval pottery were encountered, one of which also contained well-preserved organic remains. Immediately adjacent to Stricklandgate the area was heavily disturbed by fuel tanks and modern services, but a stone built well, also of medieval date, was present.

1.1.4 **Excavation results:** the excavation was targeted on the area considered to be the least affected by modern disturbance and with most potential for containing preserved medieval remains. It revealed the extent of the remains encountered during the evaluation; these were largely concentrated on the southern side of the site, where a large number of pits and other negative features were present. The majority of these were probably rubbish or quarry pits, back filled with waste material, although linear features evidently representing plot boundaries were also present. These typically fell within two phases within the medieval period, the first spanning c1100-1400 the second from c1400-1700. Later features were also present including further pits and negative features but also a stone built structure that probably formed part of a metal workshop. Modern disturbance, particularly fuel tanks and building foundations, had damaged earlier remains in several areas, but it was clear that the northern half of the site had been considerably less densely occupied.

1.2 Greenlane Archaeology

1.2.1 Greenlane Archaeology is a private limited company based in Ulverston, Cumbria, and was established in 2005 (Company No. 05580819). Its directors, Jo Dawson and Daniel Elsworth, have a combined total of over 16 years continuous professional experience working in commercial archaeology, principally in the north of England and Scotland. Greenlane Archaeology is committed to a high standard of work, and abides by the Institute of Archaeologists' (IfA; formerly the Institute of Field Archaeologists (IFA)) Code of Conduct. The desk-based assessment and evaluation will be carried out according to the Standards and Guidance of the Institute of Archaeologists (IFA 2001).

2. Objectives

2.1 Analysis

2.1.1 To carry out the analysis recommended in the post-excavation assessment report.

2.2 Publication

2.2.1 To publish the results of the excavation, including all analysis, in a suitable journal or journals.

2.3 Research Archive

2.3.1 To select material for inclusion in the research archive and discard material that is considered to have no further potential for future research.

3. Methodology

3.1 Analysis of finds

3.1.1 **Medieval pottery:** undertake fabric and form analysis. As there is no established medieval fabric typology specifically for Kendal it will be necessary to establish a fabric series for the site, with full descriptions, and illustrate the forms present in order to facilitate the analysis and provide a record for future researchers. In addition, the more significant later medieval wares will be examined in terms of their stratigraphic relationship to the early post-medieval types, in order to answer specific questions about their chronological development and the relationship between them.

3.2 Publication

3.2.1 **CWAAS:** a suitable article covering the results of the evaluation and excavation, including all analysis, will be submitted for inclusion in the *Transactions of the Cumberland and Westmorland Antiquarian and Archaeological Society*. It will include illustrations of the forms of the medieval pottery, as well as plans showing the location and the features present on site. It is anticipated that this publication will comprise the following sections:

- c2,000 words covering the description of the results of the evaluation and excavation, including a summary, background to the project, description of the features and stratigraphy encountered, brief description of the finds and environmental remains, discussion of the results of the excavation, particularly the finds and phasing, and context of the results including a comparison with other excavations carried out in Kendal and additional information available in primary and secondary sources;
- c1,000 words describing the medieval pottery forms and ware types but without descriptions of the fabrics;
- 10 pages of illustrations including a general site location plan, a plan of the features encountered, and drawings of medieval and early post-medieval/transitional pottery, totalling c70 vessels.

3.2.2 **Journal of Medieval Ceramics:** the medieval pottery, including pottery from the medieval/post-medieval transition period, has been assessed as being of regional importance, and a suitable article should therefore be submitted for inclusion in *Medieval Ceramics*. It should include illustrations of the medieval and transitional pottery, and all relevant information on the fabrics. It is anticipated that this publication will comprise the following sections:

- c500 words covering the description of the results of the excavation, similar to that described above but without any detailed discussion, or consideration of the excavations in relation to other work in Kendal;
- c2,500 words describing the medieval pottery, including full fabric descriptions, comparison with similar material from other sites, and discussion with a particular emphasis on the stratigraphic relationship between the later medieval pottery and the early post-medieval pottery;
- 8 pages of illustrations of medieval and early post-medieval/transitional pottery, totalling c70 vessels.

3.3 Research Archive

3.3.1 **Finds:** it is intended that the medieval pottery, bone, and whetstone be transferred to Kendal Museum. The post-medieval pottery and clay pipe will also be offered to Kendal Museum but as they have very little space it is anticipated that they will not be able to take it. In this case it will be retained by Greenlane Archaeology, although the clay pipe would be offered to Peter Davey. All other material will be discarded or retained by Greenlane Archaeology.

3.3.2 **Samples:** the plant remains recovered from the flots and retents of the processed samples will also be offered to Kendal Museum. All other material recovered from the samples will be discarded.

3.3.3 **Archive:** the paper and digital archive from all stages of the project will be deposited in Cumbria Record Office in Kendal once the publication texts have been finalised.

3.4 Project Staffing

3.4.1 **Management:** the project will be managed by **Dan Elsworth (MA (Hons), AIFA)**. Dan graduated from the University of Edinburgh in 1998 with an honours degree in Archaeology, and began working for the Lancaster University Archaeological Unit, which became Oxford Archaeology North (OA North) in 2001. Daniel ultimately became a project officer, and for over six and a half years worked on excavations and surveys, building investigations, desk-based assessments, and conservation and management plans. These have principally taken place in the North West, and Daniel has a particular interest in the archaeology of the area. He has recently managed a wide variety of projects including desk-based assessments, building recordings of various sizes, watching briefs, evaluations, and excavations. He has managed and produced recent projects carried out by Greenlane Archaeology, including the excavation of a late 19th century steam corn mill (Elsworth and Whitehead forthcoming), and a watching brief on Castle Street, Kendal (Elsworth *et al* forthcoming).

3.4.2 **Publication research and text:** the archaeological publication will be written by **Sam Whitehead (BSc (Hons), MA)**, with assistance from the project manager and contributions from the specialists listed below as required. Sam graduated from the University of Liverpool in 1994 with an honours degree in Archaeology, and has more than seven years continuous professional experience in commercial archaeology, much of which was in a supervisory capacity. He has extensive experience of excavations, evaluations, and watching briefs, as well as report writing and illustration production. Recent relevant projects include the production of publications for excavations at the High Street Roman Road, Kentmere (Whitehead and Elsworth 2008a), Boroughgate, Appleby-in-Westmorland (Whitehead and Elsworth 2008b), and Stanley Street, Ulverston (Whitehead and Elsworth 2008c).

3.4.3 **Publication illustration:** the publication illustrations, including those of all pottery vessel forms, will be produced by Tom Mace.

3.4.4 **Finds analysis:** staff at Greenlane Archaeology, and Ian Miller, of OA North, will analyse the medieval pottery.

4. Work timetable

4.1 Following approval of this project design and exchange of contracts, Greenlane Archaeology will be available to commence the project on **15th June 2009**. It is envisaged that the project will involve tasks carried out in the following order:

- **Task 1:** analysis;
- **Task 2:** production of publication articles and illustrations;
- **Task 3:** submission of draft articles for comment, and preparation of research archive;
- **Task 4:** production and submission of final articles;
- **Task 5:** deposition of research archive.

5. Other matters

5.1 Health and Safety

5.1.1 Greenlane Archaeology carries out risk assessments for all of its projects and abides by its internal health and safety policy and relevant legislation. Health and safety is always the foremost consideration in any decision-making process.

5.2 Insurance

5.2.1 Greenlane Archaeology has professional indemnity insurance to the value of **£250,000**. Details of this can be supplied if requested.

5.3 Environmental and Ethical Policy

5.3.1 Greenlane Archaeology has a strong commitment to environmentally- and ethically-sound working practices. Its office is supplied with 100% renewable energy by Good Energy, uses ethical telephone and internet services supplied by the Phone Co-op, is even decorated with organic paint, and has floors finished with recycled vinyl tiles. In addition, the company uses the services of The Co-operative Bank for ethical banking, Naturesave for environmentally-conscious insurance, and utilises public transport wherever possible. Greenlane Archaeology is also committed to using local businesses for services and materials, thus benefiting the local economy, reducing unnecessary transportation, and improving the sustainability of small and rural businesses.

6. Bibliography

CHES (County Historic Environment Service), 2008 *Brief for an Archaeological Excavation at 130-136 Stricklandgate, Kendal, Cumbria*, unpubl

Elsworth, DW, and Whitehead, S, forthcoming *The Barrow Steam Corn Mill, 1870-1972*

Elsworth, DW, Whitehead, S, and Dawson, J, forthcoming *The Archaeology of Wildman Street, Kendal: its Development and an Assemblage of Medieval and Post-Medieval Artefacts*

Institute of Field Archaeologists (IFA), 2001 *Standard and Guidance for Archaeological Excavation*, revised edn, Reading

Greenlane Archaeology, 2008a *130-136 Stricklandgate, Kendal, Cumbria: Archaeological Desk-Based Assessment*, unpubl rep

- Greenlane Archaeology, 2008b *130-136 Stricklandgate, Kendal, Cumbria: Archaeological Evaluation*, unpubl rep
- Greenlane Archaeology, 2009 *130-136 Stricklandgate, Kendal, Cumbria: Archaeological Excavation*, unpubl rep
- LUAU, 2001 *Yard 110, Stricklandgate, Kendal, Cumbria: Archaeological Evaluation*, unpubl rep
- Newman, C, 2006 The Medieval Period Resource Assessment, in M Brennan (ed), *The Archaeology of North West England. An Archaeological Research Framework for North West England: Volume 1 Resource Assessment*, Archaeology North West **8**, Manchester, 115-144
- Newman, C, and Newman, R, 2007 The Medieval Period Research Agenda, in M Brennan (ed), *Research and Archaeology in North West England. An Archaeological Research Framework for North West England: Volume 2 Research Agenda and Strategy*, Archaeology North West **9**, Manchester, 95-114
- OA North, 2004 *Yards 110 and 112 Stricklandgate, Kendal, Cumbria: Archaeological Excavation Assessment Report*, unpubl rep
- Whitehead, S, and Elsworth, DW, 2008a Investigation of Part of the High Street Roman Road in Kentmere, *Trans Cumberland Westmorland Antiq Archaeol Soc*, 3rd ser, **8**, 241-246
- Whitehead, S, and Elsworth, DW, 2008b Medieval Remains on Boroughgate, Appleby, *Trans Cumberland Westmorland Antiq Archaeol Soc*, 3rd ser, **8**, 246-249
- Whitehead, S, and Elsworth, DW, 2008c A Medieval Road in Ulverston, *Trans Cumberland Westmorland Antiq Archaeol Soc*, 3rd ser, **8**, 250-254