



PENRITH NEW SQUARES, PENRITH, CUMBRIA

Archaeological Post- Excavation Assessment Report



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SUMMARY

In 2003, a planning application (planning ref 3/05/0954) was submitted for the redevelopment of land adjacent to Southend Road, Penrith, Cumbria (NGR centred NY 5160 2990). The Penrith New Squares development was to comprise the construction of retail, housing and leisure facilities on land formerly occupied by car parks, playing fields, and the Penrith Town football ground. The scheme was granted permission, with a number of conditions, including the undertaking of an appropriate programme of archaeological works. Accordingly, Oxford Archaeology North (OA North) was duly commissioned to undertake these specialist works to meet the requirements of Cumbria County Council's Historic Environment Service (CCCHES). Early stages of the archaeological programme comprised the completion of a desk-based assessment, and a trial-trench evaluation. These investigations demonstrated the presence of medieval and post-medieval archaeological remains within the development area and, accordingly, CCCHES issued a brief, in accordance with the planning guidance at the time, PPG16, now superseded by PPS5, for a programme of mitigation that would allow these remains to be preserved by record.

Between June and August 2008, OA North undertook the programme of mitigation across three specific areas. Area A, in the centre of the Southend Road carpark, was, in the first instance, subject to a strip and record exercise, in order to identify archaeological deposits and features so that they could be subsequently investigated in detail. Areas B and D were investigated by trenches located around the former Two Lions Inn. Although the CCCHES brief indicated that a scheme of post-excavation works should comprise an integral element of the archaeological programme necessary to discharge the pertinent planning condition, such works were never commissioned due to the insolvency of the original principal contractor in late 2008. This mantle has now been assumed by Sainsbury's Supermarkets Ltd, with the intention of revitalising the stalled development.

The majority of the activity from the site dates to the medieval period, which encompasses three chronologically distinct phases of activity. These include two large ditches, one of which may have been connected with the town defences, whilst the other may have been a canalised watercourse. Phase 1 activity on site appeared to start in the thirteenth century and was marked by a series of ditches, gullies and pits within Areas A and B, dated by small amounts of pottery. By the fourteenth century (Phase 2), two large ditches were seen to cross Area A from approximately east to west. Ditch **1013** was located in the south-western half of the site, whilst ditch **1018** emerged from the western limit of excavation, and displayed a distinct double right-angled bend. Both ditches were up to 5m wide, and showed evidence of rapid silting, being backfilled in the fourteenth century. This rapid silting, particularly in the case of ditch **1018**, might suggest that it was once a watercourse. A cobbled surface bordered by two parallel voids, which contained the remains of decayed wood, may have been a fording point, which would reinforce its interpretation as a watercourse. During this backfilling process, a boulder wall and cobbled surface were inserted along the length of ditch **1013**. This ditch may have been part of the town defences, mentioned in fourteenth-century documents. To the north of the ditches was a group of pits containing fourteenth-century pottery.

Phase 3 in Area A was initiated by the construction of building **1299** over the southern half of ditch **1018**. The structure comprised three wall foundations, of limestone boulders, to the north of which were the remnants of cobbled surfaces. Immediately to the north of structure **1299**, and in a very similar fashion, a second building, **1068**, had been constructed, also over ditch **1018**. Two ditches and several pits and postholes, and a potential occupation layer, were recorded in Area B.

The final phase (4) commenced in Area A with the accumulation of a soil horizon, which potentially marks a period of abandonment. Little activity was identified, and what there was comprised a red sandstone wall, **1107**, abutted by a sandstone culvert and trough, and a fragmentary cobbled surface.

In Area B, similar deposits demarcated the end of the medieval period. Gullies and pits were superseded by the construction of three buildings and a well. It is likely that all three buildings were connected with the Two Lions Inn, with the latest of the buildings being nineteenth century in date. The final activity on the site relate to the construction of Southend Road carpark during the twentieth century.

Overall, the majority of the data, which have been recovered from this regionally significant monument, have been assessed in this document as possessing excellent potential for further analysis, particularly in terms of the full integration of the results from each of the recent interventions, and their correlation with earlier investigations, including the 1990 excavation on the site of the market, and investigations in other Cumbrian towns such as Carlisle, Cockermouth and Kendal. Building surveys carried out on the Two Lions Inn and adjacent buildings will also supply important information. In each chronological phase, physical elements of the site (including the large ditches, structures and their component materials) can be analysed, as well as placing the results within a chronological, geographical, cultural, social and economic context, with particular reference to the the Anglo-Scottish wars which dominated the Northern counties in the fourteenth century. Such an understanding will be furthered by analysis of the artefacts, of which the pottery may prove to be an important regional assemblage, as well as the animal bone and palaeoenvironmental assemblages, many of which have potential for detailed analysis, especially as archaeobotanically medieval records west of the Pennines are sparse.

ACKNOWLEDGEMENTS

OA North would like to thank Bob Green of Henry Riley LLP for commissioning this phase of post-excavation work on behalf of Sainsbury's Supermarkets Ltd, who are funding the project.

The archaeological excavation was directed by Jeremy Bradley and Becky Wegiel, assisted by Paul Dunn, Clare Burke, John Griffiths, Nate Jepson, Annie Hamilton-Gibney, Harriet Locke, David Maron, Julian Thorley, Aidan Parker, Becky Pressler, Christina Robinson and Steve Tamburello. The report was compiled by Kelly Clapperton and Jeremy Bradley. Sandra Bonsall processed the environmental samples, and Elizabeth Huckerby assessed the plant remains. The finds were assessed by Jeremy Bradley (pottery) and Christine Howard-Davis (molluscs and all other finds categories); the animal bone was assessed by Andrew Bates. The drawings were produced by Mark Tidmarsh and Marie Rowland. The project was managed by Emily Mercer, who also edited the report. Quality assurance was provided by Rachel Newman.

1 INTRODUCTION

1.1 PROJECT BACKGROUND

- 1.1.1 In 2003, a planning application (planning ref 3/05/0954) was submitted for the redevelopment of land adjacent to Southend Road, Penrith, Cumbria (Fig 1). The Penrith New Squares development was to comprise the construction of retail, housing and leisure facilities on land formerly occupied by car parks, playing fields and the Penrith Town football ground. The scheme was granted permission with a number of conditions, including the undertaking of an appropriate programme of archaeological investigation. Accordingly, Oxford Archaeology North (OA North) was commissioned to carry out the necessary archaeological work to meet the requirements of Cumbria County Council's Historic Environment Service (CCCHES), in its capacity as advisor to the local planning authority, Eden Borough Council. Early stages of the archaeological programme comprised the completion of a desk-based assessment (OA North 2005a) and a trial-trench evaluation (OA North 2005b; 2007a). These investigations demonstrated the presence of medieval and post-medieval archaeological remains within the development area. In accordance with the planning guidance at the time PPG16 (DoE 1990), and now superseded by PPS5 (DCLG 2010), CCCHES issued a brief for a programme of mitigation that would allow these remains to be preserved by record.
- 1.1.2 Separate planning applications were submitted (planning reference 3/05/0957) to demolish the former laundry premises as part of the wider redevelopment scheme at Southend Road (planning reference 3/05/0954) in order to provide the main pedestrian access and link between the proposed scheme and Penrith's retail core. A planning application (planning reference 3/05/0956) was submitted for internal and external alterations to the The Two Lions Public House, and demolition of a nineteenth-century extension to the rear. In order to inform the planning decision and provision of listed building consent, and as a result of this second phase of work on the Two Lions, a third phase of detailed analysis and recording was recommended prior to and during the proposed alterations to the building (OA North 2006a). A specialist conservator was brought in to advise on conservation of the ornately decorated plaster ceiling (the conservation has still to be undertaken) and, subsequent to this, the ceiling was recorded by OA North. These investigations demonstrated that the The Two Lions Public House was late medieval in origin, with sixteenth-century alterations, including an ornate ceiling. In addition to the building recording work on the Two Lions, a programme of archaeological assessment at the former Sunlight Laundry Premises, Princes Street, was also undertaken (OA North 2006b). The former laundry premises were to be demolished as part of the wider plans to redevelop Southend Road.
- 1.1.3 Between June and August 2008, OA North undertook the programme of mitigation works across three specific areas (Fig 1). Area A, positioned across the centre of the Southend Road carpark, was subject to a strip and record exercise, in order to identify archaeological deposits and features so that they could subsequently be investigated in detail. Areas B and D were investigated by trenches positioned around the former Two Lions public house. Although the CCCHES brief indicated that a scheme of post-excavation works should comprise an integral element of the archaeological programme necessary to discharge the pertinent planning

condition, such works were never commissioned due to the insolvency of the original principal contractor in late 2008. This mantle has now been assumed by Sainsbury's Supermarkets Ltd, with the intention of revitalising the stalled development.

- 1.1.4 At the request of the client's (Sainsbury's Supermarkets Ltd) representative, Henry Riley LLP, a project design (*Appendix 1*) was compiled by OA North in 2010, which incorporated a full programme of archive consolidation and post-excavation assessment of the results of, which included the the fieldwork undertaken in 2008, together with the programme of building recording undertaken on the the Two Lions Inn and the Sunlight Laundry Buildings. The following document comprises the results of this assessment, and suggests a programme of aims and objectives for further post-excavation analysis.

1.2 SITE LOCATION, TOPOGRAPHY AND GEOLOGY

- 1.2.1 The proposed development site was situated to the south of Penrith town centre (Fig 1; NGR centred NY 5160 2990). The north-western and north-eastern limits of the site fronted Great Dockray and Princes Street, with the north-eastern portion lying within the town's Conservation Area. Area A was located towards the northern end of Southend Road carpark, Area B to the immediate south of the Two Lions Inn, and Area D to the immediately west. The site was relatively flat, lying at a height of approximately 130m AOD (Ordnance Survey 1995).
- 1.2.2 Penrith sits on the undulating, south-western edge of the Eden Valley, where the underlying geology comprises Penrith New Red Sandstone and mudstones of Permo-Triassic age. These are overlain by deposits of glacial till (Countryside Commission 1998, 40).

1.3 HISTORICAL BACKGROUND

- 1.3.1 **Introduction:** the historical and archaeological background presented below is not intended to be an exhaustive account, but an updated précis of that found in the desk-based assessment (OA North 2005a), which has been used to place the current excavations at Penrith New Squares within an archaeological and historical context.
- 1.3.2 **Prehistoric Period:** Penrith is situated within an area rich in prehistoric remains. Immediately to the south-west of the town's environs, at Eamont Bridge, are the henges of King Arthur's Round Table and Mayburgh, both thought to date from the Late Neolithic period or Bronze Age (Burl 1979; HER **23663**). Although no finds of prehistoric date have been recovered from the development site, remains in the vicinity include a Bronze Age cup-and-ring-marked stone (Frodsham 1989, 16-17; Cumbria County Council 2002, 4), and battleaxes of an uncertain prehistoric date (Cumbria County Council 2002, 4; Cumberland Pacquet 1818).
- 1.3.3 **Roman Period:** although only two coins dating to the Roman period have been recovered from Penrith (Cumbria County Council 2002, 5), the town lies near the junction of the main Manchester to Carlisle Roman road, which follows the current A6 to the west; and the east/west route that followed the A66 to the south-east (Margary 1957). This passes adjacent to the Roman fort and settlement at Brougham, further to the south-east (Shotter 1997, 35).
- 1.3.4 **Early Medieval Period:** there is no documentary evidence for a settlement in Penrith pre-dating the twelfth century, although the foundation of the church clearly pre-dates the Norman

Conquest, and it has been suggested that a major nucleated settlement, possibly fulfilling a number of 'urban functions', existed before this date (Winchester 1979, 5). It has been noted that the parish church of St Andrew's stands on a rounded eminence, with significant tenth-century monuments being preserved in the churchyard (Bailey and Cramp 1988), confirming its antiquity. It has also been tentatively suggested that a block of land, later known as Bishop Row, was an ancient area of church land (Winchester 1979). Moreover, the antiquity of the central area of the town can be further hinted at by the street name Burrowgate, which contains the Old English element *burh*, a fortified place, which may suggest a pre-urban fortified enclosure in the vicinity (*ibid*).

- 1.3.5 **Medieval Period:** the town was granted the right to hold a market and fair by Henry III in 1222 (*op cit*, 3). Urban expansion appeared to follow, with timber required for the construction of new burgages, shops and stalls. An Augustian Friary was recorded from 1299 which, by the time of the Dissolution, consisted of buildings, a garden and a graveyard (*op cit*, 7). By 1310, a survey of the vill of Penrith shows that the textile industry was important, with mention of a dye works and weaving shops (*op cit*, 3). However, during the first half of the fourteenth century, the town's position on a major route from Scotland into England meant that it suffered repeated depredation by Scottish raids. During a raid of 1345, it was recorded that all the villis in the liberty of Penrith were 'completely burnt, destroyed and wasted' (*ibid*). In the wake of this destruction, the town was granted a licence to erect a defensive wall around it. The walls were, evidently, still in use in 1391, when another grant of murage (a tax levied to pay for the cost of defensive town walls (Corèdon 2004, 1980) was made for their upkeep, and they were again mentioned in 1601 (Winchester 1979, 6). Despite these references, only a field name, Great Wall Head, given on the 1843 tithe map, appears to preserve any trace of the wall (*ibid*).
- 1.3.6 It was also during the late fourteenth and early fifteenth centuries that Penrith Castle and Hutton Hall (a defensive tower house to the north-east of the church) were constructed, both of which may have been built by William Strickland, Bishop of Carlisle (1400-19; Perriam 2008).
- 1.3.7 During the second half of the fourteenth century, William Strickland appears to have helped restore the town's fortunes, acquiring substantial areas within it that may have been destroyed by the Scots (Winchester 1979, 3). It would also appear that Strickland owned the plot of land occupied by the current site (Perriam 2008). Also, during the late medieval period, Penrith held many markets, each of which was used for a specific purpose (Clarke 1787, 15). These brought prosperity to the town, which led to an important phase of rebuilding that continued into the nineteenth century.
- 1.3.8 **Post-Medieval Period:** little can be said of the town's development during the sixteenth and early seventeenth centuries, although it was in this period that the Two Lions Inn, a Grade II* listed building (HER **25303**), was originally constructed in 1585 as a mansion house for Gerard Lowther (Pevsner 1967, 177; OA North 2006a). Despite plague and famine hitting the town during this period, causing much loss of life and suffering (Appleby 1978, 124; Winchester 1979, 4), by the seventeenth century its fortunes had recovered, and Penrith had the reputation of a thriving market town, one of the main centres in Cumberland (*ibid*). This precipitated a period of reconstruction in the town, which included, amongst others, the rebuilding of St Andrew's Parish Church in 1790 (Pevsner 1967); and The George Inn, which dates to the early eighteenth century (*ibid*).

- 1.3.9 The immediately vicinity of the development site is best characterised as a focus for later post-medieval industrial and leisure activity. This included a rope walk, mineral-water works, smithy, foundry and three timber yards (OA North 2005a), while the leisure aspect comprised two bowling greens, a common garden and orchard, a football ground and a cricket ground (*ibid*).

2 ORIGINAL AIMS AND OBJECTIVES

2.1 AIMS

2.1.1 The main aim of the archaeological investigation at Penrith New Squares, given the commercial nature of the development, was to characterise the level of preservation and significance of any sub-surface archaeological remains, and to provide a good understanding of their potential. The aims can be summarised as follows:

- to assess the nature, date, density, extent, function and state of preservation of archaeological remains;
- to preserve by record the surviving archaeological remains threatened by the development, in order to identify any phasing, and the development of the history and function of the outlined development site;
- to assess the potential of the material for answering questions about the development of land use during the medieval and post-medieval periods in the town;
- and, thereby, to assess the potential of the material to answer questions about Penrith and its townspeople's role within the wider region during these periods;
- to contribute to the corpus of medieval finds assemblages for the North West, and to contribute and to build on, the relative paucity of information of such small towns outside major urban centres;
- to investigate and identify the form and purpose of the large medieval ditches;
- to correlate knowledge of the Two Lions Inn from documentary sources with below-ground remains;
- to inform wider regional, national and period-based research frameworks.

2.2 OBJECTIVES

2.2.1 The following objectives were designed to preserve by record any archaeological deposits or features that would be impacted upon by the proposed construction. The work was undertaken in order to mitigate the impact of the development on any such archaeological remains:

- the excavation of three areas, Areas A, B and D, comprising an area equating to 3463m², in order to identify and investigate any archaeological deposits and features present;
- following completion of the fieldwork, the results were to be collated and the site archive completed in accordance with English Heritage's *MAP2, Appendix 3* (1991). A post-excavation assessment of the archive and the resource implications of the potential for further analysis will be undertaken. The stratigraphic data and the finds assemblage will be quantified and assessed, and the environmental samples processed, and a brief assessment of their potential for analysis made. The assessment results will be presented within a post-excavation assessment report, which will make recommendations for a schedule, timescale and programme of analysis in accordance with *MAP2, Appendix 4 (ibid)*;

- a provisional programme of post-excavation analysis will be compiled. The extent of the programme, however, can only be reliably established on completion of the post-excavation assessment report. The proposed programme anticipates both analysis of the site stratigraphy and the artefactual/ecofactual evidence, leading to the production of a final report;
- it is anticipated that the results of the excavation will be worthy of publication. If possible, the publication text will be prepared in a suitable form for inclusion as a journal article in the *Transactions of the Cumberland and Westmorland Antiquarian and Archaeological Society*.

3 SUMMARY RESULTS OF THE ARCHAEOLOGICAL INVESTIGATIONS

3.1 INTRODUCTION

3.1.1 The excavations comprised three separate areas, with the largest being Area A, situated across the centre of the Southend Road carpark, whilst Areas B and D were located to the rear (south-east) of the Two Lions Inn (Fig 1). The preliminary results, from each of the investigations undertaken during the project, are summarised below. Four broad chronological phases of activity were recognised, all but the last of which relate to the major structural phases:

- Phase 1, medieval: late twelfth-thirteenth century
- Phase 2, medieval: thirteenth-fourteenth century
- Phase 3, medieval: fourteenth-fifteenth century
- Phase 4, post-medieval period: eighteenth century onwards

3.2 AREA A: EXCAVATION RESULTS

3.2.1 **Early Remains:** no finds or features pre-dating the medieval period were identified during the excavations in Area A.

3.2.2 **Phase 1, Medieval:** the earliest features investigated across the site comprised three small gullies (**1015** and **1007** and **1270**; Fig 2). Gullies **1015** and **1007** were parallel, aligned north-east/south-west across the south-western half of the development, whilst **1270** (Plate 1) was aligned north-west/south-east, to the north of a central baulk. The gullies measured 0.5-1m in width, and 0.48-06m in depth, and were all filled with naturally accumulated sediments. To the north of gully **1015**, a small section of heavily-truncated ditch (**1125**) was observed, which extended east/west from the central baulk, and measured more than 0.5m in width and 0.1m in depth. Immediately to the south of (**1125**) was a series of three pits, **1099**, **1101** and **1122**. These each measured between 1.1m and 1.85m, to 1.5m by 2m in width, and 0.37m to 1.05m in depth. Pits **1099** and **1101** had been deliberately backfilled, while pit **1122** had silted-up naturally. Several pits were also identified north of the central baulk: pit group **1026** to the south-west of gully **1270**; and, abutting the eastern limit of excavation, three further pits, making up group **1042**. Any additional features that may have dated to this first phase had most probably been removed by later activities across the site.



Plate 1: South-west-facing section through ditch 1018, gully 1270 and putative Phase 3 wall 1023

- 3.2.3 **Phase 2, Medieval:** a second phase could be defined by the presence of two very large ditches, **1013** and **1018** (Fig 3). Ditch **1013** (Plate 2) extended for 30.9m, in an approximately east/west direction across the south-western corner of the site, and measured between 2m and 4.95m in width, and 0.67m to 0.85m in depth.



Plate 2: Ditch 1013 during excavation, showing also wall 1163 and cobbled surface 1352, looking north-eastwards



Plate 3: *South-west-facing section through ditch 1018, truncating pit group 1026 to the east*

- 3.2.4 To the north and east lay ditch **1018** (Plates 1 and 3). It emerged from the western limit of excavation, extending north-east for 29m, where it dog-legged to the south-east for 20m. From this point it turned to the east for 31.15m, before exiting the site through the eastern limit of excavation. The ditch measured 2.48-5m in width, and 0.58-0.7m in depth. In the southern return, an unusual feature was identified, comprising two parallel voids, **1261** and **1262**, which produced decayed fragments of wood from their basal deposits; between these was a layer of cobbles, **1245**, bedded into the natural geology at the base of the ditch. This was a discrete feature and not observed in the slots excavated on either side.
- 3.2.5 Both ditches showed evidence of rapid silting by both colluvial and alluvial sediments. In ditch **1013**, some of these early deposits had been truncated by the excavation of a construction cut for wall **1163** (Section 3.2.10; Plate 2). This wall was constructed along the southern edge of the ditch, and comprised large- to medium-sized limestone and granite boulders in a drystone bond, with smaller, waterworn pebbles utilised as packing. This was abutted to the north, and extending along the length of the ditch, by cobbled surface **1352** (Plates 2 and 4).



Plate 4: Wall **1163** and cobbled surface **1352**, adjacent to ditch **1013**, looking north-eastward

- 3.2.6 To the north-east of ditch **1018**, a group of pits was excavated, **1044**, from which fragments of medieval pottery were recovered. To the south-east of these pits, extending beyond the eastern limit of excavation, a putative hearth was identified, **1144**, which also produced fragments of medieval pottery.
- 3.2.7 Towards the end of Phase 2, and once the majority of ditch **1018** had either silted up or been deliberately backfilled, a series of ditches was excavated, **1351** (Fig 4). These created two very small parcels of land. The southernmost extended beyond the limit of excavation, but the northern was still intact, and measured approximately 3m². The ditches themselves were quite wide, being 1.62m to 2.3m, but not particularly substantial, as they were not very deep, only 0.35m to 0.6m in depth. Like the earlier larger ditches, **1013** and **1018**, group **1351** rapidly silted up with colluvial and alluvial sediments.
- 3.2.8 **Phase 3, Medieval:** this phase was initiated by the construction of building **1299** (Fig 4; Plate 5) over the southern half of ditch group **1351**. The structure comprised two surviving construction cuts, **1309** and **1318**, and wall foundations constructed of limestone boulders; (**1280** and **1282** to the north, **1037** to the west, and **1349** to the east). To the north of the building were the remnants of cobbled areas, **1157** and **1337**, which may relate to external surfaces contemporary with the structure. Much of the building had been heavily disturbed by later activities, although some potential internal surfaces were identified (**1312** and **1341**). To the south, **1299** was obscured by the edge of the excavation. Gully **1134**, located to the north-

west, extended roughly north-east/south-west from the central baulk for 23.68m, before petering out. It was less than 1m in width, only 0.48m in depth, and was filled with naturally accumulated sediments. The feature was surrounded by the remains of a putative cobbled surface, **1135**, which may have been associated with buildings to the east. Immediately to the north of building **1299** was a small drainage gully, **1019**. It emerged from the central baulk and extended east/west for roughly 15.85m, before kinking slightly and continuing north-east/south-west, cutting **1134** as it terminated to the west. For much of its length it followed the centre of ditch **1018**, and it also respected the northern extent of **1299**. Close to this building, it seems possible that gully **1019** was reused during later periods, as it took the form of a rudimentary culvert, **1040**, which produced post-medieval finds; to the east, however, it underlay later medieval activity and was filled with naturally accumulated sediments that produced only medieval pottery.



Plate 5: Building **1299**, overlying ditch **1351**, looking westwards

- 3.2.9 Further to the north-west, another fragment of drystone walling, **1023** (Plate 1), was observed, cutting into the top of ditch **1018**, which was abutted by cobbled surface **1266**. Their function is difficult to ascertain, as they had been heavily disturbed, and the majority extended beyond the northern limit of excavation.
- 3.2.10 In the south-western corner of Area A, a robber trench, **1353**, was observed cutting the southern edge of ditch **1013**. It was most probably excavated to remove stone from wall **1163** (Section 3.2.5), and had been filled with a mixture of deliberately deposited backfill, material slumped from the surrounding deposits, and naturally accumulated sediments.
- 3.2.11 The latest activities that can be attributed to Phase 3 were the construction of building **1068** (Plate 6) and the excavation of gully **1134** (Fig 4). Building **1068** was located above ditch **1351**, immediately to the north of building **1299**, and partially truncated its northernmost wall, **1280**.

It was constructed in a very similar fashion to **1299**, and comprised construction cut **1311**, and the remnants of two limestone boulder foundations, **1064** to the west, and **1065** to the north. The remaining walls had been wholly removed by robbing and later activity. A substantial fragment of internal cobbled surface, **1066**, extended over much of the area.



Plate 6: Building **1068** (foreground), with a fragment of cobbled surface **1066** in the centre, and the remnants of building **1299** (background), looking south-east

- 3.2.12 **Phase 4, Post-Medieval:** the latest phase was clearly defined by the accumulation of a soil horizon, **1354** (Fig 5), which potentially marked a period of abandonment. Towards the eastern side of the site, however, positioned above the easternmost end of ditch **1018**, some activity was identified. This comprised the construction of a red sandstone wall, **1107**, which survived to five courses in height in places, although only a width of 1.34m projected from the edge of the excavation. This was abutted to the west by a sandstone culvert, **1052**, beneath a sandstone trough, **1063**, which measured 1.37m by 0.7m by 0.41m. To the north of these features, a fragment of a cobbled surface, **1059**, survived and was most possibly associated with them.
- 3.2.13 The latest activities related to the construction of Southend Road carpark during the twentieth century. Numerous layers of levelling were deposited across the area, including, in stratigraphical order, **1003**, **1277**, **1278**, **1022=1339**, **1021** and **1002**, which were subsequently sealed by tarmac **1001**.

3.3 AREA B EXCAVATION RESULTS

- 3.3.1 **Early Remains:** no finds or features pre-dating the medieval period were identified during the excavations within Area B.
- 3.3.2 **Phases 1-2, Medieval:** the earliest activities identified were several gullies and a cluster of small pits. The gullies generally followed the same alignment, north-east/south-west, and were similar in form. To the north-east, parallel gullies **3052** and **3064** (Fig 6) projected from the

limit of excavation for 7.33m and 5.29m respectively. Immediately to the west were two shorter, parallel lengths of gully, **3083** and **3087=3068**, and to the north-west, gullies **3133=3137** and **3127=3129**. The gullies ranged from 3.46m to 1.92m in length, 0.9m to 0.42m in width, and 0.1m to 0.32m in depth; and all were filled with naturally accumulated sediments. It was likely that gullies **3052** and **3064** were open throughout the medieval activity on the site, as they appeared to be undisturbed until Phase 4.

- 3.3.3 To the south of gullies **3083** and **3087=3068** were two intercutting pits. The earliest, **3091**, measured 0.53m in diameter, and 0.3m in depth, and was filled with accumulated silts. The pit had been truncated by pit **3093**, which was 1.16m by 0.75m by 0.82m, and also filled with naturally accumulated sediments.
- 3.3.4 **Phase 3, Medieval:** the latest phase of medieval activity comprised the excavation of a ditch, (**3143**), which had been recut subsequently (**3145**; Fig 7), several pits and postholes, and a potential occupation layer, **3040**. Ditch **3143** extended to the south-west for 1.7m from the north-eastern limit of excavation, before terminating. It measured more than 0.64m in width, 0.56m in depth, and had been deliberately backfilled with rubble-rich material. It was later recut by ditch **3145**. This also extended north-east/south-west from the trench edge, and extended for more than 1.18m, being filled with naturally accumulated sediments. It may still have functioned into the post-medieval period.
- 3.3.5 Towards the western limit of the site, a gully was identified, **3148**. It was aligned north-west/south-east across the development, truncating gullies **3133=3137** and **3127=3129** (Fig 6, Phase 2). It was quite an insubstantial feature, being only 0.26m wide, and between 0.12m and 0.17m in depth, and had silted up naturally.
- 3.3.6 To the east of **3148**, four postholes and six pits were identified. (Fig 7), the six pits being concentrated along the southern edge of the site. Pit **3099** was cut into the top of pit **3093**, and was partially obscured by the limit of excavation. It measured 1.16m by 0.67m by 0.63m, and had been deliberately backfilled with a rubble-rich deposit. Immediately to the east was a shallower pit, **3097**, which measured 1m by 0.74m by 0.12m. It was filled with naturally accumulated silts that produced a fragment of medieval pottery. Surrounding this, from west to east, was a series of four pits, **3070**, **3062**, **3050** and **3060**. Each measured 0.56m in diameter to 1.2m by 0.5m, and from 0.1m to 0.27m in depth. Three of the pits (**3070**, **3050** and **3062**) had been backfilled with rubble-rich deposits, and medieval pottery was recovered from pits **3070** and **3062**. Pit **3060**, however, had filled with naturally accumulated silts, but also produced fragments of medieval pottery.
- 3.3.7 The postholes, **3131**, **3085**, **3089** and **3066**, were situated mainly to the north and west of the pits, and measured between 0.17m and 0.57m in diameter, and 0.05m to 0.2m in depth. No obvious structure or relationship between them could be ascertained. The remains of a putative occupation layer, **3040**, was observed, and most likely dated to this phase; it produced fragments of animal bone and medieval pottery.
- 3.3.8 **Phase 4, Post-Medieval:** the post-medieval period was clearly separated from medieval activity by a series of levelling deposits that were laid across much of the area, including **3121**, **3039**, **3113** and **3014**. Cutting these levelling deposits was a possible gully, **3010** (Fig 8), which extended roughly east/west across the site, and measured 0.77m in width and 0.26m in depth. It

had been deliberately backfilled with a mixed silty-sandy-clay material.

- 3.3.9 Pit **3109**, situated towards the north-east corner of the development, measured 0.7m by 0.4m by 0.55m, and was used primarily for an animal burial, **3108**. It subsequently silted up before being cut to the south by gully **3102=3116**. To the west, a second pit was identified (**3054**). This measured 0.76m in diameter and 0.14m in depth, and was filled with naturally accumulated sediment. To the immediate north-east of pit **3109** was the remains of a posthole, **3104**. It measured 0.3m in diameter and 0.2m in depth, and had been deliberately backfilled. It was an isolated feature with no obvious function.
- 3.3.10 Three small gullies were observed in the north-east part of the site. Two of the gullies, **3102=3116** and **3058**, projected from the eastern limit of excavation, and were parallel, aligned east/west, for approximately 5m, before terminating. Gully **3056** began between the two termini, and again extended east/west before disappearing under the northern edge of the site. All three gullies were similar in form, ranging from 0.7m to 0.6m in width, and 0.4m to 0.2m in depth, and all had silted naturally.
- 3.3.11 To the south of gully **3010**, a large pit was identified (**3078**). It measured 1.6m by 0.9m by 0.74m, and contained a very large glacial erratic, **3081**. Whether the stone had been placed there deliberately, or the excavation was an abortive attempt to remove it, is unclear. The pit had been subsequently backfilled with material from the surrounding area.
- 3.3.12 Three buildings were subsequently constructed in the same area: **3049** to the south, **3072** on the east side of Area B, and **3073** in the northernmost corner of the area. Structure **3049** comprised three sandstone walls: **3020** forming the western and north-western walls, **3002** the north-eastern, and **3004** a central north-south wall, dividing the building into two rooms. The walls survived to between two and five courses, and ranged from 1m to 1.42m in width, all being bonded with lime mortar. What was revealed of the building measured 1.5m by 3m. A robber trench, **3047**, suggested that the building had been disturbed subsequent to its use, and it was likely that sandstone flagged floor **3003** dated to the final phase of **3049**.
- 3.3.13 Building **3073** was constructed over gullies **3116=3102** and **3058**, and comprised wall **3074** to the west, and **3075** to the south. The walls were constructed from a mix of roughly hewn sandstone blocks and limestone boulders, and had been bonded with a light lime mortar. They survived up to two courses in places, and measured between 0.53m and 0.63m in width. The whole structure measured more than 3.86m by 3.91m. Internally, a possible earth floor was observed, **3076**, and a sandstone-lined box, **3082**, abutted wall **3075**. A small area of flags, **3077**, was uncovered to the south of **3073**, and was most likely the remnants of an external surface associated with the building. Wall **3072** appeared to be that of an extension constructed to the south of the original structure, and comprised two roughly hewn sandstone walls, **3015** to the west and **3016** to the south. They survived to only one course, and were bonded with a friable sandy-mortar. The structure measured 2.67m by 1.59m, and had been heavily disturbed by later activities. It was likely that putative well **3029**, situated between the two building complexes (**3049** and **3073**), was contemporary.
- 3.3.14 The final phases across Area B included the construction of the extension to the Two Lions Inn, comprising parallel walls **3006** and **3150**, which was demolished in advance of the archaeological works; and the levelling of the area to provide access to Southend Road carpark.

This consisted mainly of demolition layers **3018** and **3041**, and hardcore sub-base, **3035**, sealed by tarmac **3034**.

3.4 AREA D EXCAVATION RESULTS

3.4.1 Natural gravelly geology, **2002**, was located at 0.5m. This was overlain by silty-sandy subsoil, **2001**, which was 0.2m thick, and a dark silty-sand topsoil, **2000**, which was 0.3m thick. The remains of the recently-demolished nineteenth-century extension for the Two Lions Inn was observed in the south-western corner, and a corner of an earlier evaluation trench (Trench 16; OA North 2007a) projected from the western limit of excavation. No further features or deposits of archaeological interest were identified within this trench.

4 MATERIAL ASSESSED

4.1 INTRODUCTION

4.1.1 The entire paper and material archive was examined for the purposes of this assessment. Quantifications are incorporated within the individual assessments. The method of assessment used varied with the class of information examined, although in each case it was undertaken in accordance with guidance provided by English Heritage in *Management of Archaeological Projects, 2nd edition* (English Heritage 1991). All classes of finds were examined in full, with observations supplemented by the records generated during the course of the fieldwork and maintained within the project archive. Quantifications are incorporated within the individual assessments.

4.2 AIMS AND OBJECTIVES

4.2.1 The aim of the assessment was to evaluate all classes of data from the investigations, in order to formulate a project design for a programme of further analysis appropriate to the potential demonstrated by the site archive. A statement of the significance of the results from each element of the archive is given below. These statements are based on the assessment work undertaken, related to the original academic themes defined in *Section 2*. The quantification and assessments represent an amalgamation of the total body of work carried out in 2008.

4.2.2 The objectives of this assessment correspond to Appendix 4 of *Management of Archaeological Projects, 2nd edition (ibid)*. They are:

- to assess the quantity, provenance and condition of all classes of material: stratigraphical, artefactual and environmental;
- to comment on the range and variety of that material;
- to assess the potential of the material to address questions raised in the course of the project;
- to formulate any further questions arising from the assessment of the material.

4.2.3 This assessment will present:

- a factual summary, characterising the quantity and perceived quality of the data contained within the site archive;
- a statement of the academic potential of the data;
- recommendations for the storage and curation of the data.

4.3 STRATIGRAPHIC DATA

4.3.1 **Quantification:** the paper archive represents a percentage of the overall data gathered during the course of the excavation. In total, 508 contexts were recorded (Table 1), ranging from extensive modern overburden to small gullies (see *Section 3* and *Appendix 3*).

Category	Quantity
Context records	508
Black and white films	17
Digital photographs	327
Section drawings	92
Plan drawings	74
Environmental samples	27
Total finds	1351

Table 1: Summary of documentary archive

4.3.2 **Assessment:** the excavation has produced a body of evidence, which has the potential to enable a full characterisation and recording of both natural deposits and archaeological remains identified within Areas A, B and D (Fig 9). From the remains, four broad but distinct phases of activity have been identified, potentially beginning in the twelfth/thirteenth century and ending with modern remains:

Phase 1 The medieval period, late twelfth-thirteenth century

Phase 2 The medieval period, thirteenth-fourteenth century

Phase 3 The medieval period, fourteenth-fifteenth century

Phase 4 Post-medieval period, eighteenth century onwards.

4.3.3 The majority of the contexts date to the medieval period, which itself encompasses three chronologically distinct phases of activity. These include two large ditches, one of which may have been connected with the town defences, whilst the other may have been a canalised watercourse. Other features include pits and gullies, and the remains of five buildings of medieval date, whilst three buildings found in Area B were connected with the later post-medieval use of the Two Lions Inn, associated with a well. It may be possible to refine the phasing further when a study of the dating of individual contexts has been undertaken during the analytical stage of the post-excavation programme.

4.3.4 The Penrith New Squares development also involved a programme of building recording on the Two Lions Inn and the Sunlight Laundry buildings. The desk-based assessment (OA North 2005a) and subsequent building recoding of the Two Lions Inn revealed a building of reasonably high status dating to the late medieval period (OA North 2005c). The continued development of the structure saw more accommodation and decoration added in the sixteenth century, including the ornately decorated ceiling which survives to this day, and the culmination of the medieval plan achieved by the insertion of a screens passage (OA North 2006a; OA North 2011). The Sunlight Laundry buildings, which were demolished as part of the wider redevelopment scheme at Southend Road, also revealed a buildings sequence that started in the late medieval period and continued into the nineteenth century (OA North 2011).

4.3.5 Two shop fronts had been inserted, probably in the nineteenth or early twentieth century, and had partly removed evidence pertaining to a previous use for the buildings. The evidence remaining (such as blocked windows) suggested that numbers 9-10 were probably domestic dwellings prior to being absorbed into the laundry complex. Other buildings which were part of

the overall complex were observed to be freestanding structures and were dated to the early nineteenth century. Many of the buildings were demolished prior to the commencement of the watching brief, which limited the scope of the results and only the rears of numbers 9-12 were inspected (OA North 2006B).

- 4.3.6 **Potential:** the stratigraphic and structural data will provide the framework within which all other analyses will take place. The excavations have allowed a complete stratigraphic record to be made of the site from the medieval period to the present day. The key to understanding the chronology of this site resides with the stratigraphic record which, coupled with information derived from the analysis of the finds forms the most significant potential, particularly key groups, such as ceramics, coins and glass, will be able to refine the phasing further.
- 4.3.7 Moreover, the origin of small towns, and settlements which in the medieval period supported village markets, is obscure. Most first appear in the historical record during the later twelfth or thirteenth century. Although Penrith is used as a territorial name from the middle of the twelfth century, it is not until 1222, when the king granted a market and fair to the town, that any urban status can be implied (Winchester 1979, 3). Furthermore, the role of small towns, and their origins, role, nature, character and function, has been highlighted as a part of national and regional research themes. In particular, it has been highlighted that more work needs to be undertaken upon town defences in the region. This is especially true in the North West, where it is thought that few towns other than Carlisle and Chester had town defences (Newman and Newman 2007, 102, 104). Documentary evidence from Penrith has indicated that, due to the ever-present threat of Scottish attack, walls were constructed to defend the town (Winchester 1979, 4).
- 4.3.8 Towns have also been seen as centres of consumption, central to placing them in broader cognitive landscapes. Consumption is, at least in part, a social construct and, hence, patterns of consumption may not simply be a function of population size or daily calorie requirements (Newman and Newman 2007, 104). The excavations conducted at Penrith New Squares have the potential to address these themes, which can then be compared to evidence from excavations from Cockermouth, Kendal and Carlisle (Leech and Gregory forthcoming; Newman forthcoming; Green Lane Archaeology 2009; Giocco 2011; Zant *et al* 2011).
- 4.3.9 Following the collapse of funding for the original scheme, work on the Two Lions Inn was stopped and many of the recommendations made following the completion of the enhanced documentary study and Level 3-type survey of the Two Lions have still to be undertaken. The work on the Sunlight Laundry Buildings has been reported on and there are no outstanding requirements relating to it.

4.4 PHOTOGRAPHIC AND DIGITAL DATA

- 4.4.1 **Photographic data:** in all, the archaeological excavations produced 17 black and white films, and 327 digital photographs (Table 1).
- 4.4.2 **Survey and Plan Data:** a 5m grid was laid across the site, and each feature was subject to plan and section drawings, which were then located within this grid. The grid, and the extent of the features identified and investigated across the site, were surveyed using a combination of techniques using a Leica 1200 series GPS, and Leica 407 series TST, which were subsequently

downloaded as shapefiles into a CAD programme.

4.4.3 **Assessment:** the photographs and digital data are an invaluable aid in all aspects of post-excavation analysis. They provide a general and detailed pictorial record of the site throughout all phases of its excavation.

4.4.4 **Potential:** the photographs and digital data will be able to add valuable analytical and illustrative material to the final report and publication.

4.5 THE MATERIAL EVIDENCE: INTRODUCTION

4.5.1 In all, 1430 fragments of artefacts and ecofacts were recovered during the investigation (Table 2). These have been assessed in related groups.

Category	Number of Pieces
Pottery	911
Clay tobacco pipe	159
Metalwork	93
Vessel and window glass	205
Other objects	42
Marine molluscs	20

Table 2: Finds assemblage by category

4.6 MEDIEVAL AND LATER POTTERY

4.6.1 **Quantification:** some 911 sherds of medieval and post-medieval pottery were collected from 140 stratified contexts during the evaluation and excavation phases, or were unstratified. Of these, 87 contexts produced exclusively medieval pottery. The pottery was, for the most part, in good condition, with little of it abraded, although there were few large fragments, and, unusually, very few diagnostic sherds. The number of sherds per context was generally quite low, with only four medieval contexts (pits **1141** and **1213** (fills **1142** and **1215**) and layers **1151** and **1241**) producing ten or more. Pit fill **1215** was exceptional in yielding 84 fragments, but they are all probably from the same vessel.

4.6.2 **Assessment:** a preliminary assessment established five main medieval fabric groups, of which the most frequently occurring was Partially Reduced Greyware. Material from excavations in Penrith Market (Newman *et al* 2000, 122) suggests a date range of the thirteenth to fourteenth centuries for this fabric. A later tradition seems to have been Northern Reduced Greyware dating, in Penrith, to the fourteenth to early seventeenth centuries. Smaller quantities of Gritty and Sandy wares were also present, with the best represented being orange Sandy ware, which appears to have been largely absent from the excavation at the market site (*ibid*). It is, however, probably broadly contemporary with the Buff Sandy ware found at the market site, and would thus date to the thirteenth and fourteenth centuries. In addition, it does not seem to be contemporary with the Northern Reduced Greyware. Unusually, Red Gritty ware, which formed some 25% of the assemblage from the market (*ibid*), was largely absent from this site, represented by less than half a dozen sherds in all.

- 4.6.3 The presence of Red Gritty ware, albeit in small amounts and always residual in its context, suggests some undefined twelfth/thirteenth-century activity, and the presence of Buff Sandy ware and the orange Sandy ware would seem to suggest that deposition began sometime in the thirteenth century. However, the mixed nature of the finds from Phase 1, which include both Northern Reduced Greyware and Partially Reduced wares, would indicate that the main focus of activity lay in the thirteenth and fourteenth centuries. The former is part of a fairly wide northern tradition, with very similar fabrics being seen in Carlisle (McCarthy and Brooks 1992, 36).
- 4.6.4 Given the almost complete absence of pottery from the sixteenth and seventeenth centuries, there would appear to have been a break in activity during that period, although it should be pointed out that pottery of this date is scarce in the region, other than from high-status sites (McNeil and Newman 2006, 157).
- 4.6.5 The post-medieval pottery was generally eighteenth- to nineteenth-century in date, with only a single context, ditch **1033** (upper fill **1025**), producing sixteenth- or seventeenth-century material, in the form of a single sherd of Cistercian-type ware. Only ten contexts produced material dating to the eighteenth century, comprising a group of what might be seen as typical wares for the period, and including white salt-glazed stonewares, Blackwares, slip-coated wares, agate wares, Staffordshire-type slipwares, and creamwares. Later material included industrial slipwares, and transfer-printed refined white earthenwares, both more typical of the nineteenth century. Unusual fabrics included a single sherd of Westerwald stoneware from well **2029** (upper fill **3030**), and two sherds of Sgraffito ware, one from the foundation cut of the same well (fill **154**, seen during the evaluation), the other from Phase 4 demolition layer **3018**. Given that it was associated with eighteenth- and nineteenth-century material, the Sgraffito ware is unlikely to be Werra ware, an unusual sixteenth-seventeenth-century German earthenware seen in the market assemblage (Newman *et al* 2000, 123), and could be either a later Staffordshire product, or from North Devon.
- 4.6.6 **Comparative material:** the only other large-scale excavation in Penrith took place on the market site in the centre of the town (Newman *et al* 2000), which produced a similar quantity of medieval pottery and has been used as basis for comment on the present assemblage (*op cit*, 19-23). Many of the fabrics found at Penrith Market and at New Squares are comparable with those from Carlisle (*op cit*, 119). The representation of individual fabrics varies between the two sites, however. At Penrith Market, much of the material was recovered from medieval garden soils, and showed a bias toward the twelfth-thirteenth century, whilst at New Squares, it seems likely that significant activity started later, in the thirteenth or fourteenth century. The eighteenth- and nineteenth-century material from New Squares reflects broad trends in the region as a whole, and can be compared to data from several other Cumbrian towns (eg Bradley and Miller 2009; Leech and Gregory forthcoming; Newman forthcoming; Green Lane Archaeology 2009; Giocco 2011; Zant *et al* 2011).
- 4.6.7 **Potential:** it is clear that the medieval pottery assemblage has excellent potential to provide a chronological framework for the contemporary structures, and other features identified during the course of the excavation. Comparison with the other published pottery from the town will enhance this significantly, perhaps allowing some speculation on the development of the settlement, seemingly spreading outwards from a central focus based on the church area in the

twelfth-thirteenth centuries.

- 4.6.8 The presence of relatively large amounts of medieval pottery from the site has significant potential for refining the dating and understanding of the pottery tradition in Penrith, and adding to the current scant understanding of pottery supply in medieval Cumbria. A number of pottery sherds from the assemblage exhibited sooting, which may offer the potential for radiocarbon assay, which, when combined with those samples recommended for radiocarbon assay from the environmental material (*see* Table 4), have the potential to refine the sequence further.

4.7 CLAY TOBACCO PIPE

- 4.7.1 **Quantification:** in all, 178 fragments of clay tobacco pipe were recovered, from 27 contexts and unstratified, with only seven contexts (topsoil *100*, wall *154*, subsoil *241*, from the evaluation, construction cut backfill *3008*, demolition layers *3017* and *3018*, and clay lining *3031*) producing more than three fragments (Table 3). All were examined for the purpose of this assessment and an outline catalogue created.

Context no	No stem fragments	No bowl fragments	Date
<i>100</i>	14	4	Three stamped bowls; 1660-80
<i>110</i>	1	1	
<i>151</i>	0	1	Nineteenth century
<i>152</i>	3	3	
<i>154</i>	7	7	
<i>157</i>	1	1	
<i>195</i>	1	0	
<i>241</i>	18	3	1610-40; one stamped stem, eighteenth century
<i>253</i>	1	0	
<i>346</i>	1	0	
<i>352</i>	2	0	
<i>410</i>	2	0	
<i>454</i>	1	0	
<i>1019</i>	1	0	
<i>1030</i>	0	1	
<i>1035</i>	0	1	Nineteenth century
<i>1058</i>	1	0	
<i>1251</i>	1	0	
<i>3005</i>	3	0	One stamped stem, nineteenth century
<i>3008</i>	13	0	
<i>3017</i>	7	0	

3018	8	2	Seventeenth century, nineteenth century
3023	1	0	
3030	2	0	
3031	15	3	Late nineteenth – early twentieth century
3036	1	0	
3059	1	0	
Unstratified	31	7	
Totals	144	34	

Table 3: Distribution of clay tobacco pipe fragments

4.7.2 **Assessment:** only 22 of the fragments derived from potentially datable bowls. It must, however, be noted that seven of these were unstratified, and the remainder derived from disturbed contexts, which much reduced their usefulness in dating. The earliest bowls (from subsoil **241**) can be dated to the first half of the seventeenth century, but most are clearly considerably later, dating mainly to the nineteenth, and perhaps even the early twentieth, century.

4.7.3 **Potential:** the bowls and stamped stem fragments will contribute to dating the contexts from which they have been recovered, but otherwise the tobacco pipe will contribute little to an understanding of activity on the site.

4.8 METALWORK

4.8.1 **Quantification:** 93 fragments of metalwork were recovered, which included 18 of copper alloy (including coins) from 12 contexts and unstratified, 68 of iron (from 34 contexts), and six of lead from two contexts and unstratified, as well as a single modern object of unspecified base metal. Their condition varies considerably, with the copper alloy and lead in fair to good condition, whilst the ironwork is extremely poor and highly fragmentary. All were examined for the purpose of this assessment and an outline catalogue created. All metalwork was x-rayed but, as a result of its condition, it is felt that this has not significantly aided the identification of items of ironwork.

4.8.2 **Assessment:** there are six coins amongst the copper-alloy objects, three of which were unstratified. A halfpenny of George VI (dated 1938) was from topsoil **100**, a possible Irish issue penny of probable eighteenth-century date from Phase 2 hearth **1144** (fill **1155**), and a possible farthing of Victoria from levelling layer **3023**. The latter seems unfinished, or might be a token rather than a coin. Unstratified coins are a shilling of George VI (dated 1945), a decimal halfpenny of Elizabeth II (dated 1971), and a medieval hammered coin (as yet unidentified, but possibly Henry III).

4.8.3 A very well-preserved medieval strap loop from Phase 2 ditch **1018** (fill **1207**) could possibly be as early as the thirteenth century (Egan and Pritchard 1991), and with the coin, is a clear indicator of medieval activity in the vicinity. An equally well-preserved decorative hooked tag, used in clothing, came from Phase 3 bedding layer **1212**, and probably dates to the later sixteenth or seventeenth century (Read 2008). A small sheet-metal aglet, or lace tag, from Phase 4 construction trench **3007** (fill **3008**), and part of a hemispherical button from Phase 3 culvert

1019 (fill **1038**) are probably of similar date, as is a badly crushed rumbler or ‘crotal’ bell (Egan 2005) from **231**. Nineteenth- or twentieth-century buttons were recovered from Phase 2 ditch **1018** (fill **1206**) and demolition layer **3036**. A single stamped-headed dress pin from Phase 4 layer **1055** is also late in date. Wire and part of a door knob are from Phase 4 levelling layer **1058**, and a single copper-alloy nail was unstratified.

- 4.8.4 The ironwork was fragmentary and proved difficult to identify with any certainty. Much of it (c 27 fragments) was fragmentary nails, many of them hand-forged, although few were complete. A further 15 fragments were too badly preserved to attempt any identification. Part of a small door latch came from demolition rubble **3036**, and can possibly be dated to the early eighteenth century (Hall and Alcock 1994, 26), although it must be noted that such objects change only slowly through time, and it could be much later.
- 4.8.5 Other objects, for instance the large enamelled bowl from Phase 4 levelling layer **1058**, are probably later nineteenth-century or later in date, reflecting the date range shown in other material groups, for example the glass (*see Section 4.9.1*). A steel shoe for a wooden clog, again likely to be late in date, came from Phase 4 layer **1021**. The lead is of little significance, being for the most part solidified drips.
- 4.8.6 **Potential:** the copper-alloy coins will contribute to dating the contexts from which they were recovered, but otherwise the copper alloy will contribute little to any further understanding of activity on the site. The ironwork is in too poor condition to sustain further analysis.

4.9 VESSEL AND WINDOW GLASS

- 4.9.1 **Quantification:** in all, there were 205 fragments of glass, 160 fragments of vessels and 45 fragments of window glass, as well as other tiny chips. There were also two small glass beads. None of these could be considered to be of medieval date, although a few small and poorly preserved fragments of window glass were probably early post-medieval, perhaps dating to the late sixteenth or seventeenth century. In general, the earlier fragments were partially demineralised, giving them an opaque, metallic appearance, and most showed iridescent flaking. All were examined for the purpose of this assessment and an outline catalogue created.
- 4.9.2 **Assessment:** the vessel glass forms a limited group, with most dating to the late nineteenth and twentieth centuries. Only a few fragments of dark olive green wine bottles from subsoil **241**, Phase 4 wall **3016**, and possible well **3029** (Phase 4, fill **3030**) could be appreciably earlier, although the forms represented point to a late eighteenth-century origin at the earliest. The remainder of the vessel glass reflects domestic activity, and includes items like mineral water bottles, early milk bottles, soda-water siphons, and Kilner jars.
- 4.9.3 All the early post-medieval window glass fragments were very small, generally no more than 20mm in maximum dimension, and in poor condition. In a few cases, pane edges survived, suggesting rectilinear quarries shaped by grozing. Slight surface damage, on occasion exposing a pitted core of undamaged glass, suggests that most of the fragments collected were originally greenish-colourless metal, typical of window glass of this date (Hurst-Vose 2008). Early window glass came from subsoil **152**, the fill of foundation cut **154** (from the evaluation), Phase 2 ditch **1018** (fill **1030**), Phase 3 culvert **1019** (fill **1038**), and Phase 4 layers **1279** and **3018**, and presumably indicates the presence of domestic buildings of sufficient pretension to have

glazed windows, at a time when glass was still a relatively expensive commodity. The remainder of the sheet glass can be dated to the late nineteenth century or later.

4.9.4 **Potential:** other than the few earlier fragments of window and vessel glass, little in this assemblage can be placed earlier than the nineteenth century, and this, combined with the fact that it mainly comes from relatively disturbed contexts, is unlikely to contribute significantly to any understanding of activity on the site. The later material will, however, contribute to dating the contexts from which it was recovered, whilst the earlier material will not only contribute to the dating of the contexts, but might suggest buildings of some pretension in the vicinity.

4.10 OTHER OBJECTS

4.10.1 **Quantification:** small amounts of ceramic building material (seven fragments), industrial residues (42 fragments), and wood (shattered), were also recovered. All were examined for the purpose of this assessment, and an outline catalogue created.

4.10.2 **Assessment:** the ceramic building material was represented by small and undiagnostic fragments. The industrial residues, recovered during the evaluation (OA North 2007a) from pit fill **106**, pit/ditch fill **315**, modern backfill **369**, and construction cut fill **376**, were undiagnostic of any particular activity, and seem most likely to derive from domestic fires. The wood from foundation cut fill **154** is described as coming from a bucket, but in the interval between excavation and this assessment, it had disintegrated.

4.10.3 **Potential:** none of the groups will sustain further analysis.

4.11 MARINE MOLLUSCS

4.11.1 **Quantification:** 20 fragments of marine mollusc shell were noted from seven contexts, most late (Phase 4) fills (**1054**, **1061**, **1102**), levelling layers (**1058** and **3018**), and subsoil (**1035**), although also from one Phase 2 fill (**1108**, a secondary fill of culvert **1052**). All were examined for the purpose of this assessment, identified to species, and an outline catalogue created.

4.11.2 **Assessment:** all were single valves, or fragments, from small examples of the native oyster. These are most likely to have been brought to the site as a foodstuff. The maximum number of individuals represented is about 20, but as some valves were shattered, it is probably considerably less. All were examined for signs of reuse, but none was noted.

4.11.3 **Potential:** the assemblage is too small to sustain further analysis, and is not directly relevant to an understanding of the nature of occupation on the site.

4.12 ANIMAL BONE

4.12.1 **Quantification and Preservation:** in total, 706 animal bone and teeth fragments from 615 individual specimens (NISP) were recovered from stratified deposits (Table 4). Unstratified bone has been excluded from this assessment. The majority of the medieval bone (Phases 1-3) is poorly preserved, the bone being fragmented, and with a significant to moderate amount of erosion to the surfaces (Table 5). Preservation of the post-medieval bone is better (Phase 4), albeit with normally less than half of the complete bone represented, but only limited erosion to

the bone surface (Table 5). Records of tooth wear, epiphysial fusion, biometry and butchery were scarce, with less than ten potential records in each category.

Species	Phase				Total
	1	2	3	4	
Horse		2	3	1	6
Cattle	1	4	4	10	19
Pig		1	2		3
Sheep/Goat		11	4	12	27
Dog		2		2	4
Cat	1				1
Rabbit				1	1
Red Deer					0
Cattle/Red Deer		1		23	24
Sheep/Goat/Roe Deer			1	2	3
Medium Mammal		7	1	12	20
Large Mammal		9		242	251
Cat-sized Mammal		1		1	2
Small Mammal				1	1
Unidentified Mammal		121	16	113	250
Domestic/Greylag Goose				1	1
Passerine (Perching Bird)		1			1
Unidentified Bird				1	1
Total	2	160	31	445	615

Table 4: Number of individual specimens (NISP) by species (bones of the same animal counted as one NISP)

4.12.2 For each species, or species group, the following were recorded: the number of individual specimens (NISP); total number of fragments; state of preservation; the number of measurable bones; the number of butchered bones; the number of mandibles or mandibular loose teeth, from which the wear pattern could be described; and the number of bones from which the epiphysial fusion state could be identified. Tooth wear and fusion data are used to assess the age of death of the principal stock animals (cattle, sheep/goat, and pig). Biometrical data are used to assess the size and, in some instances, the sex ratio of the principal stock animals.

Phase	Preservation category (%)					N
	Very Poor	Poor	Moderate	Good	Very Good	
1	-	-	-	100	-	1
2	8.61	84.77	3.97	1.32	1.32	151
3	7.69	69.23	19.23	3.85	0.00	26
4	0.65	3.01	60.43	33.98	1.94	465

Table 5: Preservation of animal bone fragments identified to a species level (excluding loose teeth)

4.12.3 **Assessment:** species including horse, cattle, sheep/goat, pig, dog, cat, goose and red deer were identified within the assemblage, which weighed c 7kg (Table 5). This assessment does not include any bone from soil samples. The material was identified using the reference collection held by the author, and with reference to Halstead and Collins (1995), and Schmid (1972). Sheep/goat distinctions were attempted using reference material, and Boessneck (1969), Kratochvil (1969), and Prummel and Frisch (1986).

4.12.4 Two partial skeletons, including that of a dog (pit **1062**) and a cow (pit **1210**), were recovered from the site.

4.12.5 **Potential:** the animal bone has no real potential for estimating the age of death of the stock animals, a biometric study, or analysis of the treatment of carcasses after slaughter, although the two partial skeletons, and a cat-pelvis that has clear evidence of butchery from a Phase 1 gully, have some potential for analysis.

4.13 PALAEOENVIRONMENTAL ASSESSMENT

4.13.1 **Quantification:** during the excavation, 26 bulk samples for the recovery, assessment and potential analysis of charred, waterlogged and mineralised plant remains, and other environmental remains, were taken from appropriate, securely stratified contexts. Between ten and forty litres from each of the 23 samples were processed, so that any charred, waterlogged and mineralised plant remains present could be assessed. The results are summarised in Table 6.

Context no	Sample no	Feature	Potential CPR	Potential charcoal	Potential Dating
134	1	Fill of ditch 133	Yes	Yes	Yes *
197	3	Fill of ditch 196	None	Yes	Yes *
1121	4	Fill of pit 1022	None	None	Yes
1143	5	Fill of hearth/pit 1164	Yes	Yes	Yes
1174	7	Upper fill of hearth/kiln 1173	Yes	Yes	Yes
1183	9	Lower fill of hearth/kiln 1173	Yes	Yes	Yes
1214	11	Fill of pit 1213	Yes	Yes	Yes
1276	17	Upper fill of ditch 1269	None	None	Yes
1301	18	Fill of ditch 1302	None	None	Yes
1310	19	Layer above ditch 1259	None	None	Yes
1313	20	Upper fill of ditch 1259	None	None	Yes
1341	23	Putative earth floor?	None	None	Yes
3063	300	Fill of pit 3062	None	Yes	Yes
3111	302	Shell midden deposit in pit 3112	None	None	Yes
Total			5	8	15

Table 6: Potential for the further analysis and dating of environmental bulk samples * samples taken during the evaluation phase (OA North 2007)

4.13.2 All plant material was provisionally identified and quantified on a scale of 1-5, where '1' is less than five items and '5' is more than 100. Plant nomenclature follows Stace (1997), and identification was aided by comparison with the modern reference collection held at OA North. The presence or absence of insect remains was also recorded.

4.13.3 **Assessment:** charred cereal grains, weed seeds and chaff were identified in all but seven samples. Large numbers of cereal grains and weed seeds were identified in five of these samples, from evaluation ditch fill **134**, hearth **1144**, and pits **1173** and **1213**. Barley (*Hordeum* sp) grains were the most frequent, but some oats (*Avena* sp), wheat (*Triticum* sp), and undifferentiated grains were also identified. The preservation of many of the cereal grains was good, and in some samples the grains appear to have sprouted. Crop-processing remains (chaff) occurred in two samples, the fills of pits **1173** and **1213**, and included glume, culm nodes, and awns, but the quantities were small. In contrast, the number of charred weed seeds was high in the five samples, and included common chickweed (*Stellaria media*), grasses (Poaceae) with large seeds, corn marigold (*Chrysanthemum segetum*), wild legumes with seeds less than 4mm

(Fabaceae), pale persicaria, knotweeds and other types (*Persicaria/Polygonum* spp), common sorrel (*Rumex acetosa*), fat-hen (*Chenopodium* sp) and other species. The remaining 14 samples in which charred plant remains were recorded had occasional charred cereal grains and weed seeds.

- 4.13.4 Occasional waterlogged or modern seeds were identified in many of the samples and these may have been preserved either in waterlogged conditions, or are intrusive. Seeds may also have been differentially preserved in drier conditions, for example, a woody seed, such as from brambles (*Rubus fruticosus* agg), or elder (*Sambucus nigra*), may have survived, but others that are less woody may not have survived, for example grasses with small seeds.
- 4.13.5 Charcoal fragments were recorded in most of the samples, and were abundant in eight from evaluation ditch fills **134** and **197**, hearth **1144**, and pits **1173**, **1213**, **3062**, and posthole **1046**. Charcoal from oak (*Quercus* sp) and diffuse porous taxa, such as alder (*Alnus glutinosa*), hazel (*Corylus avellana*), and birch (*Betula* sp), was noted. Roundwood and heather (*Calluna vulgaris*) charcoal was also recorded, together with burnt herbaceous stems.
- 4.13.6 Abundant fragments of oyster and cockle shells were recorded in the heavy residue from pit **3062**. Occasional fragments of bone were noted in the upper fill of ditch **1018** and in pit **3062**. Other remains identified in the samples included heat-affected vesicular material, coal fragments, some industrial debris, and a small amount of hammerscale.
- 4.13.7 **Potential:** the potential for analysis and radiocarbon dating is shown in Table 6, five samples having been identified as suitable for analysis of charred plant remains. These five samples, together with three others, were also assessed as suitable for charcoal analysis.
- 4.13.8 Palaeoenvironmental remains were observed in many of the bulk samples, and both crops and weed seeds were identified. Analysis of the charred plant remains may provide information about the economy, dietary requirements and crop production associated with the site in the medieval and post-medieval periods.
- 4.13.9 A mixed assemblage of charcoal was recorded in some of the samples, together with other possible sources of fuel/kindling, such as heather and roundwood. Analysis of the charcoal fragments (Table 6) may provide basic information on fuels, and perhaps, also, about woodland management.
- 4.13.10 Furthermore, the majority of samples produced material suitable for radiocarbon dating. Although the origin of such material within the context should be given careful consideration, there is good potential for refining the site chronology once the environmental material has been combined with stratigraphic data.
- 4.13.11 Until recently, little was known about medieval urban sites outside of Cheshire, and Newman and Newman (2007, 104), in the *Regional Research Agenda and Strategy*, stress the importance of adequate palaeoenvironmental sampling for all medieval urban sites. Archaeobotanically, medieval records west of the Pennines are sparse, with a few sites mentioned in Chester, Lancaster, Carlisle, Risley, and Kendal (Hall and Huntley 2007, 157), although the record has been extended more recently, for example, from Nantwich (OA North 2007b), and the Carlisle Millennium site (Huckerby and Graham 2009).

5 CURATION AND CONSERVATION

5.1 RECIPIENT MUSEUM

- 5.1.1 The Penrith and Eden Museum has been nominated as having the capacity to co-ordinate the deposition of the finds, the paper and electronic archive. Paper and digital copies of issued reports will be deposited with the Historic Environment Record (HER) and the Country Record Office, both of which are based in Kendal.

Site Code: NSP07

Penrith and Eden Museum, Robinson's School, Middlegate, Penrith, Cumbria, CA11 7PT
Telephone: 01768 865105.

Cumbria County council Historic Environment Services and Record Office, Cumbria Archive Centre, Kendal, Kendal County Offices, Kendal, LA9 4RQ
Telephone: 01539 713540 or 01539 713539

5.2 CONSERVATION

- 5.2.1 Most of the assemblage is well-preserved and in good condition. The few fragments of early post-medieval window glass are, however, unstable and in poor condition, but their size suggests that conservation would not seem necessary, as there is little to be gained from their continued survival. There is no requirement for further metalwork x-ray or conservation.

5.3 STORAGE

- 5.3.1 The complete project archive, which will include records, plans, both monochrome and colour photographs, artefacts, ecofacts and sieved residues, will be prepared following the guidelines set out in *Environmental Standards for the Permanent Storage of Excavated Material from Archaeological Sites* (UKIC 1984, Conservation Guidelines 3) and *Guidelines for the Preparation of Excavation archive for Long-term Storage* (Walker 1990).

5.4 PACKAGING

- 5.4.1 The assemblage is currently well-packed, and will require no further specialist packaging. Box lists are prepared and will be updated from the database when the identification of objects is complete.

5.5 THE DIGITAL ARCHIVE

- 5.5.1 The digital data will be temporarily stored on the server at OA North, which is backed up on a daily basis. For long-term storage of the digital data, CDs will be used, the content including the reports, plans, scanned images and digital photographs. Each CD will be fully indexed and accompanied by the relevant metadata for provenance. The digital record should ideally be duplicated as a paper record for long-term archiving, including comprehensive printouts of photographs and survey plots, labelled and summarised.

5.5.2 All dry and stable finds will be packed according to the museum's specifications, in either acid-free cardboard boxes, or in airtight plastic boxes for unstable material. Each box will have a list of its contents and will, in general, contain only one type of material, such as pottery or glass.

5.6 DISCARD POLICY

5.6.1 A Discard Policy will be prepared, in consultation with the recipient museum, Eden and Penrith Museum. Material of no discernible long-term archaeological potential will be discarded, with the museum's agreement.

5.7 DISSEMINATION

5.7.1 In accordance with the project design (*Appendix 1*), and following consultation with the client and the Cumbria County Council Archaeologist, a suitable text will be prepared to publish the results from the excavation in the *Transactions of the Cumberland and Westmorland Antiquarian and Archaeological Society*.

6 STATEMENT OF POTENTIAL

6.1 INTRODUCTION

6.1.1 In order to maximise the potential of the heritage resource, archaeological projects are strategic in nature, with a series of clearly defined aims, often posed as research questions, and objectives, which are the practical means formulated to address the research questions. These aims and objectives are modified and developed to meet the requirements of the project and the confines of the available data. As elements of the heritage resource of the site are to be destroyed as a result of the proposed development works, the first and most fundamental tenet of the investigation, *ie*, the *Primary Driver*, in MoRPHE parlance (English Heritage 2006), is to investigate, define, characterise and preserve, by record, any remains of archaeological interest in such a manner that they can be understood as fully as possible. The data generated from this work would then be used to reconstruct a chronological narrative of activity undertaken at the site, which could be further augmented with additional research. The research aims and objectives presented below have been devised in recognition of the project's *primary driver* and are informed by the findings of the archaeological work undertaken in Areas A, B, and D.

6.1.2 In essence, Project Stages 4-6 seek to process, assess, then maximise through analysis, the potential of the data recovered during the fieldwork, and, finally, to present that information in published format. The post-excavation programme, which will be undertaken within the tenets of English Heritage's *Management of Research Projects in the Historic Environment* (MoRPHE; 2006) and following the guidance of *Management of Archaeological Projects (Second edition; English Heritage 1991)*, will be guided by the specifically formulated research aims and objectives presented below. These research aims and objectives are informed first by the provisional interpretation of the results of the fieldwork completed to date and, secondly, by the various national, regional and local research agendas.

6.2 ARCHAEOLOGICAL CONTEXT

6.2.1 The excavation at Penrith New Squares has identified the presence of significant archaeological remains, dating from the medieval period through to the modern. These, however, principally enable the investigation of a medieval urban site in Cumbria.

6.2.2 **Earlier medieval remains (Phase 1):** the excavation recovered a number of residual twelfth-thirteenth-century pottery sherds associated with later features, indicating evidence of background activity within the wider locale. This has been further indicated by the number of sherds of twelfth-thirteenth-century Red Gritty ware recovered from the Market excavations in 1990 (Newman *et al* 2000), although, as with Penrith New Squares, very few were from *in situ* features. The earliest datable feature from the sites was gully **1007**, which not only contained pottery of twelfth- to fourteenth-century date, but was cut by ditch **1013**, showing that it was early in the sequence. That the material was associated with a feature, and thus likely to be *in situ*, adds to the value. Phase 1-2 features in Area B comprised gullies and intercutting pits, and were undated, but may be equated with early activity as a result of their stratigraphic position.

- 6.2.3 **Later medieval remains (Phases 2-3):** the majority of the excavated remains were found within the later medieval phases, and they reflect fairly intensive use of this area over a comparatively short period of time. The artefacts recovered suggest that this activity dates to the thirteenth and fourteenth centuries. The presence of a coin, possibly minted in the reign of Henry III, and a strap loop of the same period or earlier, would only serve to reinforce this notion. Initially, Phase 2 activity comprised the creation of two large ditches across the site; the sequence in which they were originally excavated may be established following refinement of the stratigraphic record and examination of the ceramic evidence. However, their function(s) is more difficult to define. Ditch **1018**, with its evidence of rapid silting, and a possible wood-and-cobble crossing-point, might suggest a watercourse. This putative watercourse may have been canalised, since the profile of the ditch appears to be of a cut feature, rather than the shallow meandering course that a stream would follow, especially as the double right-angled course appears quite deliberate. It is possible that further documentary work might shed light on this matter.
- 6.2.4 Ditch **1013** may have originally been intended as part of the town defences. Although there is no direct evidence, other than documentary for the construction of such defences in the mid-fourteenth century (Winchester 1979, 6), this date would coincide with the bulk of the pottery from the feature. Unfortunately, the documentary evidence is not only scanty, but gives few clues to the line of the defences (*ibid*). Comparisons can be made with the northern defences in Rickergate, Carlisle, where ditches are known to have been dug in 1314-15 (Zant *et al* 2011), somewhat earlier than at Penrith, but constructed for the same reasons, as defence against the Scots. However, the ditch, **1013**, was later partly backfilled and a boulder wall built along its south side, which would make it the wrong side for a defensive wall. The interior was then utilised as a cobbled trackway. A group of pits was noted, that are likely to represent rubbish disposal from the plots to the rear of Princes Street. One such pit (**1044**), which was identified as a hearth, contained a near complete, but fragmented, medieval pot.
- 6.2.5 Phase 3 activity was characterised by the construction of two buildings (**1068** and **1299**) in Area A, the near-complete ground plans of both being uncovered by the excavation. These buildings were constructed with boulder foundations over the backfilled remains of ditch **1018**, but were still associated with medieval pottery. The stratigraphic evidence would suggest that building **1299** was the earliest of the two. Although cobbled surfaces were associated with both buildings, they do not appear to be dwellings, as there was no evidence of hearths.
- 6.2.6 No such structural evidence was forthcoming from Area B for this period, although there was evidence of a potential occupation layer, **3040**, as well as two ditches and several pits and postholes.
- 6.2.7 **Post-medieval Activity (Phase 4):** there was much more activity within Phase 4 in Area B, where levelling deposits, pits and gullies were followed by eighteenth- and nineteenth-century building work to the rear of the Two Lions Inn. In Area A, soil was seen to have accumulated over much of the site. There appeared to have been an hiatus in activity during the sixteenth and seventeenth centuries, with little or no activity until the eighteenth century.
- 6.2.8 **Conclusion:** the excavation has identified significant medieval remains and evidence for post-medieval activity in Areas A and B. The large quantity of medieval pottery, particularly from Area A, also has the potential to date the features closely, especially if heavily-sooted pottery

vessels can augment the environmental samples recommended for radiocarbon assay. Indeed, it is anticipated that further research might enable the functional nature of some of the remains to be established, particularly the Phase 2 ditches, and Phase 3 buildings, and might also allow the structural and artefactual evidence to be situated more succinctly within their local and regional setting. The presence of quantities of grain, including sprouted examples from Phase 2 hearth **1144**, pit group **1044**, and Phase 3 Building **1068**, might be indicative of brewing activity within the vicinity, either within the confines of the site itself, or in the town immediately to the north. Moreover, further research may shed light on the medieval origins of Penrith itself, whilst excavations and surveys of other Cumbrian Towns can provide important comparisons (Winchester 1979; Leech and Gregory forthcoming; Greenlane Archaeology 2009; Newman forthcoming).

- 6.2.9 **The Two Lions:** the archaeological and historical importance of many of these structures that adjoin Great Dockray market place, which has been an important feature of Penrith since the medieval period (Winchester 1979), is reflected by their listed building status, and by their inclusion in a conservation area. The group value of the street frontage in this area was assessed as being of regional significance, with the Two Lions public house being of national significance due to its Grade II* listed status (LB SMR 25303, HER 4994). The potential for below-ground remains in these areas has also been highlighted (OA North 2011).
- 6.2.10 The programme of building recording undertaken on the Two Lions Inn and the Sunlight Laundry Buildings has highlighted the potential of both of these structures. It has been demonstrated, in particular, that, despite its external appearance, The Two Lions Inn is a building of some antiquity, dating certainly to the earlier part of the sixteenth century. The building recording also demonstrated that it had a complex past, preserving a late medieval hall plan complete with screens passage, as well as a later sixteenth-century decorated ceiling. The Sunlight Laundry buildings, which were demolished as part of the wider redevelopment scheme at Southend Road, also revealed a building sequence that started in the late medieval period and continued into the nineteenth century (OA North 2011).
- 6.2.11 **Research context:** in order to formulate the aims and objectives of the project, it is necessary for the site to be placed within national, regional, and local research contexts (*Sections 3.3-5*). At each of these strata, prioritised themes for research have been presented within research agendas and frameworks, compiled by the various corresponding levels of government bodies and specialist archaeological advisors. These research agendas are compiled by chronological period and, accordingly, those sections pertaining to the medieval, post-medieval and industrial periods are considered most appropriate to the proposed analysis of Penrith New Squares.

6.3 NATIONAL THEMES

- 6.3.1 In the strictest of terms, a period-specific and wide-embracing national research agenda for the medieval period has not yet been produced. However, several papers outlining research areas have been compiled (*see below*), whilst several research agendas have been/are being compiled for specific areas within the period, for example rural settlement and medieval ceramics (MSRG 2006; MPRG 2011). Amongst the earliest documents that present themes relevant to the present study is a paper produced by the Society for Medieval Archaeology (Hinton 1987). Whilst that document was intended to outline recommendations for the allocation of grants for medieval archaeological projects, rather than a period-specific policy *per se*, its wider relevance

has been recognised. In addition, although English Heritage's draft *Research Agenda*, circulated to the archaeological profession in 1997, may be considered outdated, a number of research themes remain pertinent for the Middle Ages in a large part of England. The following themes are drawn from these documents:

◆ ***Processes of change***

- ***Late Saxon to Medieval period:*** the changes that followed the Norman Conquest, and the way that settlement patterns and economic structures developed, are still poorly represented in archaeological research (English Heritage 1997, 44);
- ***Transition from medieval to post-medieval traditions (c AD 1300-1700):*** the late medieval to early post-medieval period is one of change in a number of agricultural, manufacturing, trade, building and institutional traditions. Some past studies have categorised evidence too rigidly, into either medieval or post-medieval aspects, leaving details of adaptation and overlap poorly understood. The relative paucity of detailed evidence attributable to the sixteenth century in many areas is, in part, a result of over-rigid period categorisation (*op cit*, 45).

◆ ***Chronological Priorities***

- ***The origins and development of the medieval small town and rural markets:*** the origin of small towns and settlements, which, in the medieval period, supported village markets, is obscure. Most first appear as towns or markets in the historical record during the later twelfth or thirteenth century, with the granting of borough status or market charters, and we should endeavour to conduct more research on settlements that have continued in use (*op cit*, 49).

◆ ***Themes***

- ***Settlement hierarchies and inter-actions:*** evidence of the nature of a town and its relationship with settlements in the surrounding area can be used to develop our understanding of the complexity of past societies, and to drive forward our understanding and develop new research and management goals, where extensive samples of individual settlements and their environs can be seen as an important step towards formulating broader theories and research goals (*op cit*, 51);
- Artefacts, ecofacts, and structural evidence will be relevant to providing insight into economy and social practice. Assemblages deriving from sites with well-understood depositional processes, and retrieved through good and consistent sampling and recovery techniques, will recommend themselves (*op cit*, 51);
- ***Urbanism:*** more complex models of urbanisation should be explored. The use of multivariate analysis, to explore spatial and temporal change in butchery, local environment, craft and industrial residues, building form and decoration, functional attributes of pottery and glass, are likely to be particularly important for testing theories relating to social action, economy, politics, and ethnicity (*op cit*, 52);

- Examination of the depositional context of materials will be axiomatic to distinguishing between patterns of rubbish disposal, activity and reuse (*ibid*);
 - Developing our knowledge of towns as centres of consumption is central to placing them in broader cognitive landscapes. Consumption is at least, in part, a social construct, and hence, patterns of consumption may not simply be a function of population size or daily calorie requirements (*ibid*);
 - ***The definition of urban and rural poor:*** the opportunity exists to broaden simple materialistic interpretations of data, and explore the absences and omissions in the record, to examine rarity and reuse within material culture, to explore diet, and marginal economic exploitation. Attitudes of inclusion and exclusion can also be addressed (*op cit*, 53);
 - ***Patterns of craftsmanship and industry (including agriculture):*** evidence for past production, in the form of artefact manufacture, industrial processing, and agriculture (*op cit*, 53);
 - Analysis of the contrast between urban and rural industrial sites (*ibid*).
- ◆ ***Landscapes***
- ***Cognitive landscapes:*** there has been some development in the theory of exploring landscapes, from perceptions based around belief-systems and social/ceremonial action. Evidence for the social factors influencing the patterns of landscape inhabitation should be examined (*op cit*, 55);
 - ***Regional chronologies:*** the data retrieved from the excavated sites should contribute to the refining of regional chronologies (*op cit*, 55).
- ◆ ***Industries***
- Stone quarrying lends itself to particular study through archaeology, not least because analysis may often reveal the sources of their products. Consequently, it is possible to study the volume and distribution, and to assess the market served, and changes in pattern and demand. The introduction and use of ceramic building materials should also be investigated (Hinton 1987).
- ◆ ***Artefacts***
- Although good dating sequences are still required, there has been too much classification; all work on objects from excavations and other sources should concentrate upon deductions about society and economy that can be made from them and the technologies that produced them. Artefacts are also important as a means of interpreting the different functions carried out on the different parts of the site. Post-excavation research should go beyond the primary cataloguing and sorting of objects (*op cit*, 6:2).

6.3.2 Although the 1996 MSRG Policy on research, survey, conservation and excavation relates to rural settlements, up to the size and administrative function of villages, some of the themes that they explored are broadly relevant to small urban sites, such as Penrith, and were reiterated by the MSRG's more recent policy statement (MSRG 2010).

◆ **Research and survey**

- The study of medieval settlements should take into account the territory to which the settlements belonged. Recent projects have shown the value of this broad multidisciplinary 'landscape' approach to the study of rural settlements (MSRG 1996);
- There should be an awareness of the subsequent development of sites and their surroundings in the post-medieval period. Studies of periods of transition are also important (*ibid*);
- Interdisciplinary research is likely to yield the most satisfying results. Significant advances in knowledge are likely, on the basis of past experience, to proceed from dialogues between archaeologists, historians, geographers, place-name scholars, students of vernacular architecture and those who work on bone and plant remains (*ibid*).

◆ **Strategy**

- The academic research agenda combines the need to address recent preoccupations, and to take into account new questions. We need to extend our understanding of regional difference, and to assess the influence of the natural environment, and define the extent to which people moulded the landscape and settlement pattern to their own needs (*ibid*).

6.3.3 The Medieval Pottery Research Group (MPRG) published *A Revised Research Strategy and Agenda for Post-Roman Ceramic Studies in Britain* (2010), which focuses on ceramics, but includes several themes of relevance to the current site. This was superseded by *A Research Framework for Post-Roman Ceramic Studies in Britain* (2011), which looked at the ceramic industries from a regional viewpoint. However, some of the wider national themes are still pertinent and include:

◆ **Periods of transition**

- How much of an impact does the Norman Conquest have on pottery? Can this be seen in new wares, technologies and/or styles? How is Norman settlement reflected in ceramic distribution (MPRG 2010, 8)?
- In the transition from the late medieval period to the post-medieval period, why do some medieval industries continue and adapt, whereas others die out (*ibid*)?

◆ **Cultural influences**

- What regional variations are there in decoration and finishes, and do these vary according to form or fabric (*ibid*)?

- Why is hand-made pottery sometimes favoured over wheel-thrown pottery, and how were different vessels used (*ibid*)?
- Do choices of raw material, and the distribution of pottery, reflect other social relationships (*ibid*)?

6.4 REGIONAL THEMES

6.4.1 The recent publication of the research framework for North West England (Brennand 2006; 2007) has provided a region-specific resource framework and research agenda for the medieval, post-medieval and industrial periods (Newman 2006; Newman and Newman 2007; McNeil and Newman 2006a, 2006b; Newman and McNeil 2007a; 2007b), which include several research topics that are relevant to the study of Penrith New Squares. For the sake of brevity, themes presented in the Regional Research Framework, but already covered in some detail in the national agendas, are not reiterated in the following section. As part of the *Research Framework for Post-Roman Ceramic Studies in Britain* (2011), the Medieval Pottery Research Group has also published a regionally specific research agenda for the North West.

6.4.2 *Medieval Period*

◆ *Regional distinctiveness*

- Establish closely-dated artefact sequences across the region, linked to absolute dating (Newman and Newman 2007, 97);
- Focused research on issues of borders and cultural identity, in relation to the proximity of the border with Scotland (*ibid*).

◆ *Urban Settlements*

- To what extent do medieval buildings in Penrith lie behind post-medieval façades (*op cit*, 104)?;
- There is a need to examine the street frontages in medieval towns, as well as the backplots (*ibid*);
- Efforts should be focused on discovering more about the character and function of the region's earliest medieval towns in the immediate post-Conquest period (*ibid*);
- The role and nature of small towns should be examined, which should include below-ground investigations in well-preserved small towns (*ibid*);
- Adequate palaeoenvironmental and bulk soil sampling strategies should be formulated for all medieval urban archaeological projects (*ibid*);
- More work is needed on town defences in the region (*ibid*).

◆ *Technology and production*

- 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).

◆ **Trade, exchange and interaction**

- 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, should enable insights into different patterns of interaction and breadth of contacts between different social groups (*op cit*, 114).

◆ **Ceramics**

- Type-series and other assemblages require a range of chemical and dating analyses, including those from Cumbria (MPRG 2011, 32);
- Identification of good stratigraphic sequences from excavations, and an examination of pottery from them, is needed (*ibid*);
- A regional ceramic survey should be undertaken, along the lines of that carried out in the North East, allowing a coherent picture of the development and supply of medieval pottery in the region to emerge (*ibid*);
- Examination of, and in some areas, further work on, imports from the continent and elsewhere in the UK is needed for all periods (*ibid*);
- Investigation is needed of whether supply zones were governed by natural features in the medieval period (for example, the rivers Mersey and Ribble), resulting in ceramic sub-regions; type series should be created for each sub-region (*ibid*);
- Research and publication is needed of production in Carlisle, Kendal and Silverdale: waste medieval and late medieval pottery have been found in these locations, but no kilns of the period have been excavated in Cumbria, except the potential clamp kiln at Fremington, which is early medieval in date (*ibid*);
- Reassessment is needed of the pottery in Cumbrian assemblages identified as being from south-west Scotland; this is required to determine cross-border exchange/trade in pottery and/or influences (*ibid*);

6.4.3 **Post-medieval period**

◆ **Environment**

- Samples should be analysed from appropriate deposits for palaeoenvironmental evidence, wherever possible, to gain information on the exploitation of plants and animals, especially in relation to changes in consumption (Newman and McNeil 2007a, 119).

◆ **Settlement and landuse**

- **The urban landscape:** attempts should be made to identify the post-medieval elements that may have distinguished the future industrial towns from those that failed to develop early during the Industrial Revolution (*op cit*, 122).

6.4.4 *Industrial period*

- ◆ *Environment*

- Analysis should be made of palaeoenvironmental material recovered from cess pits, and other suitable cut features, to inform on diet, health, natural resource use, and consumption patterns (Newman and McNeil 2007b, 141).

- ◆ *The Urban Landscape*

- Where threatened with possible redevelopment, excavations are required of now undeveloped and cleared former working-class areas regarded as slums (*op cit*, 147).

- ◆ *Trade Exchange and Interaction*

- There is a need for the examination, mapping, and evaluation of vernacular materials and objects in nineteenth-century contexts (*op cit*, 156);

6.5 LOCAL THEMES

- 6.5.1 Various local borough plans exist, but these are general and, whilst they highlight the importance of the archaeological resource, they provide little additional research contextualisation. Instead, many of the themes that run through the national and regional agendas, particularly those proposed by the Society for Medieval Archaeology (Hinton 1987), the *North West Regional Research Agenda and Strategy* (Brenmand 2007), and English Heritage's draft *Research Agenda* (1997), are relevant to Penrith New Squares within its local context.

7 UPDATED PROJECT DESIGN

7.1 AIMS AND OBJECTIVES OF THE PROGRAMME OF ANALYSIS

7.1.1 This section follows the guidance of English Heritage regarding the formulation of updated research aims (English Heritage 1991, 2–3). By considering the above themes and initiatives in the Statement of Potential (*Section 6*), the following research aims and research objectives can be posed to inform and guide the strategies implemented at the post-excavation stage of the project. As such, many of these questions can only be fully addressed at the analysis phase of the project. However, they need to be considered at this, assessment, stage, so that the analysis can be steered in a direction that is both fruitful and meaningful within a genuine research context.

7.2 UPDATED RESEARCH AIMS

- (1) What is the nature, date, density, extent, and state of preservation of the archaeological remains on the site, and can they be understood in terms of their completeness, sequence, relationships and their functions?
- (2) Is it possible to attribute the archaeological remains to meaningful activity phases, and through them, trace the historical development of the site, including evidence for the transitional phases between historical periods?
- (3) Can this relative sequence be dated, either through artefact evidence, or the application of absolute techniques, such as dendrochronology and radiocarbon assay, and can this secure dating also be used to assist in the firm dating and refinement of regional artefact chronologies?
- (4) From the distribution of features and artefacts, is it possible to identify zones and patterns of activity at each site, both in terms of practical and economic behaviour, but also zones that might relate to public and private space?
- (5) Is it possible to define, quantify and interpret evidence for craft-production or small-scale industrial activity, or any other forms of economic practice that might have been carried out on the site?
- (6) Is it possible to identify the social status of those who inhabited the site, and gain any understanding of aspects of diet, lifestyles and health?
- (7) What information is available concerning the contemporary topographical, palaeoenvironmental and historical context of the site, and the wider urban environs of the Great Dockray Market Place, and can it be collated and assimilated in a way that will facilitate an understanding of the historical development of the site and Great Dockray, particularly with regard to pre-urban usage, expansion, and intra-urban relationships with Penrith's known contemporary archaeological sites?
- (8) Similarly, what information is available concerning the contemporary topographical, palaeoenvironmental and historical context of the site, with regard to the possible

defensive ditch?

- (9) Is it possible to improve our understanding of the relationship between Penrith, the local rural settlement, and regional urban settlements, including the role of the town within socio-economic contexts, in terms of centralisation of control, access to resources, materials, skills, labour, and indications of parochialism/provincialism or links to wider areas? Is there any evidence that these relationships changed over time?
- (10) How can the results of the investigation be made available to the wider public in an accessible form, whilst undertaking appropriate archiving of the artefacts and primary data?

7.3 UPDATED RESEARCH OBJECTIVES

7.3.1 The following research objectives of the post-excavation programme have been formulated with reference to the updated research aims (*Section 7.2*), which are referenced in parentheses at the end of each objective. The manner in which Project Stage 4 (in accordance the project design *Section 4; Appendix 1*) will address specific elements of these objectives is detailed in *Section 8*. It is considered that these objectives will be applied to all data gathered during all the mitigation excavations, and watching briefs, and to appropriate elements of the trial-trench evaluation.

7.3.2 The objectives are:

- (1) Collate, check, and enter the original site records into a relational database for the purposes of centralisation and ease of interrogation (all aims);
- (2) Process the site survey data, base mapping, and digitise scanned-in pre- and post-excavation drawings within an appropriate computer package that could be integrated with the site database (all aims);
- (3) Using the processed data, organise context, feature and structure groups, create matrices and undertake provisional assessment, and then any appropriate detailed analysis of the on-site stratigraphy. This will permit the best possible understanding of the physical form and functions of, and relationships between, the different individual and composite elements of the site, provision of a chronological framework and also the formulation of an holistic narrative of the site (all aims);
- (4) Process, assess, then undertake any appropriate palaeoenvironmental analyses of the bulk samples taken from the excavation. This will allow a better understanding of formation processes, on-site activity, and the surrounding environment, as well as maximising recovery of artefacts, material for absolute dating, and faunal remains (aims 1-7);
- (5) Undertake processing, cataloguing, stratigraphic integration, assessment and then any appropriate analysis of the artefacts recovered from the fieldwork, in terms of date, origin, quality, form, fabric and function, presence and nature of residues, spatial distribution, preservation, residuality, provenance and comparison with other sites in the locale and wider region (aims 1-8);
- (6) Undertake processing, cataloguing, stratigraphic integration, assessment and then any appropriate analysis of the faunal remains recovered from the fieldwork, in terms of preservation, taphonomy, and spatial distribution, as well as the range and proportion of

taxa, the reconstruction of husbandry/exploitation regimes and the comparison of the generated data with those from other sites in the locale and wider region (aim 1 and aims 4-8);

- (7) Perform spatial analyses to explore the relationships between different features, and also between accumulations of artefacts and palaeoenvironmental material belonging to contemporary phases, in order to define activity areas and patterns of disposal (aim 1 and aims 4-8);
- (8) Undertake a programme of documentary research that will help to contextualise and aid the interpretation of the findings from the present programme of fieldwork, to identify and access data generated by investigations at comparative sites (aims 1-9);
- (9) Prepare texts and illustrations, then collate and publish, in an appropriate medium, the results of the analysis of the Penrith New Squares archaeological project, and deposit the archive generated by the project (aim 9).

8 METHOD STATEMENT

8.1 INTRODUCTION

8.1.1 The following tasks are required to fulfil the revised objectives outlined in *Section 7*. When complete, they will contribute to the aims outlined in *Section 7.2*, and will ultimately allow for the preparation of a publication text and an integrated project archive, which will include a stratigraphic narrative.

8.2 PROGRAMME STRUCTURE

8.2.1 The post-excavation programme, designed to fulfil the research aims outlined in *Section 7*, will be divided into the following stages:

- full cataloguing of any data representatively sampled
- further post-excavation investigation
- analysis
- synthesis
- preparation of draft text and illustrative material
- publication
- archive deposition.

8.3 MANAGEMENT, MONITORING AND REVIEW

8.3.1 Management and monitoring tasks have been built into the project. These tasks will include project monitoring, advice and co-ordination, problem solving, and conducting meetings with project staff and all interested external parties.

8.3.2 It is proposed that all project participants will be briefed at the start of the project, concerning the aims and objectives for the post-excavation programme, and that regular review meetings will be held to monitor progress.

8.4 PHOTOGRAPHS

8.4.1 The monochrome photographs produced during the excavation will need to be indexed, catalogued and filed. They will also need to be cross-referenced with the digital photographs through the creation of a database, which catalogues the latter.

8.5 STRATIGRAPHY: ANALYSIS AND SYNTHESIS

8.5.1 It will be necessary to confirm and refine the preliminary scheme of phasing outlined in this assessment. Specifically, it is likely that further integration of the artefact assemblage with the site stratigraphy will provide the opportunity to date the sequence of deposits, features and structures more accurately, allowing a full and meaningful analysis of their stratigraphic

relationships. The interpretation of the stratigraphic sequence will be aided by the establishment of a fully-integrated computerised site database, allowing the stratigraphic data to be linked with that data derived from artefactual and environmental sources.

8.6 ARTEFACTUAL ANALYSIS

- 8.6.1 The assemblages of finds (including the medieval and post-medieval pottery, clay tobacco pipes, ceramic and stone building material, lithics, copper-alloy objects, lead, industrial residues, glass, and animal bone) will be integrated with the refined stratigraphic sequence. The artefacts will be catalogued by context for archiving purposes, and added to the site database. A selection of the artefacts will also be photographed as part of the cataloguing process. A summary report will be produced for each category of artefact, which will be incorporated into the archive and publication. Furthermore, several of the artefact categories require some additional analysis, and these, along with the recommendations for further study, are listed below.
- 8.6.2 **Medieval and post-medieval pottery:** the material has been quantified, and a preliminary fabric series created as part of the assessment. The methodology to be followed is that recommended in the Medieval Pottery Research Group's *Minimum Standards for the Processing, Recording, Analysis, and Publication of Post-Roman Ceramics* (MPRG 2001). This class of finds has good potential for further analysis, and, to this end, the fabric analysis should be completed, allowing the fabric series to be refined, and a form series created. A brief illustrated report should be produced for inclusion in the final report, detailing the analysis, and commenting on local and regional comparators. It is also recommended that those heavily-sooted vessels from secure contexts should be considered for radiocarbon assay.
- 8.6.3 **Clay Tobacco Pipe:** the material has been quantified and recorded as part of the assessment. This class of finds has only limited potential for analysis, which will be confined to confirming the provisional dating of the stamped bowls, and stem fragments. A full catalogue should be prepared, to include dating, a note on makers marks, and any other decorative features, together with a comment on the quality and finish of the pipes. A brief summary of this will be prepared for inclusion in the final report.
- 8.6.4 **The metalwork:** the material has been quantified and recorded as part of the assessment, and, as this class of finds has no potential for analysis, no further work is anticipated. The assessment text will be edited for inclusion in the final report, and the three items of interest illustrated.
- 8.6.5 **Vessel and window glass:** the material has been quantified and recorded as part of the assessment, and, as this class of finds has no potential for analysis, no further work is anticipated. The assessment text will be edited for inclusion in the final report.
- 8.6.6 **Marine mollusc:** the material has been quantified and recorded as part of the assessment, and, as this class of finds has no potential for analysis, no further work is anticipated. The assessment text will be edited for inclusion in the final report.
- 8.6.7 **Other objects (including CBM):** none of the groups under this heading will sustain analysis. The material may be discarded, with the permission of the receiving museum, having no interpretative value.

8.7 ANIMAL BONE

8.7.1 The animal bone should be recorded and integrated into the stratigraphic record of the site, and a short report compiled from this record to be included in a final report. This report would focus on a brief quantification of the material, and a short discussion of bone deposits of greater interest, such as the two partial skeletons, and a butchered cat pelvis from an early medieval (Phase 1) gully. The unstratified bone may be discarded, with the permission of the receiving museum, having no interpretative value.

8.8 PALAEOENVIRONMENTAL ANALYSIS

8.8.1 The palaeoenvironmental assessment has demonstrated that there is a considerable potential for pollen analysis of samples extracted from several features, and therefore, the samples from two Phase 1 ditches (**7432** and **7439**) should be subjected to analysis. This has the potential to provide an insight into the character of the environment and the manner in which people interacted with it. The palaeoenvironmental methodology will follow English Heritage guidelines (2002).

8.8.2 The results of this analysis should be recorded onto a database and, where appropriate, integrated into the stratigraphic text. A full and accessible report, including appropriate tables and diagrams, will be included in the final and publication.

8.9 DOCUMENTARY RESEARCH

8.9.1 Further documentary research will be undertaken in order to assist in the interpretation of the archaeological remains. This will include a more detailed map regression, and examination of primary documents held by the Cumbria Record Office in Kendal and Carlisle, and any other relevant libraries, such as that at the University of Lancaster. Moreover, any further research on the documentary sources from Penrith should at the very least include some form of consultation with Dr Angus Winchester, Senior Lecture in History at the University of Lancaster, who has worked on medieval records from Penrith in the past. In addition, key secondary sources will be consulted, and research will be undertaken to identify comparable sites and buildings within the region.

8.10 ILLUSTRATION

8.10.1 During the analytical programme, appropriate material will be selected for illustration. Illustrative material will include general plans, phase plans, and relevant section drawings. A selection of the pottery vessels will also be illustrated, as there was no further potential in any of the other artefacts. An experienced illustrator, using standard conventions, will compile these illustrations, either digitally for the plans, or manually, as appropriate. During preparation of the report text, photographs suitable for inclusion in the publication will be selected from the project archive.

8.11 STANDING BUILDINGS

8.11.1 Following the collapse of funding for the original scheme, work was stopped and much remains to be recorded, dependent upon the revised plans for the structure (OA North 2011). Many of

the recommendations made following the completion of the enhanced documentary study and English Heritage Level 3-type survey of the Two Lions (OA North 2006a) have still to be undertaken. Assuming the plans for the Two Lions as part of the revised planning application are similar to those in the original scheme, these comprise (*ibid*):

- Watching brief of works in rooms 22, 23 and 24: Firstly, a structural solution for the support of the ornately decorated plaster ceiling in room 6 needs to be agreed. Once this is in place, the contractor can remove the modern partitions between rooms 22, 23 and 24 (but not one between rooms 22 and 19). OA North would undertake a watching brief during this process. Following on from this, the contractor would remove floor coverings, and OA North would record the floor boards, thereby allowing the contractor to number and remove the floor boards, with OA North in attendance. OA North would then record the exposed painted beams and arrange a specialist visit to undertake an EDXRF sample of the paint. The floor boards could then be put down again (OA North 2011);
- *Watching brief of other soft strip activities*: in addition to these specific actions, there needs to be an archaeological presence at all times where the contractor wishes to remove wall plaster or any other coverings and/or partitions. Details of the exact scope of works, the schedule of such works and/or method statements are not currently available (*op cit*);
- *Reporting on the results of this work*: following completion of all the fieldwork, a report needs to be produced, not only enabling the signing off of the condition relating to the Two Lions (*op cit*), but also enabling the results to be incorporated within the final report and any subsequent publication.

8.11.2 Previous work undertaken for the whole of the proposed development showed at least three of the buildings proposed for demolition were thought to date back to the late medieval or early post-medieval period (OA North 2005a). Based upon these findings, further documentary work and standing building assessment was undertaken, consisting of more detailed investigation of certain parts of the complex, together with the additional survey of number 5-7 Princes Street and a watching brief during demolition of the complex (OA North 2008). An important part of this further investigation was to inspect the main front elevation of number 9-12 Princes Street, which revealed the nature of the relationship between the properties. Although the work has been reported on and there are no outstanding requirements relating to the former Sunlight Laundry Buildings, it is necessary, given that the buildings were part of the conservation area, to include the results in the final report (OA North 2011).

8.12 REPORT PRODUCTION AND ARCHIVE DEPOSITION

8.12.1 One of the primary aims of the project is to make the results of the investigation available to the wider public, thus fulfilling the planning condition. This will be achieved through the compilation and submission of an archive report and the deposition of the site archive with Tullie House Museum, Carlisle, and a copy of the report to the CCCHER. The deposition of a properly ordered and indexed project archive in an appropriate repository is considered an essential and integral element of all archaeological projects by the IfA in that organisation's code of conduct (IfA 2010). The collated results of each stage of the project will form the basis of a full archive, compiled to professional standards in accordance with EH and other guidelines (EH 1991; 2006; Walker 1990). The archive report will comprise the collation of the

detailed data deriving from the analysis and will include a synthesised conclusion. It will be an excellent reference to any future researchers seeking a detailed account of the works undertaken at Penrith New Squares and the results achieved. Although the archive report itself will not be suitable for publication, it would, at the completion of the project, form the basis for a text to be published in a journal article. Such a publication would synthesise the results of the completed project, and would aim to present a high degree of integration between the multi-thematic analyses and the wider economic and social history of the region.

8.12.2 **Assemble and edit specialist reports:** each specialist report will be edited for consistency with the stratigraphic sequence, and in terms of style and content. Liaison will be maintained with the specialists, who will receive edited drafts for final comment. In this form, the specialist reports will be ready for incorporation into the archive report.

8.12.3 **Compile archive report:** the archive report will present:

- an introduction, detailing the contract background, site location, historical and research context, as well as the updated aims and objectives presented in this document;
- a section presenting the methodologies employed on site, as well as those of the specialist analyses;
- a summary of the detailed documentary research undertaken and the sources examined;
- a stratigraphic narrative arranged by phase and site component;
- individual sections presenting details of specialist analyses;
- a bibliography;
- appendices of raw data, together with key documents (the OA North project designs for the fieldwork and for the programme of post-excavation analysis);
- selected illustrative figures and plates.

8.13 PUBLICATION

8.13.1 The assessment has indicated that, following the completion of the project, the results of the project would be worthy of publication. An appropriate text will be compiled, supported by a number of illustrations, comprising drawings (prepared in Adobe Illustrator) and photographs, tables to summarise data and, where appropriate, interpretative phase drawings. The complete, illustrated, text will be edited by the project manager and quality-assured by the project executive to check and ensure that it is complete, appropriate for the purpose intended, and academically legitimate. Any corrections arising from the QA will be addressed by the project manager before the document is signed-off by the project executive. Following sign-off, the project manager will submit all components of the draft for publication. The eventual place of publication is provisionally envisaged as the *Transactions of the Cumberland and Westmorland Antiquarian and Archaeological Society*.

9 PUBLICATION

9.1 INTRODUCTION

9.1.1 In accordance with the guidelines provided in *MAP2* (English Heritage 1991), it is proposed that the results of the project should be disseminated through the production of an academic publication. This publication is likely to comprise no more than 6000 words of text, excluding bibliography, and the narrative will be supported by an appropriate number of line drawings, including artefactual illustrations and interpretative phase drawings, and plates. It is anticipated that the publication will form an academic article, within an appropriate academic journal, such as *the Transactions of the Cumberland and Westmorland Antiquarian and Archaeological Society*.

9.1.2 The publication will address the revised research objectives for the project (*Section 7*) and will comprise:

1. INTRODUCTION

- 1.1 Site Location

- 1.2 Circumstances of the Project

- 1.3 Historical Background

2. STRATIGRAPHIC NARRATIVE

3. ARTEFACTUAL AND ECOFACTUAL ANALYSIS

4. DISCUSSION

Bibliography

Acknowledgements

9.1.3 Following completion, the draft publication text will be submitted for internal revision and will then be copy edited ready for publication.

9.2 PROJECT ARCHIVE AND DEPOSITION

9.2.1 The completion of the project will result in an integrated archive, containing full details and catalogues of all stratigraphical, artefactual, and environmental analyses. This will also contain the project circumstances, an historical background, particularly that gained through documentary research, and provide an interpretation of the results, set within their local and regional setting.

9.2.2 Following the completion of the text for publication, the archive will be updated as necessary, particularly the information contained in the database. This, along with the material in boxes, will be checked, and box lists compiled and appended. The entire paper and material archive will be indexed, ordered and checked, and all parts delivered to the Penrith and Eden Museum.

A copy of the paper archive on microfiche will also be made. Digital mapping will need to be prepared for long-term storage, including the production of metadata. The digital record should be duplicated as a paper record for long-term archiving.

10 RESOURCES, MANAGEMENT AND PROGRAMMING

10.1 PROJECT TEAM

10.1.1 The team consists entirely of internal OA North staff (Table 7). The project will be managed by Emily Mercer.

Name	Organisation	Tasks
Emily Mercer	OA North	Project management; overseeing the production of publication text; and editing of publication text
Rachel Newman	OA North	Academic editing/QA
Jeremy Bradley	OA North	Stratigraphic analysis; documentary research; production of publication text
Jeremy Bradley	OA North	Medieval and post-medieval pottery
Christine Howard-Davis	OA North	Production of clay tobacco pipes, vessel and window glass, ceramic and stone building material, metalwork, and industrial residues reports and catalogues
Andrew Bates	OA North	Production of animal bone report and catalogue
Elizabeth Huckerby/ Denise Druce/ Sandra Bonsall	OA North	Botanical analysis and report
Project Assistant	OA North	Archive preparation
Mark Tidmarsh	OA North	CAD illustration
Adam Parsons	OA North	Publication illustration

Table 7: Proposed project team

10.2 PROGRAMMING

10.2.1 The project programming is conditioned by a series of summary tasks, which are outlined in Table 8.

Task	Description	Performed by
	SET-UP AND MONITORING	
1	Academic Management	Rachel Newman
2	Management and monitoring	Emily Mercer
3	Team meetings	All
	TRANSPORT OF MATERIALS	
4	Dispatch material to external specialist	Project Assistant
	CATALOGUE PHOTOGRAPHS	
5	Mark photographs and slides, and order the archive	Project Assistant
	DOCUMENTARY RESEARCH	
6	Visit relevant archives and libraries and undertake documentary and cartographic analysis	Jeremy Bradley or Kathryn Blythe
7	Identify and consult relevant secondary sources to identify comparable sites and buildings within the region	Jeremy Bradley or Kathryn Blythe
	FINDS ANALYSIS AND REPORTS	
9	Create/update finds database	Chris Howard-Davis

	Medieval and post-medieval pottery	Jeremy Bradley
10	Other finds	Chris Howard-Davis
	STRATIGRAPHIC ANALYSIS	
11	Stratigraphic analysis	Jeremy Bradley
12	Create context database	Project Assistant
13	Redraw matrices	Jeremy Bradley
14	Integrate analysed finds into stratigraphic matrix	Jeremy Bradley
15	Integrate documentary research and stratigraphy	Jeremy Bradley
16	Prepare stratigraphic text	Jeremy Bradley
17	Compile phase plans and sections	Jeremy Bradley
18	Digitise plans and sections	Mark Tidmarsh
	ENVIRONMENTAL ANALYSIS AND REPORTING	
19	Pollen analysis	Elizabeth Huckerby/Denise Druce/Sandra Bonsall
	ARCHIVE REPORT	
20	Compile text	Jeremy Bradley
21	Illustration	Mark Tidmarsh
	PUBLICATION TEXT	
22	Compile publication text	Jeremy Bradley
23	Compile illustrations	Mark Tidmarsh/Adam Parsons
24	Edit first draft text	Emily Mercer
25	Revise text	Jeremy Bradley
26	Edit final draft text	Rachel Newman
	ARCHIVE DEPOSITION	
27	Update archive	Paul Dunn
33	Deposit final archive	Paul Dunn

Table 8: Summary task list

10.3 MANAGEMENT STRUCTURE

- 10.3.1 OA North operates a project management system. The team is headed by the Project Manager, who assumes ultimate responsibility for the implementation and execution of the project design and the achievement of performance targets, be they academic, budgetary, or scheduling.
- 10.3.2 The Project Manager may delegate specific aspects of the project to other key staff, who both supervise others and have a direct input into the compilation of the report. The Project Manager will define and control the scope and form of the post-excavation programme, and will arrange and co-ordinate regular meetings and reviews with project team members.
- 10.3.3 OA North would also be able to provide the client and curator with updates on the progress of the work, if required, at regular intervals during the course of the project.
- 10.3.4 OA North places importance on the tight and effective management of projects in order to deliver best value to our clients. An element of managerial time will be dedicated to ongoing quality assurance and internal monitoring. This is part of our internal quality assurance system and ensures the prompt delivery of the agreed report or other deliverables on time and budget.
- 10.3.5 OA North has considerable experience of excavation and post-excavation projects of all periods and is an Institute for Archaeologists (IfA) registered organisation (RAO 17). All members of staff operate to the IfA *Code of Conduct* (2010).

11 OTHER MATTERS

11.1 HEALTH AND SAFETY

11.1.1 All OA North post-excavation work will be carried out under relevant Health and Safety Legislation, including the Health and Safety at Work Act (1974), and that detailed in the *Health and Safety Manual* (SCAUM 1997). A copy of the Oxford Archaeology Health and Safety Policy can be supplied on request. The nature of the work means that the requirements of the following legislation are particularly relevant:

- Workplace (Health, Safety and Welfare) Regulations (1992): offices and finds processing areas;
- Manual Handling Operations Regulations (1992): transport of bulk finds and samples;
- Health and Safety (Display Screen Equipment) Regulations (1992): use of computers for word-processing and database work;
- COSHH (1998): finds conservation and environmental processing/analysis.

11.2 INSURANCE

11.2.1 The insurance, in respect of claims for personal injury to, or the death of, any person under a contract of service with the unit, and arising out of, and in the course of, such person's employment, shall comply with the Employers' Liability (Compulsory Insurance) Act 1969 and any statutory orders made thereunder. OA North has professional indemnity to a value of £2,000,000, employer's liability cover to a value of £10,000,000, and public liability to a value of £15,000,000. Written details of insurance cover can be provided if required.

11.3 PROJECT MONITORING

11.3.1 Any proposed changes to the project design will be discussed with the client and relevant bodies.

11.4 TOTAL COSTS

11.4.1 The total costs for the analysis stage and report production are set out in the Financial Breakdown in *Appendix 3*.

BIBLIOGRAPHY

CARTOGRAPHIC SOURCES

Ordnance Survey, 1995 *Cumbria* NY52NW, 1:50,000

CRO(C) DRC/8/150, 1849 *Map of the Parish of Penrith in the County of Cumberland Drawn for the Commutation of Tithes, In two parts. Part 1, and Plan of Penrith, Part 2*

SECONDARY SOURCES

AHDS, 2007 *Digital Archives from Excavation and Fieldwork Guide to Good Practice*, <http://ads.ahds.ac.uk/project/goodguides/excavation/>

Appleby, AB, 1978 *Famine in Tudor and Stuart England*, Liverpool

Bailey, RN, and Cramp, RJ, 1988 *The British Academy of Anglo-Saxon Stone Sculpture: volume 2, Cumberland, Westmorland and Lancashire North-of-the-Sands*, Oxford

Boessneck, J, 1969 Osteological Differences between Sheep (*Ovis aries* Linne) and Goat (*Capra hircus* Linne), in D Brothwell and E Higgs (eds), *Science and Archaeology*, **2**, London, 331-58

Brennand, M (ed), 2006 *The Archaeology of North West England. An Archaeological Research Framework for North West England: Volume 1, Resource Assessment*, Archaeol North West, **8**, Manchester

Brennand, M (ed), 2007 *Research and Archaeology in North West England. An Archaeological Research Framework for North West England: Volume 2, Research Agenda and Strategy*, Archaeol North West, **9**, Manchester

Burl, A, 1979 *The Stone Circles of the British Isles*, New Haven

Clarke, J, 1787 *A Survey of the Lakes of Cumberland, Westmorland and Lancashire*, London

Corèdon, C, 2004 *A Dictionary of Medieval Terms and Phrases*, Woodbridge

Countryside Commission, 1998 *Countryside Character Volume 2: North West*, Cheltenham

Cumberland Pacquet, 1818 News article recording the find of a Roman coin and two battleaxes, 1st September

Cumbria County Council, 2002 *Extensive Urban Survey, Archaeological Assessment Report, Penrith*, unpubl rep

Department for Communities and Local Government (DCLG), 2010 *PPS5 planning for the historic environment*, London

Department of the Environment, 1990 *Planning Policy Guidance Note 16: Archaeology and Planning*, London

- Egan, G, 2005 *Material Culture in London in an age of Transition: Tudor and Stuart Period Finds c 1450- c 1750*, London
- Egan, G, and Pritchard, F, 1991 *Dress Accessories c 1150 – c 1450*, Medieval finds from excavations in London, **3**, London
- English Heritage, 1991 *Management of Archaeological Projects*, 2nd edn, London
- English Heritage, 1997 *Archaeology Division Research Agenda (Draft)*, unpubl doc
- English Heritage, 2002 *Environmental Archaeology: a Guide to the Theory and Practice of Methods from Sampling and Recovery to Post-Excavation*, Swindon
- English Heritage, 2006 *Management of Research Projects in the Historic Environment (MoRPHE)*, London
- Frodsham, PNK, 1989 Two Newly Discovered Cup and Ring Marked Stones from Penrith and Hallbankgate, with a Gazetteer of all known Megalithic Carvings in Cumbria, *Trans Cumberland Westmorland Antiq Archaeol Soc*, n ser, **89**, 1-19
- Giecco, F, 2011 Life in Medieval Carlisle, in M Brennan and KJ Stringer (eds) *The making of Carlisle: From Romans to railways*, Kendal, 121-136
- Greenlane Archaeology, 2009 *130-136 Stricklandgate, Kendal, Cumbria; Archaeological Post-Excavation Assessment*, unpubl rep
- Hall, LJ, and Alcock, NW, 1994 *Fixtures and Fittings in dated Houses, 1567-1763; Great Britain*, York
- Hall, AR, and Huntley, JP, 2007 *A Review of the Evidence for Macrofossil Plant Remains from Archaeological Deposits in Northern England*, London
- Halstead, P, and Collins, P, 1995 *Sheffield Animal Bone Tutorial: Taxonomic identification of the principal limb bones of common European farmyard animals and deer: a multimedia tutorial*, Archaeology Consortium, TL TP, Univ Glasgow
- Hinton, DA, 1987 Preface, in the Society for Medieval Archaeology, *Archaeology and the Middle Ages: Recommendations by the Society for Medieval Archaeology to the Historic Buildings and Monuments Commission for England*, *Medieval Archaeol*, **31**, 1-12
- Huckerby, E, and Graham, F, 2009 Waterlogged and charred remains, in C Howard-Davis (ed), *The Carlisle Millennium Project: Excavations in Carlisle, 1998-2001: volume 2: finds*, Lancaster Imprints, **15**, Lancaster, 926-36
- Hurst-Vose, R, 2008 Post-medieval and later Flat or Window Glass, in F Brown and C Howard-Davis, *Norton Priory: monastery to museum. Excavations 1970-87*, Lancaster Imprints, **16**, Lancaster, 328-9
- Institute for Archaeologists (IfA), 2010 *By-Laws: Code of Conduct*, Reading
- Kratochvil, Z, 1969 Species Criteria on the Distal Section of the Tibia in *Ovis Ammon F Aries* and *Capra Aegarus F Hircus L*, *Acta Veterinaria* (Brno), **389**, 483-90
- Leech, RH, and Gregory, RA, forthcoming, *Archaeological Investigations of three Burgage Plots in Main Street, Cockermouth, Cumbria*, Cumbria Archaeol Res Reports, **3**
- McCarthy, MR, and Brooks, CM, 1992 The establishment of a medieval pottery sequence in Cumbria, England, in D Gaimster, and M Redknap, *Everyday and Exotic Pottery from Europe, c 650-1900*, Oxford,

21-37

- McNeil, R, and Newman, R, 2006a The post-medieval resource assessment, in Brennand 2006, 145-64
- McNeil, R, and Newman, R, 2006b The industrial and modern period resource assessment, in Brennand 2006, 165-94
- Margary, ID, 1957 *Roman Roads in Britain*, **2**, London
- Medieval Pottery Research Group, 2001 *Minimum Standards for the Processing, Recording, Analysis, and Publication of Post-Roman Ceramics*, Medieval Pottery Research Group Occ Pap, **2**, London
- Medieval Pottery Research Group (MPRG), 2010 *A Research Strategy and Agenda for Post-Roman Ceramic Studies in Britain*, <http://mprg.wikispaces.com/>
- Medieval Pottery Research Group (MPRG), 2011 *A Research Framework for Post-Roman Ceramic Studies in Britain*, Medieval Pottery Res Grp Occ Pap, **6**, London
- Medieval Settlement Research Group, (MSRG) 1996 *Medieval Rural Settlements, a Policy on their Research, Survey, Conservation and Excavation*, <http://www.britarch.ac.uk/msrg/policy.html>
- Medieval Settlement Research Group (MSRG), 2006 *Annual Report*, **21**, unpubl rep
- Medieval Settlement Research Group (MSRG), 2010 *Policy Statement*, www.britarch.ac.uk/msrg/msrgpolicy, accessed on 25th November 2010
- Bradley, J and Miller, I, The medieval and post-medieval pottery, in C Howard-Davis, *The Carlisle Millennium Project: Excavations in Carlisle, 1998-2001, Volume 2: The Finds*, Lancaster Imprints 15, Lancaster, 660-78
- Newman, C, 2006 Medieval Period Resource Assessment, in Brennand 2006, 115-44
- Newman, C, and Newman, R, 2007 The Medieval Agenda, in Brennand 2007, 95-114
- Newman, R, and McNeil, R, 2007a The Post-Medieval Period Research Agenda, in Brennand 2007, 115-32
- Newman, R, and McNeil, R, 2007b The Industrial and Modern period research agenda, in Brennand 2007, 133-58
- Newman, RM, Hair, NJ, Howard-Davis, CLE, Brooks, C, and White, AJ, 2000 Excavations at Penrith Market, 1990, *Trans Cumberland Westmoreland Antiq Archaeol Soc*, n ser, **100**, 105-30
- Newman, RM, forthcoming *The Archaeology of Kendal*
- OA North, 2005a *Southend Road, Penrith, Cumbria: Archaeological Desk-Based Assessment*, unpubl rep
- OA North, 2005b *Land at Southend Road, Penrith, Cumbria: Archaeological Evaluation*, unpubl rep
- OA North, 2005c *Two Lions Inn, Great Dockray, Penrith, Cumbria: Archaeological Building Assessment*, unpubl rep
- OA North, 2006a *Two Lions Public House, Great Dockray, Penrith, Cumbria: Archaeological Desk-Based Assessment and Building Investigation*, unpubl rep
- OA North, 2006b *Former Sunlight Laundry Premises, Penrith, Cumbria: Archaeological Desk-Based Assessment and Building Assessment*, unpubl rep

- OA North, 2007a *Penrith New Squares, Penrith, Cumbria: Archaeological Evaluation Report*, unpubl rep
- OA North, 2007b *Second Wood Street, Nantwich: Palaeoenvironmental Investigations*, unpubl rep
- OA North, 2008 *Former Sunlight Laundry Premises, Penrith, Cumbria: Archaeological Standing Building Investigation*, unpubl rep
- OA North, 2011 *Penrith New Squares: Update report on the Archaeological works undertaken to date and outstanding issues*, unpubl rep
- Perriam, DR, 2008 William Strickland's Tower in Penrith: Penrith Castle or Hutton Hall, *English Heritage Hist Rev*, **3**, 36-45
- Pevsner, N, 1967 *The Buildings of England: Cumberland and Westmorland*, Harmondsworth
- Prummel, W, and Frisch, H-J, 1986 A guide for the distinction of species, sex and body side in bones of sheep and goat, *J Archaeol Sci*, **13**, 567-77
- Read, B, 2008 *Hooked-clasps and Eyes: a classification of sharp- and blunt-hooked clasps and miscellaneous hooks, eyes, loops, rings or toggles*, Langport
- Richardson, C, 1998 A Catalogue of recent acquisitions to Tullie House Museum and reported finds from the Cumbrian area 1990-1996. Part I: Tullie House accessions, *Trans Cumberland Westmorland Antiq Archaeol Soc*, n ser, **98**, 1-60
- Schmid, E, 1972 *Atlas of Animal Bones for Prehistorians, Archaeologists and Quaternary Geologists*, London
- Shotter, D, 1997 *Romans and Britons in North-West England*, Lancaster
- Stace, C, 1997 *New Flora of the British Isles*, 2nd edn, Cambridge
- Standing Conference of Archaeological Unit Managers (SCAUM), 1997 *Health and Safety Manual*, Poole
- UKIC, 1984 *Environmental Standards for the Permanent Storage of Material from Archaeological Sites*, London
- Walker, K, 1990 *Guidelines for the Preparation of Excavation Archives for Long-term Storage*, UKIC, London
- Winchester, AJL, 1979 *Four Historic Cumbrian Towns*, unpubl rep for Cumbria County Council
- Zant, J, Miller, I, Mould, Q, and Howard-Davis, C, 2011 The northern defences of medieval Carlisle: Excavations at Rickergate, 1998-9, in RM Newman (ed), *Carlisle: Excavations at Rickergate, 1998-9 and 53-55 Botchergate, 2001*, Cumbria Archaeol Res Rep, **2**, Bowness-on-Windermere, 5-69

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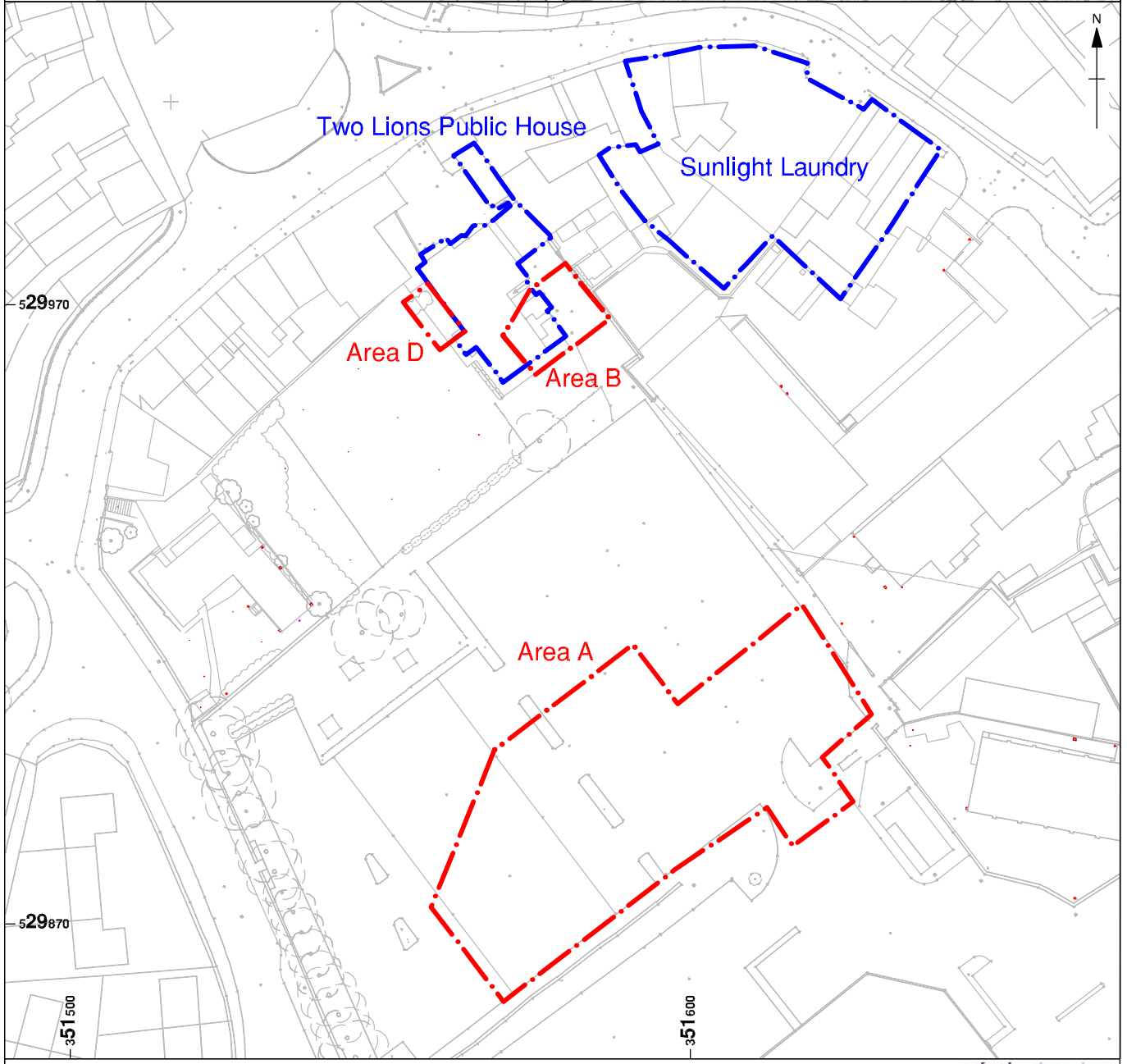
Figure 5: Area A, Phase 4

Figure 6: Area B, Phases 1 and 2

Figure 7: Area B, Phase 3

Figure 8: Area B, Phase 4

Figure 9: Overall plan of Areas A and B



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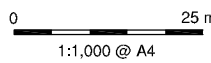


Figure 1: Site location

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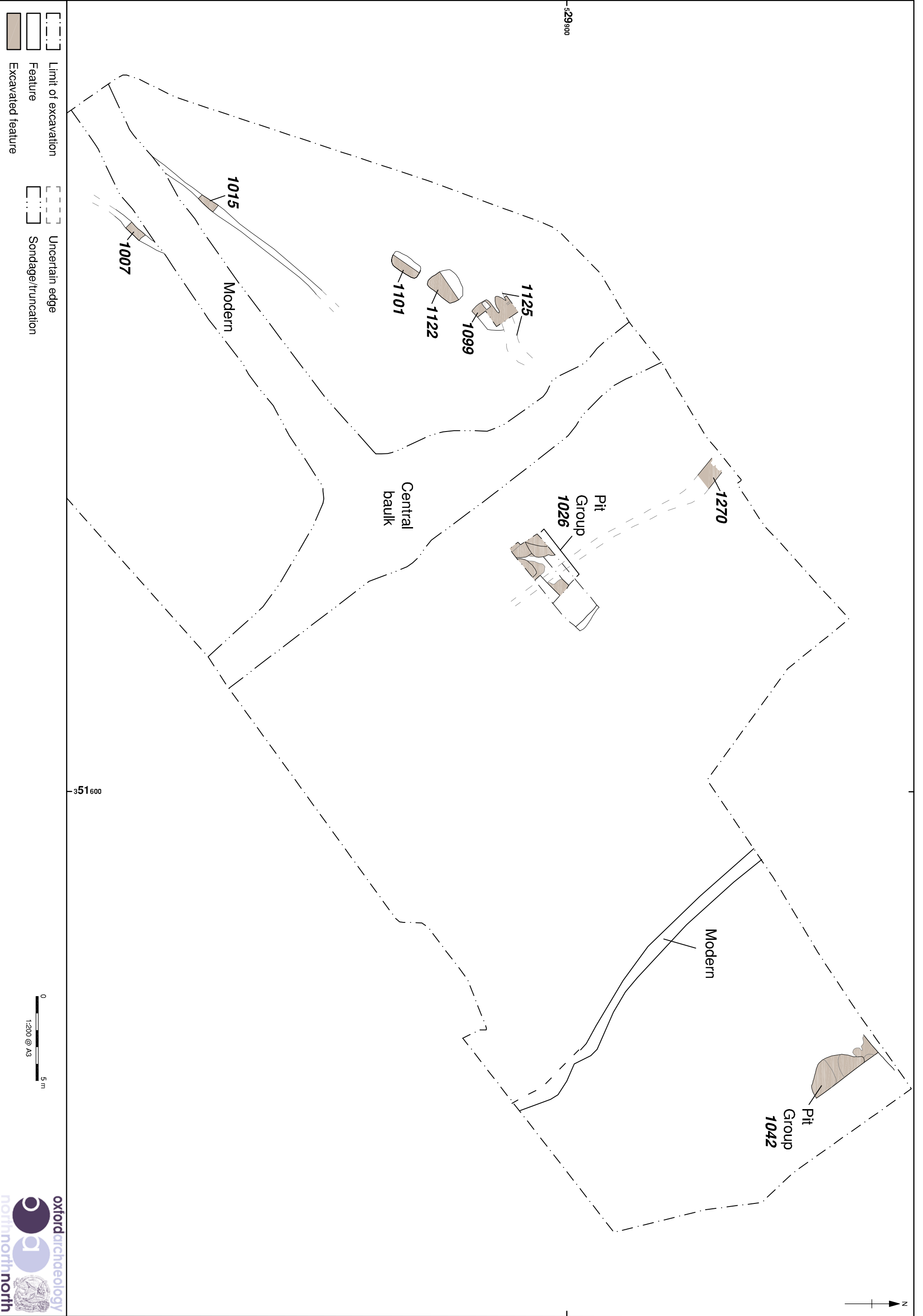


Figure 2: Area A, Phase 1

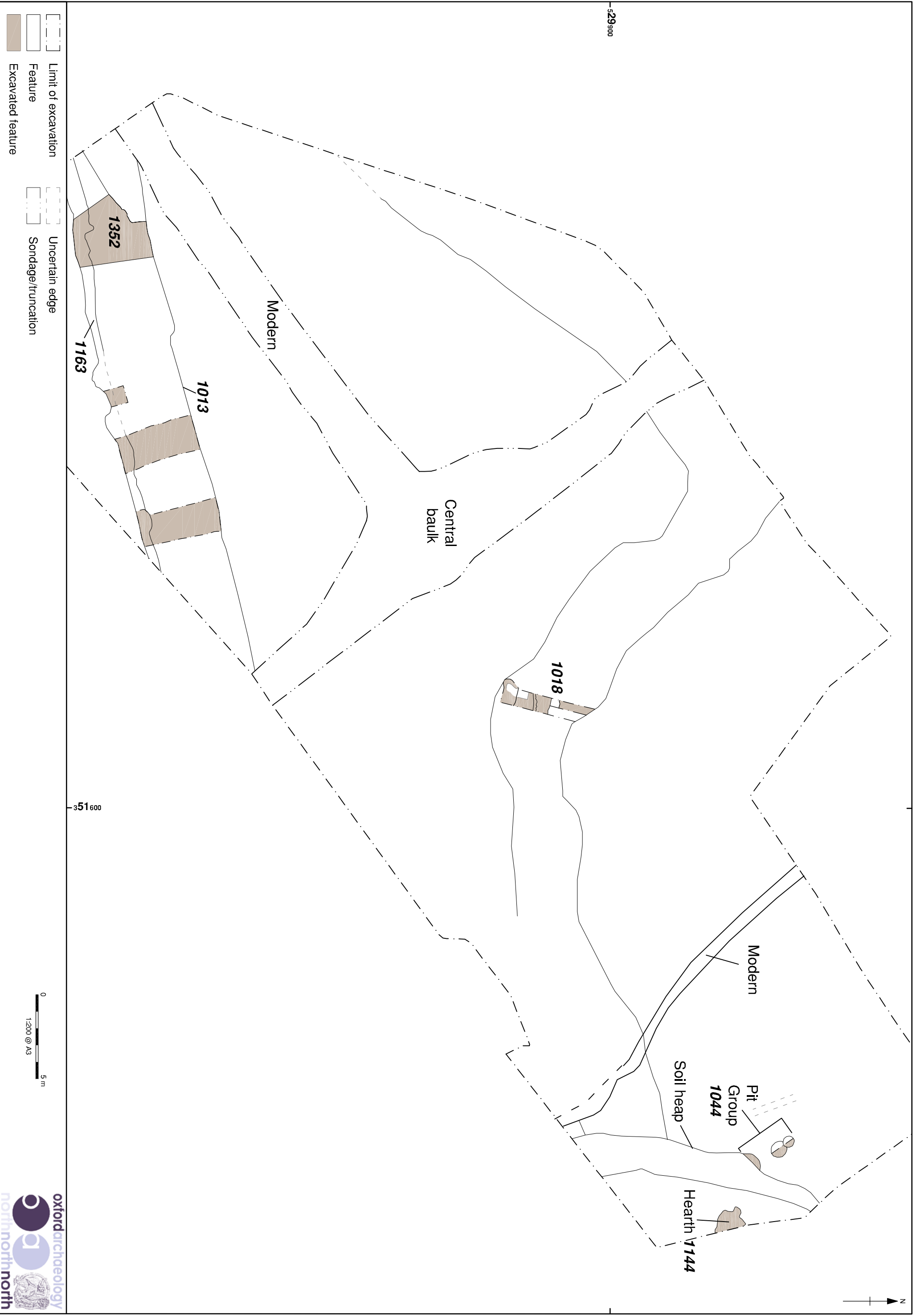


Figure 3: Area A, Phase 2

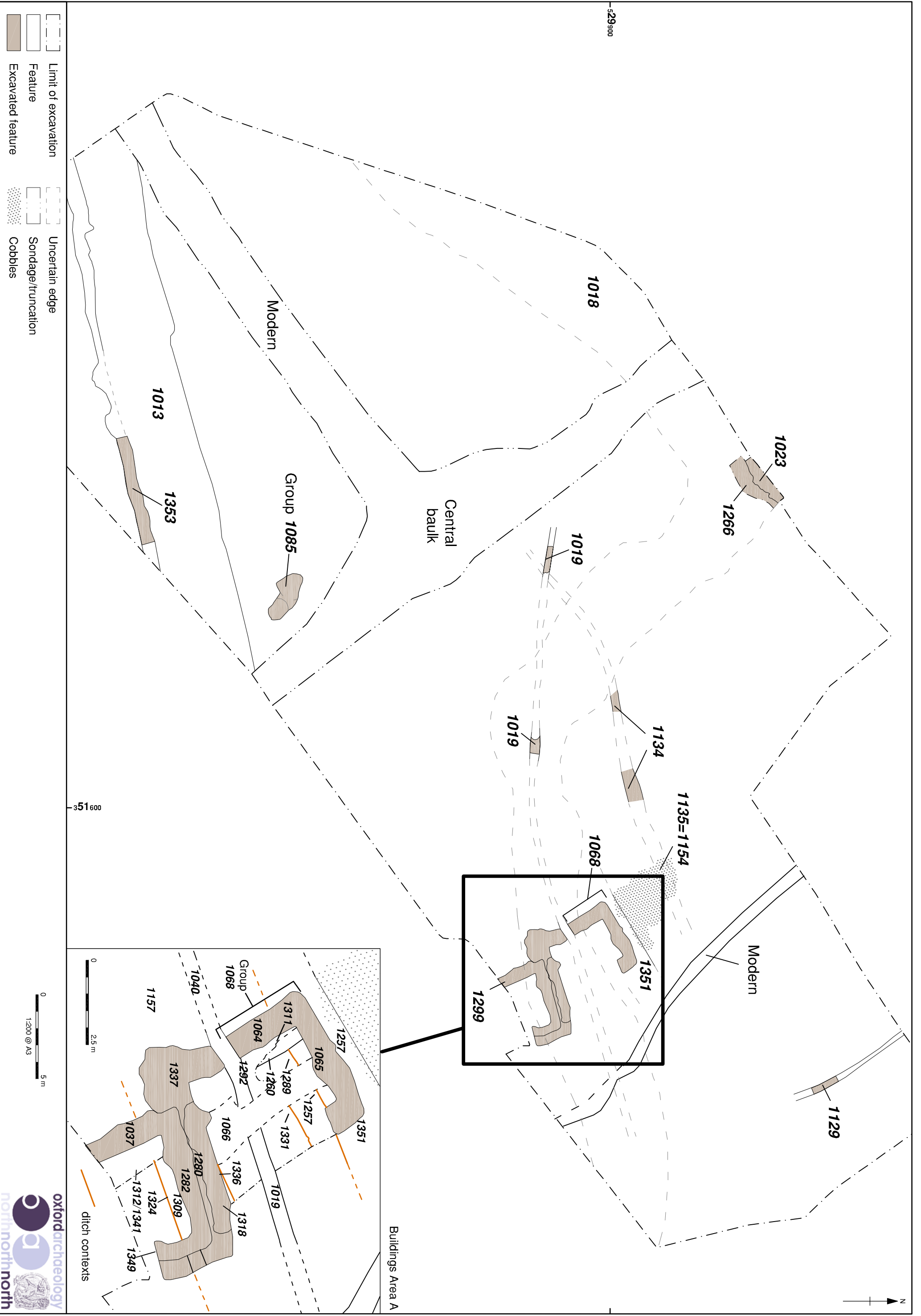


Figure 4: Area A, Phase 3, with inset of structures 1068 and 1299

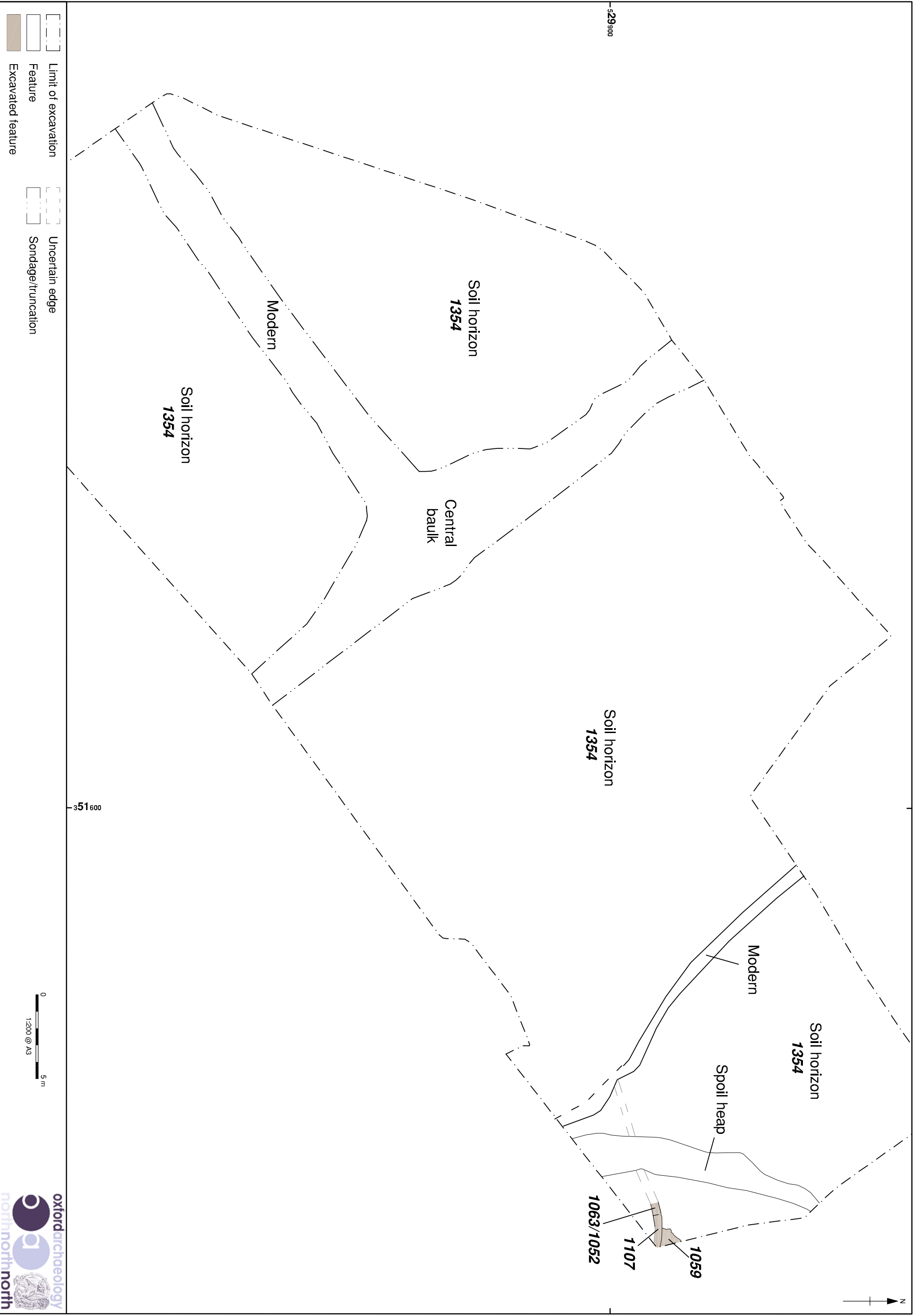


Figure 5: Area A, Phase 4

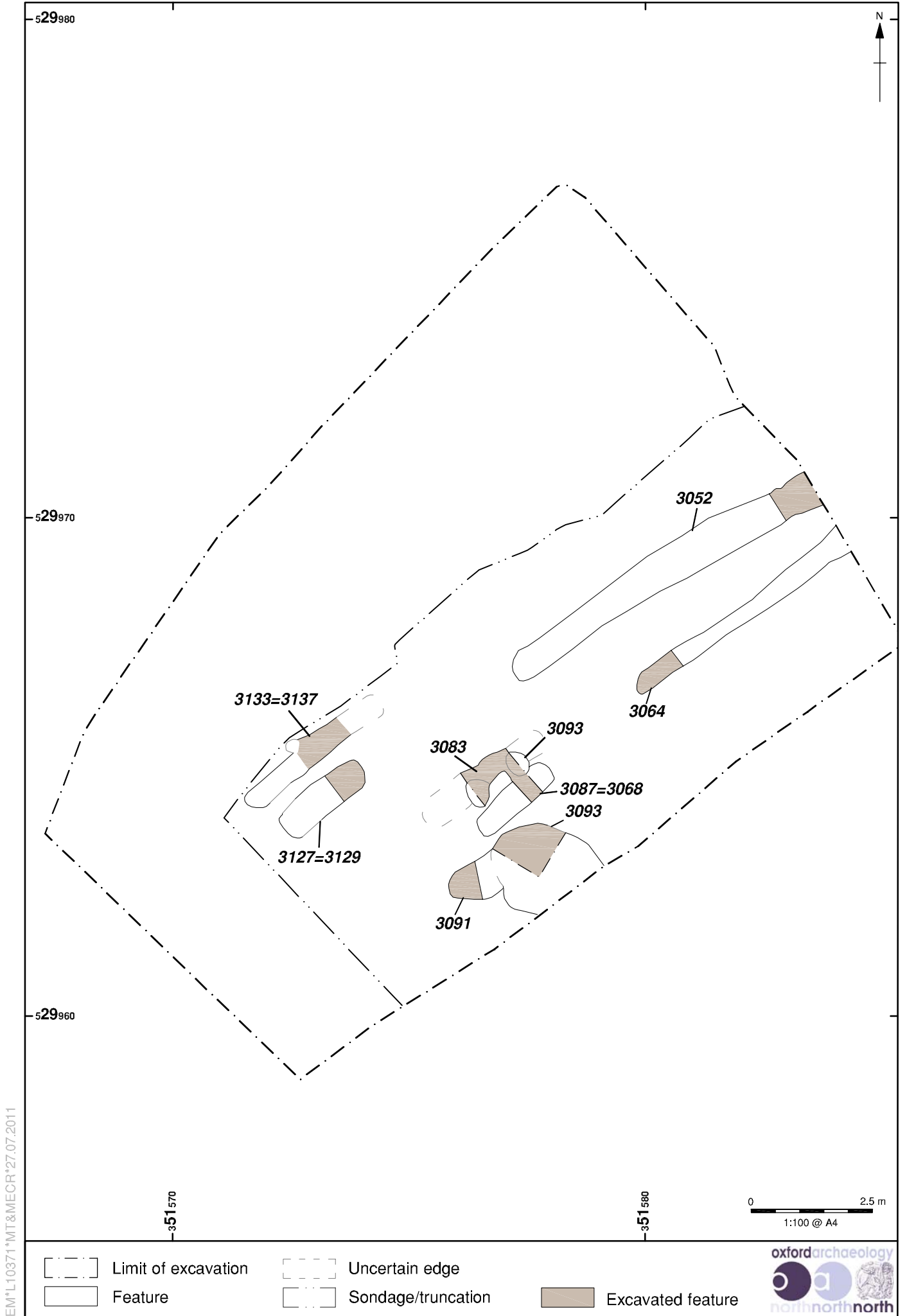


Figure 6: Area B, Phases 1 and 2

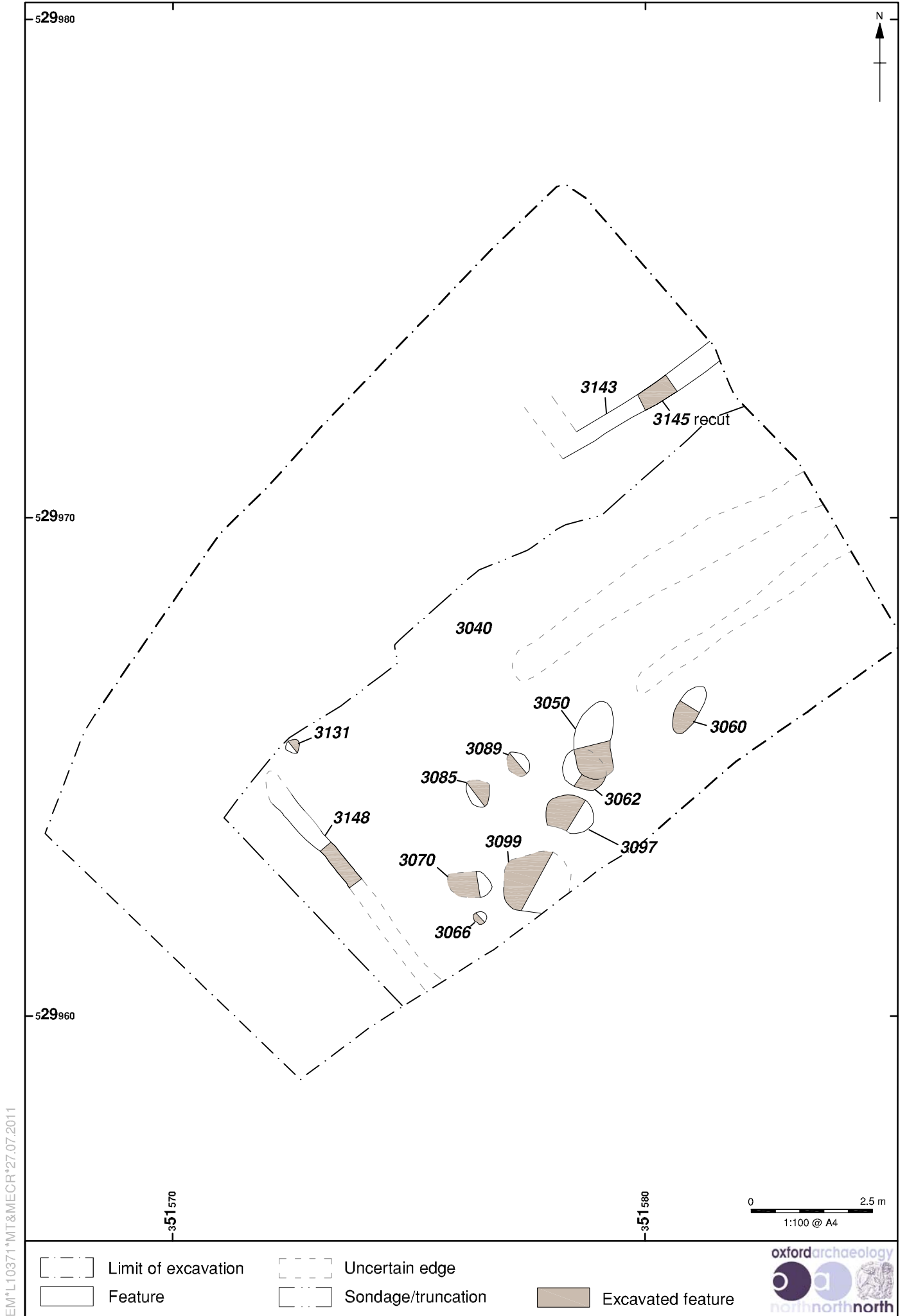


Figure 7: Area B, Phase 3

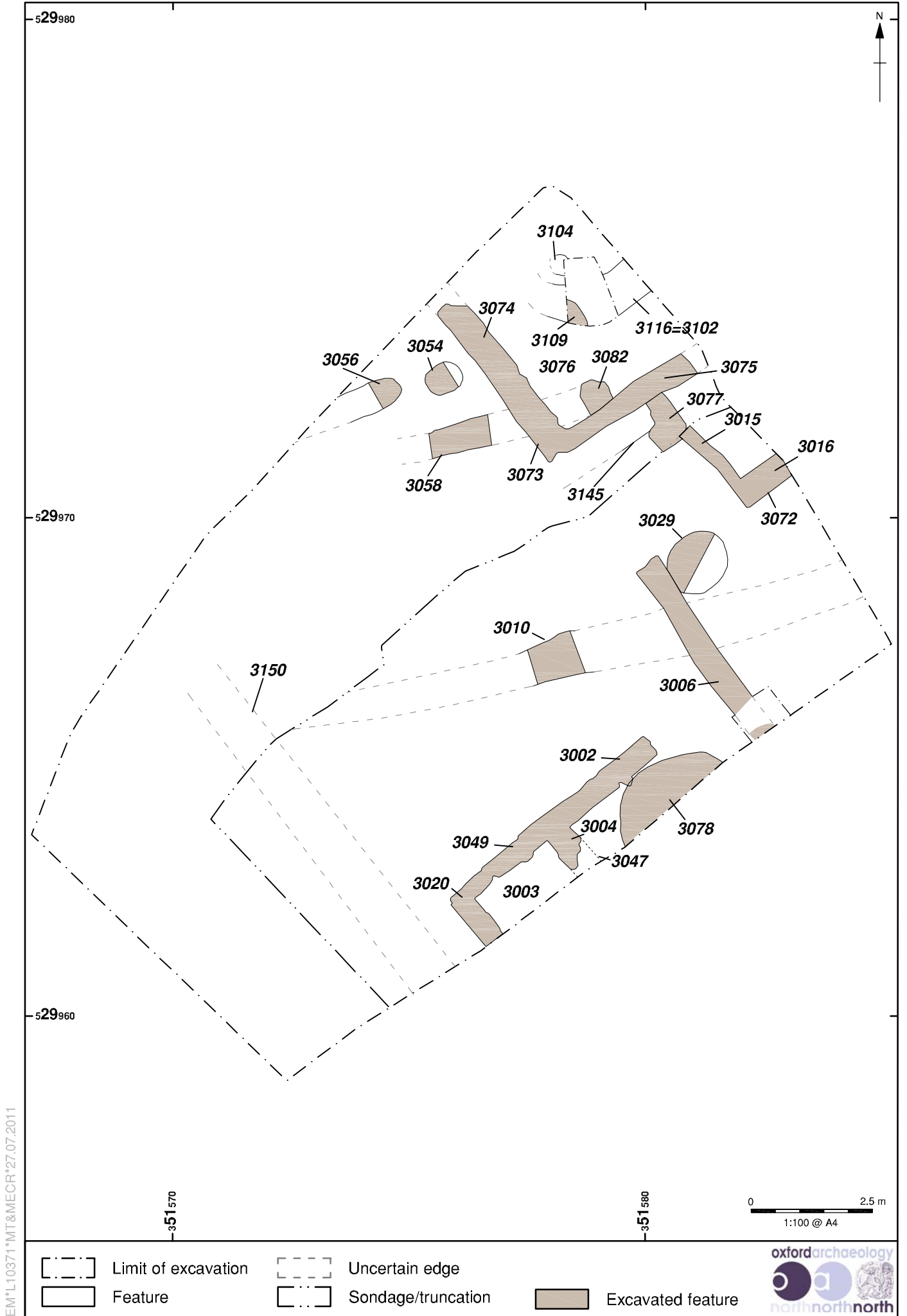


Figure 8: Area B, Phase 4



Figure 9: Overall plan of Areas A and B

APPENDIX 1: PROJECT DESIGN FOR POST-EXCAVATION ASSESSMENT

1.1 PROJECT BACKGROUND

- 1.1.1 In 2003, a planning application (planning ref 3/05/0954) was submitted for the redevelopment of land adjacent to Southend Road, Penrith, Cumbria (NGR centred NY 5160 2990). This, the Penrith New Squares development, was to comprise the construction of retail, housing and leisure facilities on land formerly occupied by car parks, playing fields and the Penrith Town football ground. The scheme was granted permission with a number of conditions, including the undertaking of an appropriate programme of archaeological works. Accordingly, Oxford Archaeology North (OA North) was duly commissioned to undertake these specialist works to meet the requirements of Cumbria County Council Historic Environment Service (CCCHES). Early stages of the archaeological programme comprised the completion of a desk-based assessment (OA North 2005a) and a trial-trench evaluation (OA North 2005b; 2007). These investigations demonstrated the presence of medieval and post-medieval archaeological remains within the development area and, accordingly, CCCHES issued a brief, in accordance with PPG16 (DoE 1990), for a programme of mitigation that would allow these remains to be preserved by record.
- 1.1.2 Over the summer of 2008, OA North undertook the programme of mitigation across three specific areas. Area A, located across the centre of the Southend Road carpark, was, in the first instance, subject to a strip and record exercise in order to identify archaeological deposits and features so that they could be subsequently investigated in detail. Areas B and D were investigated by trenches located around the former Two Lions public house. Although the CCCHES brief indicated that a scheme of post-excavation works should comprise an integral element of the archaeological programme necessary to discharge the pertinent planning condition, such works were never commissioned due to the insolvency of the original principal contractor in late 2008. This mantle has now been assumed by Sainsbury's Supermarkets Ltd, with the intention of revitalising the stalled development.
- 1.1.3 The following document is submitted at the request of Sainsbury's Supermarkets Ltd and represents a project design for a full programme of archive consolidation and post-excavation assessment of the results of fieldwork undertaken in 2008 in association with the New Squares development to the standards of English Heritage's (EH) *Management of Archaeological Projects, Second Edition* (MAP2; 1991) and the *Management of Research Projects in the Historic Environment* (MoRPHE; 2006). To maximise efficiency and coherency, it is proposed that the programme of archaeological works will be organised as a multi-stage project (of which Stages 1-2 have been completed already). The six stages of the investigation, in terms that will be utilised throughout this document, are as follows:
- **Project Stage 1:** referring to all preliminary and pre-planning determination works undertaken to date, including the desk-based assessment and building assessments of the Two Lions and Sunlight Laundry buildings (completed 2005-8);
 - **Project Stage 2:** the programme of intrusive archaeological works completed to date, including the trial-trench evaluation and programme of mitigation whereby all remaining features of cultural heritage significance identified within Areas A, B and D were preserved by record (completed by the end of 2008);
 - **Project Stage 3:** any further works undertaken on the site, including the three forthcoming watching briefs (Princes Court, the southern part of Area A, and Area C) and also the further mitigative building recording of the Two Lions;
 - **Project Stage 4:** subdivided into two stages, of which the first, 4a, will comprise the processing of the raw data generated by the Project Stage 2 fieldwork. The second (4b) will be the post-excavation assessment of the potential for further analysis of the processed Project Stage 2 data, culminating in the production of an assessment report for submission to the Client, to CCCHES, and ultimately to the Cumbria Historic Environment Record (CHER). Many of the processes for Project Stage 4 will remain valid for application to the archive generated during the forthcoming Project Stage 3 fieldwork, although some, particularly budgetary and timetabling, modifications will be required;

- **Project Stage 5:** an appropriate scheme of analysis based on the assessment results, culminating in the production of a draft text for publication for submission to the Client, CCCCHES and the CHER;
- **Project Stage 6:** publication and dissemination of the results, archiving of the original records and finds with the Cumbria Record Office and Penrith Museum, respectively.

1.1.4 This document is divided into five distinct parts; the first presents a brief introduction to the project, the second a summary of the Project Stages 1 and 2 results, whilst the third section briefly examines the research context of the project and presents the project aims and objectives. The fourth part provides a detailed method statement for Project Stage 4, the programme of post-excavation processing and assessment, whilst the fifth outlines the necessary resources to fulfil that programme. Since the present document covers only the assessment of the completed Project Stage 2 results, by definition, elements and finer details of *Sections 2, 4 and 5* will need to be updated and resubmitted following the completion of the forthcoming Project Stage 3 fieldwork. The scope of works and detailed methodologies for Project Stages 5 and 6 are dependent upon the results of Project Stage 4, at the completion of which an updated project design for the next stage will be issued. Because of this, it is not possible at this juncture to provide programmes and methodologies for Project Stages 5 and 6.

2 A REVIEW OF THE FIELDWORK RESULTS TO DATE

2.1 INTRODUCTION

2.1.1 The following section briefly outlines the results of the Project Stage 1 and 2 fieldwork undertaken by OA North up until the 2008 hiatus. It does not seek to be a comprehensive account of the recorded stratigraphy, nor of every phase of activity, but rather, to provide a context for the post-excavation programme.

2.2 PROJECT STAGE 1: DESK-BASED ASSESSMENT OF THE SCHEME PROPOSAL

2.2.1 In November 2004, OA North was commissioned by Taylor and Hardy, acting on behalf of Lowther Manelli and Tesco, to undertake an archaeological desk-based assessment (dba) of the site of a proposed superstore and associated development adjacent to Southend Road, Penrith. The archaeological work, which was undertaken in December 2004 and January 2005, was requested to inform a planning application for the proposed development.

2.2.2 The desk-based assessment demonstrated that the study area lies on the edge of the historic core of Penrith, and has some potential to contain buried remains of medieval tenements (OA North 2005a). The area adjoins market place, known as Great Dockray, which has been an important feature of Penrith since the medieval period. Considerable post-medieval development is recorded along the northern and eastern edges of the area, some of which has survived as standing buildings. The archaeological and historical importance of many of these structures is reflected by their status as listed building, and by their inclusion in a conservation area. The group value of the street frontage in this area was assessed as being of regional significance, with the Two Lions public house being of national significance, given its Grade II* listed status (LB SMR 25303, HER 4994). The potential for below-ground remains in these areas was also highlighted.

2.3 PROJECT STAGE 1: ARCHAEOLOGICAL BUILDING SURVEYS

2.3.1 *The Two Lions Public House:* following on from the dba and as a result of consultation with English Heritage, Manning Elliot, acting on behalf of the client, commissioned OA North to undertake an initial assessment of the Two Lions in order to understand its phasing and note any features of archaeological or historical significance. An assessment based on an RCHME Level 1-type survey (EH 1999) was carried out in July 2005 and the building was identified as having multiple phases of building or alteration, being of great historical interest (OA North 2005c). With this in mind, and given the building's statutory status, it was recommended that a more detailed programme of assessment and recording be undertaken to understand more fully the phasing of the structure.

2.3.2 As a result of these recommendations, Manning Elliott commissioned OA North to undertake a programme of further archaeological assessment of the Two Lions Public House. A planning application (planning reference 3/05/0956) was submitted for internal and external alterations to the building, and demolition of a nineteenth-century extension to the rear. In order to inform the planning decision and provision of listed building consent, further information was required. Consequently, English Heritage requested that a desk-based assessment and Level 3-type buildings assessment was undertaken. This work was carried out in June and July 2006.

2.3.3 The desk-based assessment consisted mainly of consultation of available documentary and cartographic sources for the application site, and included visits to the Cumbria County Record Office in Carlisle and consultation of OA North's library (OA North 2006a). The earliest identified documentary evidence was an early twentieth-century

reference to a deed dated 1584, which recorded the purchase of a house named 'Newhall', from Thomas Brisbie, by Gerard Lowther. The following year, Gerard Lowther is believed to have set about a comprehensive renovation and enlarging of the existing building, in the process creating a parlour with an ornately decorated ceiling which survives to this day. The effect of this redevelopment was the transformation of what was a substantial merchant's dwelling into a higher status manorial dwelling. References to subsequent conveyance deeds suggest that the property stayed in the Lowther family until 1626, when it was sold to Mary Grame or Graham, the descendants of whom sold the property to Thomas Langthorne in the 1650s.

- 2.3.4 The earliest cartographic evidence available is from 1787 when the building is shown accompanied by a bowling green to its west. The date for the establishment of the bowling green cannot be ascertained beyond the mid-eighteenth century, but it is thought to have earlier origins (OA North 2006a). Similarly, the date for the transformation of the dwelling into a public house was difficult to discern from documentary sources, but it is thought to have occurred in the mid-nineteenth century; the Penrith tithe map of 1849 identifies the property as a house owned and occupied by John Atkinson, a chair and table maker, but a map published three years later identifies the building as 'The Two Lions Public House' (OA North 2006a).
- 2.3.5 The detailed building investigation revealed eight broad phases of stratigraphy within the exposed fabric. The original Phase 1 structure was larger, and of higher status than previously thought, comprising a north/south-aligned range, with a porch/stair tower on its western front facade, and with a kitchen block to the rear (OA North 2006a). Decoration observed below the floorboards of the first floor demonstrates that the structure clearly pre-dates its purchase by Gerard Lowther in the late sixteenth century, and was already of reasonably high status prior to that date. Phases 2 and 3 chart the continued development of the structure as a medieval and post-medieval hall, with more accommodation and decoration added in Phase 2, including the ornately decorated ceiling which survives to this day, and the culmination of the medieval plan-type achieved by the insertion of a screens passage in Phase 3. Phase 4 represents a change of style, with an attempt to turn the medieval hall into a Georgian town-house. The later phases relate to its Victorian and subsequent use as a public house and hotel.
- 2.3.6 As a result of this second phase of work on the Two Lions, a third phase of detailed analysis and recording was recommended prior to and during the proposed alterations to the building. A specialist conservator was brought in to advise on conservation of the ornately decorated plaster ceiling (the conservation has still to be undertaken) and, subsequent to this, the ceiling was recorded by OA North (OA North 2006a). Following the collapse of funding for the original scheme, work was stopped and much remains to be recorded dependent upon the revised plans for the structure.
- 2.3.7 **The Sunlight Laundry Buildings:** in addition to the building recording work on the Two Lions, Manning Elliott commissioned OA North to undertake a programme of archaeological assessment at the former Sunlight Laundry Premises, Princes Street. A planning application was submitted (planning reference 3/05/0957) to demolish the former laundry premises as part of the wider redevelopment scheme at Southend Road (planning reference 3/05/0954) in order to provide the main pedestrian access and link between the proposed scheme and Penrith's retail core. The earlier dba (OA North 2005a) undertaken for the whole of the proposed development showed at least three of the buildings proposed for demolition, the whitewashed or rendered buildings (numbers 9-11 Princes Street), perhaps dated back to the late medieval or early post-medieval period. Consequently, Cumbria County Council's Historic Environment Service (CCCHES) requested that a supplementary desk-based assessment and an English Heritage Level 1-type standing building assessment be undertaken. The work was carried out in February and March 2006 and a report was issued which set out recommendations for further investigative works (OA North 2006b).
- 2.3.8 To this end, CCCHES issued a further brief in November 2006, taking the recommendations into account and outlining the further works necessary. This consisted of further, more detailed investigation of certain parts of the complex to English Heritage Level 2 standard, together with the additional survey of number 5-7 Princes Street and a watching brief during demolition of the complex. An important part of this further investigation was to inspect the main front elevation of numbers 9-12 Princes Street which revealed the nature of the relationship between the properties, specifically, that the two shop fronts were inserted, probably in the nineteenth or early twentieth century, and have partly removed evidence pertaining to a previous use for the buildings. The evidence remaining (such as blocked windows) suggested that numbers 9-10 were probably domestic dwellings prior to being absorbed into the laundry complex. Other buildings formerly part of the overall complex were observed to be freestanding structures and were dated to the early nineteenth century. Many of the buildings were demolished prior to the commencement of the watching brief, which limited the scope of the results, and only the rears of numbers 9-12 were inspected. The work has been reported on (OA North 2008) and there are no outstanding requirements relating to the former Sunlight Laundry Buildings.

2.4 PROJECT STAGE 2: TRIAL-TRENCH EVALUATION OF THE SCHEME AREA

- 2.4.1 Following the pre-determination desk-based assessment of the site as a whole, and work on the buildings of main concern within the conservation area, the development site was considered to be of high archaeological potential. Consequently, planning permission was granted with a number of conditions for the redevelopment (planning application ref 3/05/0954). One of the conditions was to ensure the implementation of a programme of archaeological work, the first phase of which was evaluation trenching. The majority of this was carried out by OA North between May and July 2007, with the final phase within the former Sunlight Laundry premises undertaken in September 2007.
- 2.4.2 Sixty-three trenches were excavated across the development site, measuring between 5m and 30m in length, and between 1m and 1.6m in width, depending on any physical restraints. Excavation was initially undertaken by machine to either the first deposits of archaeological significance or to natural soils, and then completed manually. Four trenches were completely devoid of any archaeological remains and modern services, eighteen trenches contained only modern services, whilst the remainder contained features of archaeological interest, which were investigated and recorded by hand.
- 2.4.3 Evaluation of a large proportion of the southern half of the proposed development site, in Trenches 1-15, focused around the playing fields and Penrith Football Club, identified no features of archaeological significance. This area was proposed for the construction of the supermarket and its associated car park. This may indicate that the south-western part of the site had been heavily truncated by levelling activity associated with construction of the playing fields and football club. However, as depicted on the cartographic sources consulted during the initial dba, it would seem that activity did not expand much beyond the limits of the medieval and early post-medieval town, around the north and eastern edges of the development site (OA North 2007).
- 2.4.4 Trenches 8 and 9 contained the concrete foundations of the former Penrith Rugby Club, which was located towards the south-west of the playing fields. It was constructed in the mid-twentieth century; the earliest reference to it was on the Ordnance Survey maps of 1968 and 1971. It was demolished in the late twentieth century (OA North 2005a).
- 2.4.5 Probably the most significant archaeological remains included those found within Trenches 16-19, positioned immediately around the Two Lions Inn, and resulting mainly from their physical association with the Grade II* listed Inn. Although not the earliest archaeological remains, they contained features of early post-medieval date, which included large, heavily robbed wall foundation trenches, most likely relating to the early manor of the Lowther Family built in the late sixteenth century. Across Southend Road carpark, the Outer Southend Road carpark and to the west of the former bowling green beside the Two Lions Inn, several features dating to the medieval period were found, including seven large ditches and several substantial pits. The remainder of the features across the development site were small ditches, gullies, pits and heavily degraded or truncated walls, the majority of which were medieval or post-medieval and probably relate to burgage plots for the medieval and post-medieval tenements that were known to front Southend Road and Great Dockray.

2.5 PROJECT STAGE 2: TARGETED ARCHAEOLOGICAL EXCAVATION

- 2.5.1 The impact of the proposed development on the archaeological remains identified by the evaluation was clearly substantial. Consequently, a mitigation strategy to record the remains by excavation was put in place, as defined in a brief produced by CCCHES in February 2008. OA North commenced excavation of the site in the summer of 2008 and had almost completed the fieldwork phase when the development was put on hold following withdrawal of funding for the scheme late in 2008. The excavation revealed significant archaeological remains, which are important in understanding the development of this part of medieval and early post-medieval Penrith.
- 2.5.2 **Area A:** the strip and record exercise in Area A covered an irregular space 80m north-east/south-west by up to 30m wide, located to the north of the football ground. Significant archaeological deposits were located between 0.8m and 1.2m below the present ground level, and appeared to represent several phases of medieval and post-medieval activity. The earliest features included two substantial ditches, one an east/west-aligned boundary ditch that had been further defined by a wall, the other being more sinuous and likely to have performed a drainage function. Subsequent to silting up, the boundary ditch had formed the route of a cobbled road, and similar cobbles had been laid in localised areas of the drainage ditch. Features flanking these routes comprised groups of pits and gullies that produced medieval pottery and may have represented activity to the rear of burgage plots. The subsequent intensification of activity in the area was represented by the laying of further cobbled surfaces and, in seemingly separate plots, the construction of two immediately adjacent buildings, both with boulder foundations. Although abandoned and levelled, these medieval buildings and features were succeeded by post-medieval or industrial-period

structures, including more surfaces, a trough, a culvert, and another building, all associated with eighteenth- and nineteenth-century pottery.

- 2.5.3 **Area B:** Area B measured 14m by 10m and was situated to the rear of the former Two Lions Public House on Princes Street. There, a series of pits, postholes and gullies were found to be associated with medieval pottery. These almost certainly represent activity to the rear of the Princes Street burgage plots and, as well as comprising evidence for refuse disposal, may also include beam slots for timber-framed buildings. Again, these medieval remains were succeeded by features associated with eighteenth- and nineteenth-century pottery. These included a number of stone walls that could have belonged to one or more buildings, and a possible sub-circular well.
- 2.5.4 **Area C:** funding was withdrawn before Area C could be archaeologically investigated, and it thus remains as an area of archaeological interest.
- 2.5.5 **Area D:** Area D was placed to investigate the remains of a possible stair tower on the south-west side of the former Two Lions Public House. The trench was aligned north-west/south east and measured 10m by 5m. An examination of the deposits within the trench revealed that there were no archaeological features.

3. RESEARCH CONTEXT, AIMS AND OBJECTIVES

3.1 INTRODUCTION

- 3.1.1 In order to maximise the potential of the heritage resource, archaeological projects are strategic in nature, with a series of clearly defined aims, often posed as research questions, and objectives, which are the practical means formulated to address the research questions. These aims and objectives are modified and developed to meet the requirements of the project and the confines of the available data. As elements of the heritage resource of the site are likely to be destroyed as a result of the proposed development works, the first and most fundamental tenet of the investigation, ie, the *Primary Driver*, in MoRPHE parlance (EH 2006), is to investigate, define, characterise and preserve, by record, any remains of archaeological interest in such a manner that they can be understood as fully as possible. The data generated from this work could then be used to reconstruct a chronological narrative of activity undertaken at the site, which could be further augmented with additional research. The research aims and objectives presented below have been devised in recognition of the project's *primary driver* and are informed by the findings of the archaeological work undertaken in Areas A, B, and D.
- 3.1.2 In essence, Project Stages 4-6 seek to process, assess, then maximise through analysis, the potential of the data recovered during the fieldwork, and finally, to present that information in published format. The post-excavation programme, which will be undertaken within the tenets of EH's *Management of Research Projects in the Historic Environment* (MoRPHE; 2006) and following the guidance of *Management of Archaeological Projects (Second edition; EH 1991)*, will be guided by the specifically formulated research aims and objectives presented below. These research aims and objectives are informed first by the provisional interpretation of the results of the fieldwork completed to date and, secondly, by the various national, regional and local research agendas.
- 3.1.5 **Research context:** in order to formulate the aims and objectives of the project, it is necessary for the site to be placed within national, regional, and local research contexts (*Sections 3.3-5*). At each of these strata, prioritised themes for research have been presented within research agendas and frameworks compiled by various corresponding levels of government bodies and specialist archaeological advisors. These research agendas are compiled by chronological period and, accordingly, those sections pertaining to the medieval, post-medieval and industrial periods are considered most appropriate to the proposed investigation at Penrith New Squares.

3.2 NATIONAL THEMES

- 3.2.1 The most recent English Heritage Research Strategy documents are *Exploring our Past Implementation Plan* (2003), *Discovering the Past, Shaping the Future* (2005), and *SHAPE* (2007), although these are, in effect, organisational strategies compiled for the use of English Heritage. The draft *Research Agenda*, circulated to the archaeological profession in 1997, may be considered outdated, although a number of research themes remain pertinent for a large part of England, and are presented in the following sections:

◆ *Processes of change*

- *Late Saxon to Medieval period:* The changes that followed the Norman Conquest, and the way that settlement patterns and economic structures developed, are still poorly represented in archaeological research (op cit, 44);

- Transition from medieval to post-medieval traditions (c AD 1300-1700): the late medieval to early post-medieval period is one of change in a number of agricultural, manufacturing, trade, building and institutional traditions. Some past studies have categorised evidence too rigidly, into either medieval or post-medieval aspects, leaving details of adaptation and overlap poorly understood. The relative paucity of detailed evidence attributable to the sixteenth century in many areas is in part a result of over-rigid period categorisation (*op cit*, 45).

◆ **Chronological Priorities**

- *The origins and development of the medieval small town and rural markets*: the origin of small towns and settlements, which in the medieval period supported village markets, is obscure. Most first appear as towns or markets in the historical record during the later twelfth or thirteenth century with the granting of borough status or market charters and we should endeavour to conduct more research on settlements that have continued in use (*op cit*, 49).

◆ **Themes**

- *Settlement hierarchies and inter-actions*: evidence of the nature of the town and its relationship with settlements in the surrounding area can be used to develop our understanding of the complexity of past societies and to drive forward our understanding and develop new research and management goals, where extensive samples of individual settlements and their environs can be seen as an important step towards formulating broader theories and research goals (*op cit*, 51);
- Artefacts, ecofacts, and structural evidence will be relevant to providing insight into economy and social practice. Assemblages deriving from sites with well-understood depositional processes, and retrieved through good and consistent sampling and recovery techniques, will recommend themselves (*op cit*, 51);
- *Urbanism*: more complex models of urbanisation should be explored. The use of multivariate analysis, to explore spatial and temporal change in butchery, local environment, craft and industrial residues, building form and decoration, functional attributes of pottery and glass, etc, are likely to be particularly important for testing theories relating to social action, economy, politics, and ethnicity (*op cit*, 52);
- Examination of the depositional context of materials will be axiomatic to distinguishing between patterns of rubbish disposal, activity and reuse (*ibid*);
- Developing our knowledge of towns as centres of consumption is central to placing them in broader cognitive landscapes. Consumption is at least in part a social construct and hence patterns of consumption may not simply be a function of population size or daily calorie requirements (*ibid*);
- *The definition of urban and rural poor*: the opportunity exists to broaden simple materialistic interpretations of data and explore the absences and omissions in the record, to examine rarity and reuse within material culture, to explore diet, and marginal economic exploitation. Attitudes of inclusion and exclusion can also be addressed;
- *Patterns of craftsmanship and industry (including agriculture)*: evidence for past production in the form of artefact manufacture, industrial processing, and agriculture (*op cit*, 53);
- Analysis of the contrast between urban and rural industrial sites (*ibid*).

◆ **Landscapes**

- *Cognitive landscapes*: there has been some development in the theory of exploring landscapes from perceptions based around belief-systems and social/ceremonial action. Evidence for the social factors influencing the patterns of landscape inhabitation (*op cit*, 55);
- *Regional chronologies*: how the data retrieved from the excavated sites can contribute to the refining of regional chronologies (*op cit*, 55).

3.2.2 **Medieval period-specific themes**: in the strictest of terms, a period-specific and wide-embracing national research agenda for the medieval period has not yet been produced. However, several papers outlining research areas have been compiled (*see below*) whilst several research agendas have been/are being compiled for specific areas within the period, for example rural settlement and medieval ceramics (MSRG 1996; MPRG 2010). Amongst the earliest

documents that presents themes relevant to the present study is a paper produced in 1987 by the Society for Medieval Archaeology. Whilst that document was intended to outline recommendations for the allocation of grants for medieval archaeological projects, rather than being a period-specific policy *per se*, its wider relevance was recognised (Hinton 1987, 1). The following themes have been drawn from these documents:

◆ **Industries**

- Stone quarrying lends itself to particular study through archaeology, not least because analysis may often reveal the sources of their products. Consequently, it is possible to study the volume and distribution and to assess the market served, and changes in pattern and demand. The introduction and use of ceramic building materials should also be investigated (Society for Medieval Archaeology 1987, 4:1Dvi).

◆ **Artefacts**

- Although good dating sequences are still required, there has been too much classification; all work on objects from excavations and other sources should concentrate upon deductions about society and economy that can be made from them and the technologies that produced them. Artefacts are also important as a means of interpreting the different functions carried out on the different parts of the site. Post-excavation research should go beyond the primary cataloguing and sorting of objects (*op cit*, 6:2).

◆ **Analysis and conservation**

- More resources are required for conservation and storage, with resources being concentrated on the most informative material. Furthermore, conservation is often determined on resources available rather than actual need (*op cit*, 9:7i);
- Work on dendrochronology as a dating tool is especially important for medieval archaeology (*op cit*, 9:7ii).

3.2.3 Although the 1996 MSRG Policy on research, survey, conservation and excavation relates to rural settlements, up to the size and administrative function of villages, some of the themes that they explored are broadly relevant to small urban sites, such as Penrith, and were reiterated by the MSRG's more recent policy statement (MSRG 2010).

◆ **Research and survey**

- The study of medieval settlements should take into account the territory to which the settlements belonged. Recent projects have shown the value of this broad multidisciplinary 'landscape' approach to the study of rural settlements (MSRG 1996);
- There should be an awareness of the subsequent development of sites and their surroundings in the post-medieval period. Studies of periods of transition are also important (*ibid*);
- Interdisciplinary research is likely to yield the most satisfying results. Significant advances in knowledge are likely, on the basis of past experience, to proceed from dialogues between archaeologists, historians, geographers, place-name scholars, students of vernacular architecture and those who work on bone and plant remains (*ibid*).

◆ **Strategy**

- The academic research agenda combines the need to address recent preoccupations, and to take into account new questions. We need to extend our understanding of regional difference, and to assess the influence of the natural environment, and define the extent to which people moulded the landscape and settlement pattern to their own needs (*ibid*).

3.2.4 The Medieval Pottery Research Group (MPRG) published *A revised research strategy and agenda for post-Roman ceramic studies in Britain* (2010), which focuses on ceramics, but includes several themes of relevance to the current site, including:

◆ **Periods of transition**

- How much of an impact does the Norman Conquest have on pottery? Can this be seen in new wares, technologies and/or styles? How is Norman settlement reflected in ceramic distribution (MPRG 2010, 8)?

- In the transition from the late medieval period to the post-medieval period, why do some medieval industries continue and adapt whereas others die out (*ibid*)?
- ◆ **Cultural influences**
- What regional variations are there in decoration and finishes, and do these vary according to form or fabric (*ibid*)?
- Why is hand-made pottery sometimes favoured over wheel-thrown pottery and how were different vessels used (*ibid*)?
- ◆ Do choices of raw material, and the distribution of pottery, reflect other social relationships (*ibid*)?

3.3 REGIONAL THEMES

3.3.1 The recent publication of the research framework for North West England (Brennand 2006; 2007) has provided a region-specific resource framework and research agenda for the medieval, post-medieval and industrial periods (Newman 2006; Newman and Newman 2007; McNeil and Newman 2006; Newman and McNeil 2007a; 2007b) that include several research topics that are relevant to the study of Penrith New Squares. For the sake of brevity, themes presented in the Regional Research Framework but already covered in some detail in the national agendas are not reiterated in the following section. The Medieval Pottery Research Group (MPRG 2010) has also published regionally specific research agendas, including one for the North-West.

3.3.2 Medieval Period

- ◆ **Regional distinctiveness**
- Establish closely dated artefact sequences across the region, linked to absolute dating (Newman and Newman 2007, 97);
- Focused research on issues of borders and cultural identity, in relation to the proximity of the border with Scotland (*ibid*).
- ◆ **Urban Settlements**
- To what extent do medieval buildings in Penrith lie behind post-medieval facades (*op cit*, 104)?;
- There is a need to examine the street frontages in medieval towns as well as the backplots (*ibid*);
- Efforts should be focused on discovering more about the character and function of the region's earliest medieval towns in the immediate post-Conquest period (*ibid*);
- The role and nature of small towns should be examined, which should include below-ground investigations in well-preserved small towns (*ibid*);
- Adequate palaeoenvironmental and bulk soil sampling strategies should be formulated for all medieval urban archaeological projects (*ibid*).
- ◆ **Technology and production**
- 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).
- ◆ **Trade exchange and interaction**
- 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 should enable insights into different patterns of interaction and breadth of contacts between different social groups (*op cit*, 114).
- ◆ **Ceramics**
- Type-series and other assemblages require a range of chemical and dating analyses (MPRG 2010, 9-10);
- Imports to the region from elsewhere in the UK and the Continent need to be examined (*ibid*).

3.3.3 *Post-medieval period*

◆ *Environment*

- Sample appropriate deposits for palaeoenvironmental evidence wherever possible to gain information on the exploitation of plants and animals, especially in relation to changes in consumption (Newman and McNeil 2007a, 119).

◆ *Settlement and landuse*

- *The urban landscape:* attempts should be made to identify the post-medieval elements that may have distinguished the future industrial towns from those that failed to develop early during the Industrial Revolution (*op cit*, 122).

3.3.4 *Industrial period*

◆ *Environment*

- Excavations should recover palaeoenvironmental data from cess pits and other suitable cut features to inform on diet, health, natural resource use, and consumption patterns (Newman and McNeil 2007b, 141).

◆ *The Urban Landscape*

- There is a need to excavate urban cellars to examine life ‘below stairs’ in the middle class house and cellar dwellings and workshops in working class houses (*op cit*, 146-7);
- Where threatened with possible redevelopment, excavations are required of now undeveloped and cleared former working class areas regarded as slums (*op cit*, 147).

◆ *Trade Exchange and Interaction*

- There is a need for the examination, mapping, and evaluation of vernacular materials and objects in nineteenth-century contexts (*op cit*, 156);

3.4 LOCAL THEMES

- 3.4.1 Various local borough plans exist, but these are general and, whilst they highlight the importance of the archaeological resource, they provide little additional research contextualisation. Instead, many of the themes that run through the national and regional agendas, particularly those proposed by the Society for Medieval Archaeology (1987), the *North West Regional Research Agenda and Strategy* (Brennan 2007) and English Heritage’s draft *Research Agenda* (1997) are relevant to Penrith New Squares within its local context.

3.5 RESEARCH AIMS

- 3.5.1 By considering the above themes and initiatives, the following research questions (RQ) and objectives (RO) can be posed to inform and guide the strategies implemented at the post-excavation stage of the project. As such, many of these questions can only be fully addressed at the analysis phase of the project. However, they need to be considered at this, assessment, stage, so that the analysis can be steered in a direction that is both fruitful and meaningful within a genuine research context.

RQ1 What is the nature, date, density, extent, and state of preservation of the archaeological remains on the site, and can they be understood in terms of their completeness, sequence, relationships and their functions?

RQ2 Is it possible to attribute the archaeological remains to meaningful activity phases, and through them, trace the historical development of the site, including evidence for the transitional phases between historical periods?

RQ3 Can this relative sequence be dated, either through artefact evidence, or the application of absolute techniques such as dendrochronology and radiocarbon assay, and can this secure dating also be used to assist in the firm dating and refinement of regional artefact chronologies?

RQ4 From the distribution of features and artefacts, is it possible to identify zones and patterns of activity at each site, both in terms of practical and economic behaviour, but also zones that might relate to public and private space?

RQ5 Is it possible to define, quantify and interpret evidence for craft-production or small-scale industrial activity, or any other forms of economic practice that might have been carried out on the site?

RQ6 Is it possible to identify the social status of those who inhabited the site, and gain any understanding of aspects of diet, lifestyles and health?

RQ7 What information is available concerning the contemporary topographical, palaeoenvironmental and historical context of the site and the wider urban environs of the Great Dockray Market Place, and can it be collated and assimilated in a way that will facilitate an understanding of the historical development of the site and Great Dockray, particularly with regard to pre-urban usage, expansion, and intra-urban relationships with Penrith's known contemporary archaeological sites?

RQ8 Is it possible to improve our understanding of the relationship between Penrith, the local rural settlement, and regional urban settlements, including the role of the town within socio-economic contexts, in terms of centralisation of control, access to resources, materials, skills, labour, and indications of parochialism/provincialism or links to wider areas? Is there any evidence that these relationships changed over time?

RQ9 How can the results of the investigation be made available to the wider public in an accessible form, whilst undertaking appropriate archiving of the artefacts and primary data?

3.6 RESEARCH OBJECTIVES

3.6.1 **Overall Research Objectives:** the following over-arching objectives of the post-excavation programme have been formulated with reference to the research questions (*Section 3.5*), which are referenced in parentheses at the end of each objective. The manner in which Project Stage 4 will address specific elements of these objectives is detailed in *Section 4*. It is considered that these objectives will be applied to all data gathered during all the mitigation excavations and watching briefs, and to appropriate elements of the trial-trench evaluation.

- Ra** Collate, check, and enter the original site records into a relational database for the purposes of centralisation and ease of interrogation (all RQs).
- Rb** Process the site survey data, base mapping and digitise scanned-in pre-and post-excavation drawings within an appropriate computer package that could be integrated with the site database (all RQs).
- Rc** Using the processed data, organise context, feature and structure groups, create matrices and undertake provisional assessment and then any appropriate detailed analysis of the on-site stratigraphy. This will permit the best possible understanding of the physical form and functions of, and relationships between, the different individual and composite elements of the site, provision of a chronological framework and also the formulation of an holistic narrative of the site (all RQs).
- Rd** Process, assess then undertake any appropriate palaeoenvironmental analyses of the bulk samples taken from the excavation. This will allow a better understanding of formation processes, on-site activity, and the surrounding environment, as well as maximising recovery of artefacts, material for absolute dating, and faunal remains (RQ1-7).
- Re** Undertake processing, cataloguing, stratigraphic integration, assessment and then any appropriate analysis of the artefacts recovered from the fieldwork, in terms of date, origin, quality, form, fabric and function, presence and nature of residues, spatial distribution, preservation, residuality, provenance and comparison with other sites in the locale and wider region (RQ1-8).
- Rf** Undertake processing, cataloguing, stratigraphic integration, assessment and then any appropriate analysis of the faunal remains recovered from the fieldwork, in terms of preservation, taphonomy, and spatial distribution, as well as the range and proportion of taxa, the reconstruction of husbandry/exploitation regimes and the comparison of the generated data with those from other sites in the locale and wider region (RQ1 and RQ4-8).
- Rg** Perform spatial analyses to explore the relationships between different features, and also between accumulations of artefacts and palaeoenvironmental material belonging to contemporary phases in order to define activity areas and patterns of disposal (RQ1 and RQ4-8).
- Rh** Undertake a programme of documentary research that will help to contextualise and aid the interpretation of the findings from the present programme of fieldwork, to identify and access data generated by investigations at comparative sites (RQ1-9).
- Ri** Prepare texts and illustrations, then collate and publish in an appropriate medium the results of the analysis of the Penrith New Squares archaeological project, and submit the final archive (RQ9).

4. METHOD STATEMENT FOR POST-EXCAVATION PROCESSING AND ASSESSMENT (PROJECT STAGE 4)

4.1 INTRODUCTION

- 4.1.1 **Scope of Project Stage 4:** in accordance with the guidance of MAP2 and MoRPHE (EH 1991; 2006), Project Stage 4 seeks to process and assess each of the forms of raw data recovered during the fieldwork to date, in order to establish their potential to address the project research questions (outlined in *Section 3.5*) through detailed analysis (*ie* Project Stage 5). At present, Project Stage 4 covers only the archive generated during the Project Stage 2 fieldwork, and modifications may be necessary to accommodate and integrate the results of the forthcoming Project Stage 3 fieldwork. In order to facilitate the completion of Project Stage 4, it has been divided into two logical sub-stages: Stage 4a, representing the preparation and processing of the raw data, and Stage 4b, which comprises the formal assessment of the processed data. A report will be prepared on the results of the assessment and, although it will be a quality-assured and academically valid document suitable for submission to the Cumbria Record Office (CRO) and Historic Environment Record (HER), it will not be suitable for publication. Similarly, although many of the tasks that will contribute to this assessment will facilitate the production of the final archive, in itself part of the wider objectives of the project, the specific production of the final archive for submission to the Cumbria Record Office and the Penrith Museum falls outside the scope of Project Stage 4.
- 4.1.2 **Tasks and products:** the six thematic tasks necessary to complete the post-excavation processing and assessment (labelled 'PAT' – post-excavation assessment tasks) have been divided into a series of sub-tasks. These, the resources required, and their final products, are summarised in Table 1, and considered in more detail below, whilst the estimated duration, order and interdependencies of each task are illustrated within the accompanying gantt chart (*Appendix 1*). Essentially, Tasks 2 and 3 pertain to Project Stage 4a and Tasks 4-8 to Stage 4b, whilst Task 1 is relevant to both stages. The scope of works defined within the present document is pertinent to the processing and assessment of the 2008 excavation archive (Project Stage 2), but will need to be updated and resubmitted following the completion of forthcoming archaeological works (Project Stage 3).
- 4.1.2 **Interfaces:** the principal consultational interfaces for the project include close liaison with the Client, CCCHES, CRO and Penrith Museum, which will be the recipient of, respectively, the archive and artefacts for permanent storage or display, and the Cumbria HER. Where appropriate, provisional results can be disseminated to the public through outreach.

4.2 PAT1, MANAGEMENT

- 4.2.1 This element facilitates the completion of all those aspects of Research Objectives (RO) a-i that are appropriate to the post-excavation assessment and ensures the efficient execution of this stage of the project to time and budget. The team for the post-excavation assessment will be managed by Emily Mercer, who will organise and monitor the internal OA North staff and the external specialists. Specialists have been chosen for their knowledge of the region and its materials, and for their ability to fulfil contracts to budget and on time. Emily will report to Rachel Newman (OA North Senior Executive Officer: Research and Publication) who, as Project Executive, will undertake quality assurance and academic direction, and to Murray Cook (OA North Post-Excavation Programme Manager), who is responsible for timetabling staff to ensure that the programme runs to time. In parallel, Emily will report to a designated representative for the Client and to CCCHES, as appropriate.
- 4.2.2 **General management (PAT1.1):** OA North places importance on the tight and effective management of the post-excavation stages of a project in order to deliver best value to our clients. An element of managerial time, particularly of the Post-Excavation Programme Manager, will be dedicated to ongoing internal monitoring, whilst the Project Executive will monitor and assure quality. This is part of the OA North internal quality assurance system and ensures the prompt delivery of the agreed report or other deliverables on time and budget. General management time will be required to deal with the organisation of non-specific tasks, administration and correspondence, together with the preparation of any progress reports, project review meetings and for liaison with the Client's monitor. Basic project review, including the tracking of task completion and logging of resource expenditure, will be undertaken internally on a weekly basis. Brief progress reports for submission to the Client's monitor can be prepared to coincide with each invoice and would summarise the current status of each of the tasks (including task sub-divisions). Any problems likely to impact upon the schedule will be communicated immediately to the Client's representative.
- 4.2.3 **Project team briefing (PAT1.2):** it will be necessary to brief each member of the project team concerning the aims and objectives of the project, expected outcomes, and their specific roles, responsibilities, products and timetable. Where possible, the briefing will be undertaken collectively, although external specialists may have to be contacted

separately. Following the completion of each task sub-division, the responsible staff member will inform the project manager, preferably through a brief email, with details of the work that was undertaken, the time taken, and any positive or negative issues arising that may affect further works. Should any issues arise during the undertaking of a task, the responsible staff member will inform the project manager by whatever convenient method guarantees that the information is transmitted and received. The project manager will in turn keep the Project Executive informed of progress, developments and issues.

4.3 PAT2, DATA PROCESSING AND FIELDWORK ARCHIVE COMPLETION

- 4.3.1 The processing of the raw stratigraphic data gathered during the fieldwork will need to be completed, fully digitised and checked for consistency and coherency for ease of integration and interrogation. This will ensure that any issues can be dealt with at an early stage, that basic information can be distributed to specialists, and that the assessment can take place within a secure framework. This processing and enhancement of the stratigraphic archive is a vital component of presenting and completing each of the project's aims and objectives, but specifically contributes to ROa-c, and provides the contextual basis for, and facilitates the completion of, ROd-g.
- 4.3.2 **Quantify and pdf records (PAT2.1-2):** a basic quantification of each form of raw data (*ie* context records, digital photographs, permatrace drawings) is required so that the size and range of the archive can be rapidly demonstrated. Organisation of records at this stage will facilitate filing and future analysis. To improve accessibility, permit duplication and reduce the risk of damage to original paperwork, the original records will be scanned as pdfs and organised into digital files.
- 4.3.3 **Complete and check site database and formulate matrices (PAT2.3-4):** so that the stratigraphic data recovered during the fieldwork can be integrated with the other forms of data and then coherently and consistently interrogated, it is necessary to input this material into a database. A database of the recorded context information will be compiled, allowing rapid access to, and cross-referencing of, stratigraphic, descriptive, photographic and pictorial information that will form the basis of context lists for specialists and for report appendices, and could be integrated with a GIS/CAD programme. At the same time, the database fabric will be checked and then, if appropriate, adjusted to ensure that it remains practical and flexible for each of the forms of analysis and tasks required of it.
- 4.3.4 Digital photographs will be labelled and organised according to the relevant photographic indices and linked into the site database. These will form the primary source of plates for all reports and publications and, once organised by intervention and theme, security copies will need to be made. The labelling of the monochrome contact prints will be undertaken as part of the archiving works during Project Stage 5.
- 4.3.5 Harris matrices will be produced using the generator within the database. The formulation of these will provide a means of checking the stratigraphic relationships presented in the database against those in the original site records, which were verified in the field. These will be checked and disseminated to specialists.
- 4.3.6 **Digitise drawings and integrate survey data (PAT2.5):** the original site drawings will be scanned and then digitised in a CAD package, and will then be integrated with the survey data generated during the fieldwork.
- 4.3.7 **Allocate provisional phasing and produce summary information (PAT2.6):** group numbers were allocated in the field, as were, in a number of instances, provisional activity phases. Following the verification of the site database and archive through the production of matrices, complete allocation of provisional phasing will be undertaken (even if it is merely the attribution of features to broad or unphased categories) and added to the database. To supplement the matrices, summary tables of context information will be extracted from the database and CAD plans will be produced.
- 4.3.8 **Assess stratigraphy (PAT2.7):** through the completion and digitisation of the stratigraphic archive, the compilation of the site matrices and the establishment of the provisional scheme of phasing for each intervention, it will be possible to build up a comprehensive understanding of the stratigraphic sequence, in terms of its size, completeness and complexity. This information can be thus used to appreciate the basic potential of the processed stratigraphic data to address the project research aims through further analysis. The results of this assessment will be summarised within a short document for inclusion within the complete post-excavation assessment report.

4.4 PAT3, PALAEOENVIRONMENTAL SAMPLE AND FINDS PROCESSING

- 4.4.1 Palaeoenvironmental samples were taken from a range of features during the investigation. These will need to be processed before they can be assessed for their potential to assist in addressing the research questions stated in *Section 3.5*, specifically RQ1-7. Palaeoenvironmental processing and assessment will largely facilitate ROd (*Section*

3.6).

- 4.4.2 In order to address Roe and ROF (*Section 3.6*), the finds and ecofacts recovered by hand, metal-detection, and those retrieved from the washed palaeoenvironmental sample residues, will be processed so that they can be assessed for their potential to assist in the fulfilment of RQ1-8 (*Section 3.5*).
- 4.4.3 **Process bulk samples (PAT3.1):** some 68 tubs of sediment were sampled from 26 contexts for general biological analysis (GBA) and bone recovery. Since these were collected in accordance with the judgement of the experienced excavation staff (with particular regard to stratigraphic position, formation processes, taphonomy and palaeoenvironmental potential), it can be assumed that all samples derive from important deposits that were considered to have sufficient palaeoenvironmental potential to make a genuine contribution to an understanding of the site. In accordance with EH (2002) directives, a minimum of 40l will be processed from each sample, although smaller sub-samples may be retained for biochemical analysis, parasite squashes, etc.
- 4.4.5 Tubbed samples will be processed manually through their disaggregation within water, the floating-off of any light fraction (including insects, charred (CPR) and waterlogged (WPR) plant remains) within a 250-500 micron mesh, and the collection of dense residue within a nest of graded sieves, the smallest with a 500 micron mesh. Sample processing sheets will be completed. Dense residues and light fractions will be air dried or kept wet, as appropriate, and bagged for sorting.
- 4.4.6 **Sort/scan through residues and database results (PAT3.2-3):** each of the processed residues will be sorted for the removal of industrial waste, artefacts, large/dense ecofacts, and for bones, which will be packaged appropriately, with bags clearly labelled that the material derives from bulk sampling (as opposed to hand collection). The residues will also be scanned for non-removable or dense palaeoenvironmental material (*ie* fine charcoal or encrusted/mineralised ecofacts). Records of the sorted and scanned material will be made on processing sheets, which will be added to the site database for easy cross-referencing and interrogation.
- 4.4.7 **Combine assemblages (PAT3.4):** to ensure that specialists receive all available data, material recovered from the processed samples will be collated and integrated with that from hand collection. Human bones from the same burial, but deriving from different collection methods, will be combined.
- 4.4.9 **Artefact and zooarchaeological processing and dispatch (PAT3.5-7):** the recovered artefact and faunal assemblages will need to be processed so that they are clean, appropriately packaged, organised and ready for assessment. Cleaning will be undertaken in a manner appropriate to the material, using tools and techniques that will minimise abrasion, degradation or any other form of damage. Thus, for example, the majority of the pottery will be cleaned using water and sponges, rather than tooth brushes, whilst ironwork will be dry-brushed gently. Wet materials will be dried thoroughly at a low, stable temperature. The assemblage will then be packaged appropriately according to context and material-type. Pottery of different dates will be bagged separately, as will any sherds that derive clearly from specific vessels or distinct scatters. All bags will then be allocated a unique object record number (ORN), preferably ascending in context order, boxed by material, and catalogued within the OA North computerised finds system. Summary data will be abstracted from the OA North finds database for inclusion within the site database, and as a catalogue to send to the appropriate specialists. The fully processed finds assemblage will be organised by material type, loan forms completed, and will then be transported, as required (by hand, van or courier), to appropriate internal and external specialists.

Task	Task Description	Product	Staff	Days
1	Project Management			
1.1	Management, liaison and review	General management, including project review, liaison with the client and CCCHES, production of progress reports, provision of staff and ongoing quality assurance	EM	8
			MC	0.5
			RMN	1
1.2	Project Briefings	Project team fully briefed	EM	1
			BW/KC	0.25
			JB	0.25
			EH, CHD	0.5

2 Data processing and fieldwork archive completion				
2.1	Quantify records	Tabulated summary of the archive by site and primary record type	KC/BW	0.5
2.2	Pdf the archive	Digital copy of all original site records	KC/BW	2
2.3	Site database: check that formatted correctly, can be adapted, etc	Complete database of context information that can be queried, analysed, integrated with other data and used for production of summary tables; more complete understanding of site sequence	JC	0.5
2.4	Site database: check archive and relationships; add descriptions, create digital matrices and undertake verification checks against database and original records; input to database, label and organise digital photographs		JB	10
2.5	Scan-in and digitise key site drawings; complete and check survey data	Assessment-stage CAD complete with relevant post-excavation plans and sections added	KT	2
			MR	10
2.6	Allocate provisional phasing and produce summary information	Establishment of provisional phasing to send out to specialists	JB	4
			KC/BW	4
2.7	Assess processed stratigraphic data	A brief document summarising the scale, completeness and complexity of the processed stratigraphic data, and an assessment of the potential of that data to address project research aims	JB	2
			KC/BW	2
3 Sample and Finds Processing				
3.1	Process bulk samples for palaeoenvironmental remains and finds recovery	A proportion of each palaeoenvironmental bulk sample processed. Dense residues and light fractions bagged wet or dry, as appropriate	SB	10
3.2	Sort through residues for industrial waste, artefacts, large ecofacts, etc. Scan for non-removable palaeoenvironmental material (<i>ie</i> fine charcoal)	All cultural and Zooarchaeological material separated and bagged. Processing sheets filled-out, including record of observations of fine palaeoenvironmental material	SB	5
3.3	Enter results into database	Database of information gained from observations made during residue sorting	SB	1
3.4	Combine material assemblages for specialists	Materials sorted by type and transfer documentation compiled	SB	0.5
3.5	Wash, dry and bag finds	Complete assemblages of each material type clean, organised and ready for assessment	Assistant	5
3.6	Catalogue and divide up finds		SB	1
3.7	Organise material to go to external specialists		SB	0.5
4 Palaeoenvironmental Material Assessment				
4.1	Assess and report on intestinal parasite eggs	Establishment of potential to address research questions through further specialist analysis, together with a provisional statement and programme of the nature of that analysis	Specialist	4
4.2	Undertake palaeoenvironmental assessment for waterlogged and charred plant remains, including charcoal and data entry		DD	3

4.3	Establish presence of insect remains and make arrangements accordingly		EH	0.5
4.4	Integrate results into site database	Palaeoenvironmental results will be fully integrated within the stratigraphy	SB	1
			JC	0.25
4.5	Compile report on WPR and CPR from bulk samples	Checked and integrated report on the assessment of the palaeoenvironmental remains, identification of comparable assemblages and recommendations for any further analysis	DD	3
4.6	Undertake palaeoenvironmental management and QA		EH	1
5	Finds Assessment			
5.1	Assess, catalogue and report upon hand-collected finds	Basic catalogue, quantification, assessment and recommendations for any further analysis	JB	2
			CHD	5
5.2	X-ray metalwork and industrial debris	Material x-rayed with appropriate completed documentation	KB	6
5.3	Basic conservation	Undertake basic stabilisation of delicate metal or organic objects	KB	2
5.4	Assess, catalogue and report upon hand-collected animal bones and marine molluscs	Basic catalogue, quantification, assessment and recommendations for any further analysis	AB/CHD	2
5.5	Assimilate finds data into site database	Finds and spot dates will be fully integrated within the stratigraphy	SB	1
			JC	0.25
5.6	QA finds reports	Accurate, quality-assured finds information	CHD	0.25
6	Synthesis and presentation			
6.1	Visit HER, scan and collate information	Identification of extant knowledge of site and of investigations at Penrith and comparative sites	JB	3
6.2	Gather identified reference sources, and collate those that have the potential to provide the most informative comparanda	Database of appropriate comparanda, with details of date, level of investigative detail, provision of site plan, etc	JB	2
6.3	Compile front end of report	Introduction, contract background, historical background, aims and objectives, methodologies	JB	2
6.4	Assemble and edit specialist assessment reports	Formatted reports for integration into assessment document	EM	1
6.5	Summarise excavation results	Brief summaries of the archaeological findings; selection of plates; insertion and formatting of appendicised stratigraphic data	JB	3
			KC	3
6.6	Compile Statement of Potential for Analysis	Discussion of results (including synthesis across trenches and project stages) and establishment of significance within local, regional and national context; establishment of research potential; redefinition of research aims and objectives	JB	4
6.7	Update project design	Costed programme of works and appropriate method statements for further analysis and production of an illustrated publication draft	EM	2

6.8	Prepare illustrations for report	Scaled and plated digitised drawings showing general and detailed elements of the site to illustrate the report	Illustrator	3
6.9	Edit report	Corrections to report returned to original authors	EM	3
6.10	Corrections	Corrections to text	JB	2
			KC/BW	2
		Corrections to illustrations	Illustrator	1
6.11	Quality assurance	Fully checked and quality-assured report	RN	2
6.12	Copy-editing		KC/BW	2
6.13	Internal sign-off		RN	
6.14	Formal submission of document	Digital and hard copies of final, fully approved document submitted to Client	EM	0.25
			Ass	0.5

Table 1: Task list for Project Stage 4, the programme of post-excavation processing and assessment of the data generated during Project Stage 2

4.5 PAT4, PALAEOENVIRONMENTAL ASSESSMENT

- 4.5.1 The samples processed as part of PAT3 will need to be assessed for their potential to assist in addressing the research questions stated in *Section 3.5*, specifically RQ1-7. Essentially, the assessment of the environmental assemblage will seek to identify those samples with good preservation of a range of charred (CPR) and waterlogged (WPR) plant, pollen and faunal remains, and which are apparently free from modern contamination; the assessment will then make recommendations for further analyses that are appropriate to the project's research framework. Palaeoenvironmental processing and assessment will largely facilitate ROd. The palaeoenvironmental assessment methodology will follow EH guidelines (2002) and Dr Sue Stallibrass, EH Regional Scientific Advisor for the North West, will be consulted as appropriate.
- 4.5.2 **Assess Parasite eggs (PAT4.1):** whilst the excavation encountered very few waterlogged deposits, in one or two instances there were features that might have been used for the disposal of faecal material, within which the eggs of intestinal parasites may be preserved. A small number of sub-samples will be selected from a range of features and will be submitted to a specialist so that they can be examined as squashes under the microscope.
- 4.5.3 **Assess plant macrofossils (PAT4.2):** the light fractions from the processed bulk sediment samples, together with any relevant material recovered from/observed within the dense residues, will be examined for waterlogged, charred or mineralised plant remains using a Leica MZ6 binocular microscope. All plant material will be provisionally identified and quantified on a scale of 1-5, where '1' is fewer than five items and '5' is more than 100. Plant nomenclature will follow Stace (1997) and identification will be aided by comparison with the modern reference collection held at OA North. The components of the matrix will be noted and the suitability of the samples for further analysis and scientific dating will be recorded. The results of the identification process will be recorded into a database.
- 4.5.4 **Identify presence of insect remains (PAT 4.3):** preservation of good assemblages of chitinous invertebrate remains is not expected, although it is possible that some evidence may be encountered among basal, waterlogged deposits; the light fractions from samples processed from these contexts will be kept wet. Preservation of insect remains within these flots will thus be obvious at the assessment stage and, dependent on the quantity of such remains, proposals will be made either for the paraffination of the wet flot, or of a sample taken from the retained tub.
- 4.5.5 **Integrate results into the site database (PAT4.4):** either directly during the process of recording the raw data, or by importing summary tables, the results of each of the palaeoenvironmental assessments will be entered into the project database, so that they can be integrated fully with the stratigraphy and provide suitable information for general analysis. Internal and external specialists must provide copies of all original digital and written records for incorporation into the project archive.
- 4.5.6 **Compile and QA palaeoenvironmental reports (PAT4.5):** the results of the palaeoenvironmental assessments will be articulated within written reports for integration into the post-excavation assessment document, with a contribution to the non-technical executive summary. Care will be taken to ensure that colloquial plant names, where possible, are used alongside scientific nomenclature. The assessment will make full consideration of, and reference to, the original research aims (*ie* those presented in *Section 3.5* of this document) and, equally, recommendations for further

analysis will be tied into the updated research aims and objectives for the project. An appropriate methodology for such works will be included within the updated project design for further analysis (Project Stage 5).

4.6 PAT5, ARTEFACTUAL ASSESSMENT

- 4.6.1 In order to address ROe and ROf (*Section 3.6*), the finds and ecofacts recovered by hand, metal-detection and retrieved from the washed palaeoenvironmental sample residues, will be assessed for their potential to assist in the fulfilment of RQ1-8 (*Section 3.5*), with recommendations for further analyses as appropriate.
- 4.6.2 **Assess artefacts (PAT5.1-3):** during processing (PAT3.5), a basic identification and record will have been made for all items within each category of material in the finds assemblage and incorporated into the site database. The database will be updated as a result of any further identification, quantification or description that arises out of specialist assessment to form a full catalogue. The specialists will be asked to identify the potential of the material to contribute to the original research aims of the project, and specify the further work required in Project Stage 5, including any specific requirement for conservation. All finds work will be carried out in accordance with the Institute for Archaeologists *Standard and Guidance for the Collection, Documentation, Conservation and Research of Archaeological Materials* (IfA 2001).
- 4.6.3 All other material categories, including the metalwork, worked flint, worked stone, medieval and post-medieval pottery, will be assessed by suitable specialists to record information fully and adequately on all pertinent aspects of the assemblage, in accordance with current and accepted industry guidelines for the various material types. All metalwork and a selection of industrial residues will be submitted for x-ray, and the interpretation of these artefacts will be reviewed with the aid of the x-ray plates. The results of the assessment will be presented within a report for integration into the post-excavation assessment report, and will provide details of the quantity and quality of the artefactual data, spot-dating where possible, and an assessment of the potential for any further analysis within the framework of the original research questions and objectives, which will be articulated through a series of recommendations. Requirements for illustration and long-term conservation and storage will be established, but should any requirement for specialist short-term conservation be identified, then selected finds will be sent to the Karen Barker Conservation Laboratory for stabilisation.
- 4.6.4 **Assess faunal remains (PAT5.4):** the faunal remains will be assessed for their potential for further analysis, using the standard zooarchaeological methodologies of Cohen and Serjeantson (1996) and Halstead and Collins (1995), and utilising osteological reference material held by OA North, together with standard reference works (Schmid 1972). Measurements taken will again follow standard guidelines (Von den Driesch 1976; Payne and Bull 1988). Separation of sheep and goat (Boessneck 1969), and the separation of red and fallow deer (Lister 1996) will take place where possible. The assessment will generate a basic catalogue recording the state of preservation, fragmentation and evidence for taphonomy, together with a count of anatomical elements by taxon and the proportion of elements usable for ageing and metrical analysis. A specialist report will be compiled, including recommendations for any suitable further analyses within the framework of the project's research questions.
- 4.6.5 **QA and Assimilate finds information into database (PAT5.5-6):** the results of the assessments will be quality assured then added to the site database, so that the accurate results can be integrated fully with the stratigraphy and provide suitable information and spot dating for general analysis.

4.7 PAT6, SYNTHESIS AND PRESENTATION

- 4.7.1 Once the results of the specialist assessments (PAT4-5) have been integrated with the processed stratigraphic data (PAT2), it will be possible to undertake the final element of Project Stage 4. This will comprise the re-examination of the stratigraphic sequence in respect of the results of PAT4-5, allowing a full assessment of that sequence within a chronological and cultural framework, and the best appreciation of the significance, and potential for further analysis, of the synthesised data. This will be presented within a post-excavation assessment report, the structure of which can be broken down as follows:
- **1: Introduction:** an introduction, detailing the contract background, site location and archaeological and historical context;
 - **2: Research Aims and Objectives:** a review of the research context for the site and of the appropriate research aims and objectives (very similar to that presented within *Section 3* of the present document);
 - **3: Methodologies:** a section dealing with the methodologies employed on site, as well as those of the specialist assessments;

- **4: Summary of Fieldwork Results:** stratigraphic summaries of each site that are sufficient to demonstrate the basis of interpretation, phase-allocation etc, rather than being extensive (and turgid) stratigraphic narratives;
 - **5: Results of the Assessment:** a section presenting details of the specialist assessments of the stratigraphy, artefacts and palaeoenvironmental data recovered from the site, in terms of primary quantifications, conservation requirements, an evaluation of the importance of the material, and its ability to address research questions through further analysis;
 - **6: Statement of Potential for Analysis:** comprising a discursive review of the archaeological context for the Penrith New Squares findings and their place within that framework (as can be established or mooted at this assessment stage); an integrated review of the potential for all forms of data recovered to address the original research aims;
 - **7: Design for Project Stages 5 and 6:** a project design, formatted like *Section 4* of the current document, including presentation of those updated aims that it is felt the dataset can address through analysis, and the objectives needed to complete that process;
 - **8: Bibliography;**
 - **Appendices** of raw data, together with key documents, such as the CCCHES brief, as appropriate;
 - **Illustrations:** selected locations maps and digitised site drawings to demonstrate the location and juxtaposition of features, together with selected plates to enhance the text.
- 4.7.2 **Undertake brief background research (PAT 6.1-2):** it will be necessary to examine aspects of the context of the present investigation in greater detail so that a more complete understanding of the historical sequence and significance of the findings can be gained. This will include consultation of the Cumbria HER and Record Office in order to gain access to the unpublished results of recent fieldwork, as well as published and unpublished documentary sources. Moreover, to facilitate the comparative and formal analysis of the physical remains recorded during the investigation, it will be necessary to make some consideration of contemporary urban sites in the region, especially those from Penrith. A literature search will be undertaken to identify those sources that have the potential to provide the most informative comparanda, which will then be collated with details of date, level of investigative detail, provision of site plan, etc. Local museums and libraries will be consulted briefly where time and resources allow, but where access proves difficult, or key documents are held in private collections, it is proposed that at this stage, these documents are noted so that arrangements can be made for their consultation at the analysis stage of the project.
- 4.7.3 **Compile 'front end' of report (PAT6.3):** Sections 1-3, comprising the introduction, aims and objectives, and the methodology, form the 'front end' of the post-excavation assessment report. This will utilise information from the CCCHES brief, this project design, reports on previous stages of work and, where appropriate, from the programme of background research.
- 4.7.4 **Assemble, edit and incorporate specialist reports (PAT6.4):** each of the specialist reports will be formatted within the OA North house style and edited for consistency with the stratigraphic sequence, and in terms of style and content. For the sake of clarity and continuity, this may entail the breaking down and reallocation of certain parts of the report (for example, the movement of methodologies, appendices and integrated discursive material to the relevant section in the overall assessment document). Although the original (*ie* unedited) specialist reports will be incorporated into the project archive, in the interests of brevity, reducing repetition, and to save paper, they will not be appended to the assessment document. However, liaison will be maintained with the specialists, who will receive edited drafts for final comment. In this form, the specialist reports will be ready for incorporation into Section 5 of the post-excavation assessment report.
- 4.7.5 **Summarise excavation results (PAT6.5):** it will be necessary to convey an appreciation of the archaeological remains that are being assessed, and this contextualisation will be achieved through the formulation of an appropriately brief explanatory text on what the excavated results can tell us about the chronological development of the site and its components (presented in Section 4 of the assessment report). This summary will be presented according to phase, in stratigraphic order and, as far as possible, will utilise group numbers, or refer to more general trends, rather than every single feature and context. Attention will be drawn to key relationships where these demonstrate support for the interpretation, as will general trends in sedimentology, dimensions, colouration, etc; generally, however, such specific information will be presented, where appropriate, in appendicised tables of contexts or Harris matrices, etc. Reference to dated artefacts, or to palaeoenvironmental assemblages, will be made

where these enhance, or support, the interpretation of features. Drawings, in the form of phased, scaled plans and sections as appropriate, will support and illustrate the narratives, accompanied by photographs where this is of benefit.

- 4.7.6 **Compile Statement of Potential for Analysis (PAT6.6):** the statement of potential (comprising Section 6 of the final assessment report) represents an holistic evaluation of the importance of the data recovered and will draw upon, and synthesise, the results of each of the specialist assessments (including stratigraphical), the background research, and the project's academic research context (as presented in *Section 3* of this document). Logically, the section can be broken down into three parts. The first, entitled 'Statement of Significance' will represent a thematic discussion of the integrated results within the framework of the existing local, regional and national knowledge. The need for brevity demands that specific features, deposits or finds, would only be referred to where they illustrated points more clearly than general themes. The second part, the 'Potential for Further Analysis' will examine the extent to which the dataset, whether whole or in part, by site or more collectively, can address each of the project research questions. This will establish the strengths and limitations of the data within the research context, including any significant lacunae that would prevent a more complete understanding of certain aspects of the different site areas. When combined with the Statement of Significance, it will become apparent whether, and how, any, or all, of the original research questions (*Section 3.5*) can be addressed through analysis of the dataset and thus remain appropriate for Project Stage 5. Equally, the more detailed background research undertaken as part of the assessment could allow a greater appreciation of the significance of the data recovered, and the formulation of research questions that had not previously been envisaged. The updating of the project research aims and objectives so that they remain valid to the original research context, but now seek to ask only those questions that can be addressed by the assessed dataset, thus forms a logical third and concluding part to the Statement of Potential for Analysis.
- 4.7.7 **Compile updated project design for analysis (PAT6.7):** the updated project design will present:
- a tasklist, programme and methodologies for appropriate analysis and production of an illustrated publication draft;
 - a dissemination strategy, including a publication synopsis for the full report and details of appropriate media;
 - opportunities for outreach.
- 4.7.8 **Prepare illustrations (PAT6.8):** suitable illustrations for the assessment report will be devised, and prepared at an appropriate scale, with additional digitisation of fine detail as required.
- 4.7.9 **Editing, quality assurance and submission (PAT6.9-14):** the report text and illustrations will be edited by the project manager, with corrections returned to the original authors. Once the report is deemed satisfactory, and has been copy-edited, it will be passed to the Project Executive for quality assurance (QA), to check and ensure that it is complete, appropriate and academically legitimate; any corrections arising from the QA will be addressed by the project manager before the document is signed-off by the Project Executive.

4.8 HEALTH AND SAFETY

- 4.8.1 OA North provides a Health and Safety Statement for all projects and maintains a Unit Safety policy. All site procedures are in accordance with the guidance set out in the *Health and Safety Manual* compiled by the Standing Conference of Archaeological Unit Managers (1997). The nature of the work means that the requirements of the following legislation are particularly relevant:
- *Workplace (Health, Safety and Welfare) Regulations (1992)* – offices and finds processing areas;
 - *Manual Handling Operations Regulations (1992)* – transport of bulk finds and samples;
 - *Health and Safety (Display Screen Equipment) Regulations (1992)* – use of computers for word-processing and database work;
 - *COSSH (1988)* – finds conservation and environmental processing/analysis.
- 4.8.2 A written risk assessment will be undertaken in advance of project commencement and copies will be made available on request to all interested parties.
- ## 4.9 INSURANCE
- 4.9.1 OA North has a professional indemnity cover to a value of £2,000,000, proof of which can be supplied as required.

4.10 OWNERSHIP

- 4.10.1 Currently the material archive (artefacts, ecofacts and palaeoenvironmental samples) found during the Penrith New Squares fieldwork belong to the owners of the land from which they were recovered, whilst the documentary archive is the property of OA North. OA North would deposit the documentary archive with the Cumbria Record Office (Carlisle) and would seek to encourage the respective landowners to allow the material archive to be deposited with the Penrith Museum. OA North retain the intellectual property rights for photography, written text and other works generated during the programme of works and the issuing of deliverables to meet the requirements of the client.

5. TIMETABLE AND RESOURCES

5.1 OUTCOMES

- 5.1.1 Although at present the programme and resources accommodate the assessment only of data generated by fieldwork to 2008, the final outcome of Project Stage 4 will be a complete post-excavation assessment of the archive of data generated by all stages of intrusive archaeological fieldwork (including the forthcoming works) undertaken at Penrith New Squares. The assessment will take the form of an illustrated report, submitted in bound paper and digital formats to the client and to the Cumbria HER. There is no specific outreach planned for Project Stage 4, although any requests for talks/lectures from local historical and archaeological societies and interest groups will be welcomed.

5.2 TIMETABLE FOR PROJECT STAGE 4

- 5.2.1 **Production of post-excavation assessment report:** the timetable for each of the tasks is presented within the gantt chart (*Appendix 1*). It is estimated that it will take about six months to undertake the necessary tasks for the completion of the post-excavation assessment and production of the associated report.
- 5.2.2 At the completion of Project Stage 4, and subsequent to the acceptance of the document by the client, a full and formal review could be undertaken at the OA North office or another location of convenience to the client. The review, involving the OA North Project Manager, Project Executive, OA North team members, representatives of the client and any other significant parties or their representatives, will consider the work that has been completed, with a brief consideration of the suitability of methodologies, budget and timetable, with particular reference to liaison with, and feedback from, specialists and team members. The formal review would then be used as an opportunity to discuss the programme of work for Project Stage 5 (detailed analysis and production of a draft document for publication).

5.3 PROJECT TEAM

- 5.3.1 **OA North:** it is vital that an experienced project team conducts the post-excavation programme. The close personal involvement that has been developed through physically excavating the site means that the field team has an unparalleled connection and understanding of the archaeology investigated. As an organisation, OA North has a high level of experience of urban archaeology in Cumbria and the investigation through to publication of sites in Carlisle, Cockermouth, Kendal and Penrith itself. OA North can draw on a wealth of experience from staff specialised in excavation, post-excavation, stratigraphic analysis, finds, human osteology, zooarchaeology and palaeoecology, all of whom can make a significant contribution to the fulfilment of the post-excavation programme. Moreover, within the context of the strong public interest, it is important that the work should be undertaken by an organisation that can keep the public informed through outreach.
- 5.3.2 **Organisational strategies:** as a registered educational charity, an Institute for Archaeologists (IfA) Registered Archaeological Organisation (RAO, registration number 17), and as one of the largest independent archaeological organisations in Britain, Oxford Archaeology has both an established reputation and a philosophical imperative in the pursuit of post-excavation excellence and high-quality publication. As such, the project fits in easily with the organisation's long-term strategy and vision to be at the forefront of archaeological research, discovery and exploration and to be recognised as champions of the social and cultural importance of archaeology. Furthermore, the organisation's core principles of maintaining and promoting the highest professional, academic, commercial and ethical standards, and of the provision of access to archaeology for all, are easily applicable to the wider objects of the post-excavation works for Penrith New Squares.
- 5.3.3 **Project Team:** the provisional project team to undertake the programme of post-excavation works is detailed in Table 2. As indicated by Table 1, not all of these people will be involved with the completion of Project Stage 4, but will be informed of their role in later proceedings at this preliminary stage.

Team member	Responsibility	Principal role
<i>OA North staff</i>		
Rachel Newman (RN), BA (Hons), FSA	Senior Executive Officer: Research and Publication - Project Executive	Project Executive responsible for quality assurance, academic leadership. Rachel is series editor for the <i>Lancaster Imprints</i> , and was a period group co-ordinator for the North West Archaeological Research Framework. She is also Vice President of the Cumberland and Westmorland Antiquarian and Archaeological Society
Murray Cook (MC), MA (Hons), FSA	Post-Excavation Programme Co-ordinator	Staff scheduling and strategic leadership for post-excavation tasks
Alan Lupton, MA, PhD	Operations Manager	Staff scheduling and strategic leadership for fieldwork tasks
Emily Mercer (EM), BA (Hons), MSc	Project Manager	Project organisation and budget management; liaison; preparation of management documents and editing of reports
Jeremy Bradley (MS), BA (Hons)	Project Officer	Fieldwork direction. Collation of the archives, stratigraphic assessment, documentary research, interpretation of the results and compilation of report text. Assessment and analysis of medieval pottery.
Kelly Clapperton (KC), BA (Hons)	Supervisor	Fieldwork supervision. Collation of the archives, stratigraphic assessment, interpretation of the results and compilation of report text
Becky Wegiel (BW), BA (Hons)	Supervisor	Fieldwork supervision. Collation of the archives, stratigraphic assessment, interpretation of the results and compilation of report text
Chris Howard-Davis (CHD), BA (Hons)	Finds Manager - Expert	Assessment and analysis of finds, conservation advice; detailed academic input
Elizabeth Huckerby (EH), BA (Hons), MSc	Environmental Manager - Expert	Advice and academic leadership on palaeoenvironmental assessment and analysis
Denise Druce (DD), BA (Hons), PhD	Project Officer, Palaeoenvironmental - Expert	Identification of plant macrofossils, charred and waterlogged wood. Assessment of monolith samples
Mairead Rutherford (MR), BSc (Hons), PhD	Project Officer, Palaeoenvironmental - Expert	Identification of plant macrofossils, charred and waterlogged wood. Assessment of monolith samples
Sandra Bonsall (SB), BSc (Hons)	Environmental Supervisor - Team member	Processing, assessment and analysis of palaeoenvironmental samples. Organisation of the finds room, including collation and cataloguing
Andrew Bates (AB), BSc (Hons), MSc	Project Officer, Zooarchaeology - Expert	Assessment and analysis of zooarchaeological remains
Jo Cook (JC), BA (Hons), Mlitt	Project Officer, IT - Support	IT support and database formulation. Assimilation and presentation of digital data
Adam Parsons (AP), BA (Hons)/Marie Rowland (MER), BA (Hons), MA/Mark Tidmarsh (MT), BA (Hons)	Illustrators - Team members	Presentation of site drawings and artefact illustration for reports and publication
Project Assistant (Ass)	Fieldwork excavation and support tasks	Project Assistants will undertake support tasks, including filling in database records, washing osteological material and finds, bagging material, etc

<i>External Experts</i>		
Ian Panter (IP)	YAT Wood Conservation Laboratory	Advice on treatment of organic remains. Conservation of such remains
Karen Barker (KB)	Specialist	Advice on, and conservation of, inorganic remains
John Carrott	Specialist	Palaeoecology Research Services: assessment of Parasites
David Smith	Specialist	Based at Birmingham University; study of Insect remains
SUERC	Specialist	Radiocarbon dating

Table 2: Summary of the project team

6. Bibliography

6.1 PRIMARY AND CARTOGRAPHIC SOURCES

Ordnance Survey, 1968 *Plan NY 5030 & Plan NY5130*, 1:2500

Ordnance Survey, 1971 *Plan NY 5029-5129*, 1:2500

6.2 SECONDARY SOURCES

Boessneck, J, 1969 Osteological differences between sheep (*Ovis aries Linne*) and goat (*Capra hircus Linne*), in D Brothwell and E Higgs (eds), *Science in Archaeology*, **2**, 331-58, London

Brennand, M (ed), 2006 *The Archaeology of North West England; an archaeological research framework for North West England: volume 1 resource assessment*, Archaeol North West, **8**, Manchester

Brennand, M (ed), 2007 *Research and Archaeology in North West England; an archaeological research framework for North West England: volume 2 research agenda and strategy*, Archaeol North West, **9**, Manchester

Brooks, CM, 2000 in RM Newman *et al* 2000, 119-26

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

Department of the Environment 1990, *Planning Policy Guidance Note 16: Archaeology and Development*, London

Department for Communities and Local Government (DCLG), 2010a, *PPS5 planning for the historic environment*, London

English Heritage (EH), 1991 *Management of Archaeological Projects*, 2nd edn, London

English Heritage, 1997 *Draft Research Agenda*, unpubl

English Heritage, 2002 *Environmental Archaeology: a Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post Excavation*, London

English Heritage, 2003 *Implementation plan for exploring our past 1998. External version* http://www.english-heritage.org.uk/upload/pdf/plan_eop_98.pdf

English Heritage, 2005 *Discovering the Past, Shaping the Future*, unpubl rep

English Heritage (EH), 2006 *Management of Research Projects in the Historic Environment (MoRPHE)*, London

English Heritage, 2008 *Shape 2008. Strategic Framework for Historic Environment Activities and Programmes in English Heritage: Guidance for external Grant Applicants*, London

Halstead, P, and Collins, P, 1995 *Sheffield Animal Bone Tutorial: Taxonomic Identification of the Principal Limb Bones of Common European Farmyard Animals and Deer. A Multimedia Tutorial*, Archaeology Consortium, TL TP, Univ Glasgow

Hinton, DA, 1987, Preface, in the Society for Medieval Archaeology, *Archaeology and the Middle Ages: Recommendations by the Society for Medieval Archaeology to the Historic Buildings and Monuments Commission for England*, *Medieval Archaeol*, 1-12

Hurst-Vose, R, Post-medieval and later Flat or Window Glass, in F Brown and c Howard-Davis, *Norton Priory: monastery to museum. Excavations 1970-87*, Lancaster Imprints, 16, Lancaster, 328-9

- Institute of Field Archaeologists (IFA) 2001 *Standard and Guidance for the Collection, Documentation, Conservation and Research of Archaeological Materials*, London
- Lister, AM, 1996 The Morphological Distinction between Bones and Teeth of Fallow Deer (*Dama dama*) and Red Deer (*Cervus elaphus*), *Int J Osteoarchaeol*, **6**, 119-43
- McCarthy, MR and Brooks, CM, 1992, The establishment of a medieval pottery sequence in Cumbria, England, in D Gaimster and M Redknap, *Everyday and Exotic Pottery from Europe, c 650-1900*, Oxford
- McNeil, R, and Newman, R, 2006 The post-medieval resource assessment, in Brennan 2006, 145-64
- Medieval Pottery Research Group (MPRG), 2010 *A Revised Research Agenda for Post-Roman Ceramic Studies in Britain*, unpubl rep
- Medieval Settlement Research Group (MSRG), 2006 *Annual Report*, **21**, unpubl rep
- Medieval Settlement Research Group (MSRG), 2010 *Policy Statement*, www.britarch.ac.uk/msrg/msrgpolicy, accessed on 25th November 2010
- MPRG (Medieval Pottery Research Group), 1994 *A Research Strategy and Agenda for Post-Roman Ceramic Studies in Britain*, <http://mprg.wikispaces.com/>
- MSRG (Medieval Settlement research Group) *Medieval rural settlements, a policy on their research, survey, conservation and excavation*, <http://www.britarch.ac.uk/msrg/policy.html>
- Museums and Galleries Commissions, 1992 *Standards in the museum care of archaeological collections*, unpubl rep
- Newman, C, 2006 Medieval Period Resource Assessment in Brennan 2006, 115-44
- Newman, C, and Newman, R, 2007 The medieval agenda, in Brennan 2007, 95-114
- Newman, R, and McNeil, R, 2007a The post-medieval agenda, in Brennan 2007, 115-32
- Newman, R, and McNeil, R, 2007b The industrial and modern period resource assessment, in Brennan 2007, 133-58
- Newman, RM, Hair, NJ, Howard-Davis, CLE, Brooks, C, and White, AJ, 2000 Excavations at Penrith Market, 1990, *Trans Cumberland Westmoreland Antiq Archaeol Soc*, 2nd Ser, 100, 105-130
- OA North, 2005a *Southend Road, Penrith, Cumbria: Archaeological Desk-Based Assessment*, unpubl
- OA North, 2005b *Land at Southend Road, Penrith, Cumbria: Archaeological Evaluation*, unpubl
- OA North, 2005c *Two Lions Inn, Great Dockray, Penrith, Cumbria: Archaeological Building Assessment*, unpubl
- OA North, 2006a *Two Lions Public House, Great Dockray, Penrith, Cumbria: Archaeological Desk-Based Assessment and Building Investigation*, unpubl
- OA North, 2006b *Former Sunlight Laundry Premises, Penrith, Cumbria: Archaeological Desk-Based Assessment and Building Assessment*, unpubl
- OA North, 2007 *Penrith New Squares, Penrith, Cumbria: Archaeological Evaluation Report*, unpubl
- OA North, 2008 *Former Sunlight Laundry Premises, Penrith, Cumbria: Archaeological Standing Building Investigation*, unpubl
- Payne, S, and Bull, G, 1988 Components of variations of measurements of pig bones and teeth, and the use of measurements to distinguish wild from domestic pig remains, *ArchaeoZoologia*, **2 (1, 2)**, 27-66
- RCHME, 1996 *Recording Historic Buildings: A Descriptive Specification*, 3rd edition, Swindon
- Read, B, 2008, *Hooked-clasps and Eyes. A classification of sharp- and blunt-hooked clasps and miscellaneous hooks, eyes, loops, rings or toggles*, Langport
- Schmid, E, 1972 *Atlas of Animal Bones for Prehistorians, Archaeologists and Quaternary Geologists*, Amsterdam
- Standing Conference of Archaeological Unit Managers (SCAUM), 1997 *Health and Safety Manual*, Poole
- United Kingdom Institute for Conservation, 1990 *Environmental Standards for the Permanent Storage of Excavated Material from Archaeological Sites*, London

United Kingdom Institute for Conservation, 1998 *First Aid for Finds*, London

Von den Driesch, A, 1976 A Guide to the Measurement of Animal Bones from Archaeological Sites, *Peabody Museum Bull*, **1**, Harvard

APPENDIX 2: SUMMARY CONTEXT LIST

SITE A

Context No	Interpretation	Assessment Phase
1000	Number applied to unstratified finds	N/A
1001	Tarmac	4
1002	Levelling layer across the car park	4
1003	Relict topsoil	4
1004	Subsoil	4
1005	Natural alluvial sediment	0
1006	Secondary fill of gully 1007	1
1007	Cut of gully	1
1008	Upper fill of ditch 1086, secondary fill	3
1009	Not used	-
1010	Layer of waterworn pebbles used to form a rough surface. Group 1013/1352	2
1011	Not used	-
1012	Not used	-
1013	North-east/south-west-aligned boundary ditch with a cobbled surface 1352 and wall 1163	2-3
1014	Fill of gully 1015, secondary fill probably alluvial	1
1015	Cut of gully	1
1016	Demolition backfill of pit 1101	3
1017	Upper fill of pit 1082. Mix of backfill and secondary fill	3
1018	Large curvilinear boundary ditch aligned roughly east/west across the site, containing 1261 and 1262	2-3
1019	Limestone- and sandstone-lined culvert	3
1020	Fill of ditch 1018	2
1021	Rubble levelling layer	4
1022	Gravel/cobbled levelling layer	4
1023	Dry-stone walling cutting into 1015	3
1024	Slightly curved feature consisting of naturally occurring stones	4
1025	Fill of ditch 1033, same as 1027 and 1030	2
1026	Group of six intercutting rubbish pits, which are adjacent to ditch Group 1018	1
1027	Upper fill of ditch 1033. Secondary fill	2
1028	Lower fill of ditch 1033. Secondary fill	2
1029	Fill of pit 1235, possible backfill	3
1030	Upper fill of ditch 1033, secondary fill	2
1031	Gravelly fill of a narrow drain	1
1032	Lower fill of ditch 1033, primary fill	2
1033	Cut of boundary ditch	2
1034	Relict ground surface	4
1035	Relict subsoil	4
1036	Hardcore levelling layer	4
1037	Lower fill of culvert 1039, secondary fill	3
1038	Upper fill of culvert 1039, the final alluvial silting	3
1039	Cut of culvert	3
1040	Stone lining for culvert	3
1041	Cut for shallow drain filled with a gravelly silt	1
1042	Series of three intercutting rubbish pits	1-3
1043	Not used	-
1044	Group of three intercutting pits, most likely for storage or rubbish	3
1045	Not used	-

1046	Remains of post burnt <i>in situ</i>	2
1047	Upper fill of ditch 1224 , mix of backfill and secondary fill	3
1048	Wall aligned east/west along the south-east edge of ditch group 1013	2
1049	Deliberate deposit of stone	3
1050	Foundation course for boulder wall in cut 1181	2
1051	Group including a trough, culvert and wall	4
1052	Sandstone culvert	4
1053	Rubbish-filled upper fill of trough 1063	4
1054	Lower fill of trough 1063 , mix of accumulated sediment and backfill	4
1055	Layer of levelling	4
1056	Deposit of slag and clinker laid as levelling	4
1057	Layer of lime mortar laid as levelling	4
1058	Deliberate deposit of demolition rubble and domestic waste, laid as a levelling layer	4
1059	Fragment of cobbled surface	4
1060	Upper fill of ditch 1106 , backfill	2
1061	Backfill of rubbish pit 1062	4
1062	Cut for rubbish pit	4
1063	Sandstone trough placed directly over culvert 1052	4
1064	Western wall of building group 1068	3
1065	Northern wall of building group 1068	3
1066	Internal cobbled flooring in building Group 1068	3
1067	Construction cut for wall 1064	3
1068	North-west/south-east- and north-west/south-east-aligned building, comprising foundations constructed from riverine rounded boulders, with an internal cobbled surface and associated occupation deposits	3
1069	Backfill of construction cut 1067	3
1070	Fill of pit 1071 , secondary fill	3
1071	Cut of shallow pit	3
1072	Layer of burnt material	4
1073	Upper fill of ditch 1172 , secondary fill	3
1074	Deliberate backfill of robber trench 1075 . Group 1013/1353	3
1075	Cut of robber trench. Group 1013/1353	3
1076	Backfill of ditch 1080	3
1077	Fill of 1080 , cobbles thrown in to stabilise the area, or tumble from wall 1079	3
1078	Cobbled surface. Group 1013/1352	2
1079	Wall located in ditch group 1013	2
1080	Cut of boundary ditch. Group 1013	2
1081	Lower fill of pit 1082 , secondary fill	3
1082	Cut for pit. No obvious function	3
1083	Fill of pit 1084 , secondary fill	3
1084	Cut of pit, no obvious function	3
1085	Group of three intercutting pits, no obvious function	3
1086	Cut of boundary/defensive ditch. Group 1013	2
1087	Fill of pit 1088 , secondary fill	3
1088	Cut for pit, no obvious function	3
1089	Primary fill of pit 1082	3
1090	Fill of pit 1091 , secondary fill	3
1091	Cut of pit, no evidence of function	3
1092	Upper secondary fill of ditch 1095 . Group 1013/1353	3
1093	Redeposited natural material within ditch 1095 . Group 1013/1353	3
1094	Basal fill of ditch 1095 , secondary fill. Group 1013/1353	3
1095	Cut of robber trench. Group 1013/1353	3
1096	Fill of pit 1097 , potentially natural	3
1097	Cut of potential pit, possibly natural	3
1098	Fill of pit 1097	3

1099	Cut of rubbish/storage pit	1
1100	Fill of pit 1099 , combined colluvial and backfill	1
1101	Cut of pit, no suggestion as to its use	1
1102	Backfill of construction cut 1103	4
1103	Construction cut for wall 1107	4
1104	Fill of pit 1062 . Same as 1060	2
1105	Fill of ditch 1106 , mix of backfill, demolition material and secondary fill	2
1106	Cut of broad, shallow boundary ditch. Group 1018	2
1107	Short length of red sandstone wall that terminated before trough 1063	4
1108	Fill of culvert 1052 , secondary fill	2
1109	Primary fill of ditch 1106	2
1110	Fill of ditch 1086 , secondary fill	2
1111	Fill of ditch 1086 , secondary fill	3
1112	Fill of ditch 1172 , rubble backfill	3
1113	Fill of ditch 1172 , tertiary or secondary fill	3
1114	Deposit of rubble in ditch 1172	3
1115	Upper fill of pit 1118 , tertiary fill	3
1116	Fill of pit 1118 , secondary fill	3
1117	Basal fill of pit 1118 , primary fill	3
1118	Cut of rubbish/storage pit	2
1119	Cut of pit, disturbed remains of a storage or rubbish pit	2
1120	Fill of pit 1119 , mix of backfill and secondary fill	2
1121	Single fill of pit 1122 , secondary fill	2-3
1122	Cut of pit, no obvious function	1
1123	Discrete deposit of stones within ditch, group 1013	3
1124	Fill of storage/rubbish pit 1119 , backfill	2
1125	Cut of truncated boundary ditch	1
1126	Fill of ditch 1125 , secondary fill	1
1127	Potential cobbled surface, located in ditch, group 1013	2
1128	Fill of gully 1129 , secondary fill	3
1129	Cut for gully	3
1130	Upper fill of gully 1133 , tertiary fill	3
1131	Middle fill of gully 1133 , secondary fill	3
1132	Basal fill of gully 1133 , primary fill	3
1133	Cut of gully. Part of group 1134	3
1134	Linear gully aligned roughly east/west across the site. Most likely for drainage or a boundary	3
1135	Putative cobbled surface	3
1136	Wall within ditch. Group 1013	2
1137	Fill of ditch recut 1224 , secondary fill	3
1138	Potential cobbled surface within ditch 1224	3
1139	Fill of ditch 1229 , secondary fill	2
1140	Fill of robber trench 1220 , backfill. Group 1013/1353	3
1141	Cut of large storage pit	2
1142	Fill of pit 1141 , charcoal-rich mix of secondary fill and backfill	2
1143	Fill of potential hearth 1144	2
1144	Cut of hearth pit. The surrounding natural geology has been heat-affected	2
1145	Lower fill of ditch 1086 , primary fill	2
1146	Cobbled surface located in ditch 1172 . Group 1013/1353	2
1147	Cut of large boundary ditch. Part of group 1018	2
1148	Final silting of the hollow created by ditch 1147 and pit group 1026	2
1149	Upper fill of ditch 1147 , secondary fill	2
1150	Cut of shallow pit. Potential storage pit	1
1151	Accumulation of silts over pit group 1026	1
1152	Basal fill of pit 1150 , secondary fill	1
1153	Naturally accumulated silts and gravels above cobbled surface 1154	3

1154	Cobbled surface lying to the north of building group 1068	3
1155	Fill of hearth 1144 , backfill holding the putative stone lining in place	2
1156	Cut of small, putative storage pit	1
1157	Fill of pit 1156 , mix of colluvial material and backfill	1
1158	Appears to be a mixed deposit filling up the remains of a tree bole	1
1159	Fill of pit 1141 , a mixed deposit	3
1160	Discrete deposit of gravel above putative cobbled surface 1161	3
1161	Potential cobbled surface	3
1162	Interface deposit, degraded material above the natural geology	1
1163	North-east/south-west-aligned stone wall, composed of large rounded boulders, constructed along the south-east edge of ditch group 1013 . Has been robbed out from the central section, group 1353	2
1164	Cut of truncated pit, most likely a storage/rubbish pit	1
1165	Possible remnant topsoil or subsoil	4
1166	Putative levelling layer	4
1167	Slag-rich material laid for levelling	4
1168	Deliberately laid deposit of burnt silty material	4
1169	Cut of pit, most likely for rubbish/demolition	4
1170	Lower fill of pit 1169 , backfill	4
1171	Upper fill of pit 1169	4
1172	Cut of large, defensive/boundary ditch. Part of ditch group 1013	2
1173	Cut of large pit, may be the remains for a hearth/oven or kiln	2
1174	Upper fill of putative hearth/kiln 1173 , secondary silting	3
1175	Fill of ditch 1086 , discrete deposit of primary fill	2
1176	Not used	-
1177	Bedding layer below cobbled surface 1146	2
1178	Lower fill of ditch 1172 . Backfill laid to provide levelling for surface 1146	2
1179	Single fill of ditch 1180 ; rapidly accumulated secondary fill	3
1180	Cut for shallow ditch along the edge of ditch 1172	3
1181	Construction cut for wall 1050 . group 1013/1163	2
1182	Backfill of construction cut 1181	3
1183	Lower fill of putative hearth/kiln 1173 ; a charcoal-rich deposit burnt <i>in situ</i>	3
1184	Construction cut for wall 1048	2
1185	Cut for robber trench, in ditch group 1013/1353	3
1186	Cut of pit, for storage or rubbish	2
1187	Fill of pit 1186 ; a mixture of backfill and some naturally accumulated colluvium	3
1188	Cut of pit, likely for storage or rubbish	1
1189	Cut of shallow pit, likely for storage or rubbish	1
1190	Cut of pit, likely for storage or rubbish	1
1191	Cut of pit, likely for storage or rubbish	1
1192	Cut of small pit, likely for storage or rubbish	1
1193	Upper fill of pit 1190 , secondary fill	1
1194	Lower fill of pit 1190 , deliberate backfill	
1195	Single fill of small pit 1192 , deliberate backfill	1
1196	Upper fill of pit 1189 , deliberate backfill	1
1197	Lower fill of pit 1189 , secondary fill	1
1198	Single fill of pit 1188 , redeposited natural backfill	1
1199	Upper fill of pit 1150 , redeposited natural backfill	1
1200	Single fill of pit 1191	1
1201	Layer of natural silt overlying cobbles 1010	3
1202	Putative cobbled surface. Part of ditch group 1013	3
1203	Cut of pit, truncated to the north by pit 1216 . No obvious function, possibly for storage/rubbish	2
1204	Fill of pit 1203 , secondary fill	3
1205	Fill of pit 1186 ; mix of backfill and naturally accumulated colluvium	3

1206	Upper fill of ditch 1208 , rubble backfill	2
1207	Fill of ditch 1254 ; backfilled demolition rubble	2
1208	Later recut of boundary ditch 1254	2
1209	Fill of pit 1210 , backfill	4
1210	Cut of small rubbish pit	4
1211	Not used	-
1212	Bedding layer for cobbled surface 1066	3
1213	Cut of rubbish/demolition pit	3
1214	Single fill of pit 1213 , cobble and clay backfill	3
1215	Fragments of medieval pottery backfilled into rubbish pit 1213	3
1216	Cut of potential rubbish/storage pit	3
1217	Single fill of pit 1216 , secondary fill	3
1218	Fill of ditch 1147 , redeposited natural material purposely backfilled into the ditch	2
1219	Lower fill of ditch 1147 , primary fill	2
1220	Cut of robber trench. Part of Group 1013/1353	3
1221	Fill of ditch 1224 , secondary fill	3
1222	Fill of ditch 1224 , mix of a gravel metalled surface and naturally accumulated alluvium	2
1223	Fill of ditch 1224 , gravels and stones laid as a metalled surface. Group 1013/1353	2
1224	Recut of ditch 1229 , perhaps for surface 1223	2
1225	Backfill of construction cut 1226	2
1226	Construction cut for wall 1048	2
1227	Fill of ditch 1229 , secondary fill	2
1228	Fill of ditch 1229 ; mix of natural silting and deliberate stone backfill	2
1229	Cut of boundary/defensive ditch	2
1230	Alignment of stones. Possibly a repair to existing surface 1010	3
1231	Fill of ditch 1233 , secondary/tertiary fill	2
1232	Fill of ditch 1233 , secondary fill - alluvial	2
1233	Cut of defensive/boundary ditch	2
1234	Layer of accumulated sediment below cobbles 1066	3
1235	Cut of pit, likely to be for storage/rubbish	3
1236	Fill of ditch 1233 , secondary fill - alluvial	2
1237	Lower fill of ditch 1233 , secondary fill - alluvial	2
1238	Bedding layer underlying 1212	3
1239	Cut of posthole, highly truncated	2
1240	Fill of posthole, secondary fill	3
1241	Naturally accumulated colluvium below cobbles 1066	3
1242	Fill of ditch 1233 , secondary fill - colluvial	2
1243	Floor/occupation layer	3
1244	Potential levelling layer	3
1245	Fill of ditch 1254 , cobbled surface	2
1246	Fill of culvert 1261 , secondary fill	2
1247	Fill of ditch 1254 , secondary fill - colluvial	2
1248	Fill of ditch 1254 , secondary fill - colluvial	2
1249	Fill of ditch 1254 , secondary fill - colluvial	2
1250	Fill of ditch 1254 , secondary fill - colluvial	2
1251	Fill of ditch 1254 , secondary fill - colluvial	2
1252	Fill of ditch 1254 ; backfilled demolition rubble	2
1253	Upper fill of ditch 1254 ; mix of backfilled demolition rubble and secondary fill	2
1254	Cut of boundary/defensive ditch	2
1255	Fill of posthole 1256 , secondary fill	3
1256	Cut of posthole	3
1257	Cut for boundary/drainage ditch	2

1258	Fill of ditch 1257 , secondary fill - colluvial	2
1259	Cut of large ditch as boundary/defence	2
1260	Cut of boundary/drainage ditch	2
1261	Cut for decayed wooden structure within ditch 1018 , with possible relationship with 1245	2
1262	Cut, same function as 1261	2
1263	Cut of small gully, likely for drainage	3
1264	Single fill of gully 1263 , mix of backfilled subsoil and accumulated sediment	3
1265	Not used	-
1266	Fill of ditch 1269 , layer of tumble from wall 1023 or cobbled surface	3
1267	Fill of ditch 1269 , secondary fill - colluvial	2
1268	Single fill of ditch/gully 1270 , secondary fill - colluvial	1
1269	Cut of boundary/defensive ditch	2
1270	Cut for gully, for boundary or drainage	1
1271	Construction cut for wall 1023 , part of building group 1068	3
1272	Not used	-
1273	Not used	-
1274	Not used	-
1275	Not used	-
1276	Upper fill of ditch 1269 , secondary fill - alluvial and colluvial	2
1277	Layer of demolition rubble - levelling	4
1278	Layer of demolition rubble - levelling	4
1279	Layer of naturally accumulating silts	4
1280	Wall foundation comprising naturally worn boulders. Part of building Group 1299	3
1281	Not used	-
1282	Wall foundation. Part of building Group 1299	3
1283	Not used	-
1284	Fill of feature 1262 , mix of natural silting and partial decaying <i>in situ</i>	2
1285	Fill of ditch 1208 , secondary fill - colluvial	2
1286	Cobbled surface; repair to surface 1066	3
1287	Fill of ditch 1260 , result of colluvial silting	3
1288	Fill of ditch 1289 , result of colluvial silting	2
1289	Cut of ditch for boundary/drainage	2
1290	Accumulated layer within building group 1068	3
1291	Fill of ditch 1259 , same as 1315	2
1292	L-shaped foundation overlying cobbled surface 1066	3
1293	Backfilled material located between walls 1280 and 1282 . Part of building Group 1299	3
1294	Group number for construction cuts for building group 1068	2
1295	Fill of pit 1296 , stony backfill	2
1296	Cut for large shallow pit, possibly for storage/drainage	1
1297	Backfill of construction cut 1298	3
1298	Construction cut for wall 1065	3
1299	Heavily-truncated building, comprising three surviving foundation walls to the east, north and west	3
1300	Backfill between structures 1280 and 1282	3
1301	Fill of ditch 1302 , layer of bedding for cobbled surface 1066	3
1302	Cut of boundary/drainage ditch	2
1303	Layer of accumulated sediment overlying ditches 1305 and 1309	3
1304	Fill of ditch 1305 , secondary fill - colluvial and alluvial	2
1305	Cut for boundary/defensive ditch	2
1306	Not used	-
1307	Boulder foundation of the western wall of building group 1299	3
1308	Backfill of construction cut 1309	3
1309	Construction cut for wall 1307	3

1310	Silts sealing layer above ditch 1259	3
1311	Construction cut for wall 1065	3
1312	Potential floor, or levelling layer	3
1313	Upper fill of ditch 1289 , secondary fill - colluvial	2
1314	Fill of ditch 1289 , secondary fill - alluvial	2
1315	Fill of ditch 1259 , same as 1291	2
1316	Fill of ditch 1259 . Deliberate dump of stony material, or rapid accumulation of material through a flooding event	2
1317	Backfill of putative construction cut 1318	3
1318	Indistinct construction cut for foundation wall 1280	3
1319	Fill of ditch 1259 , secondary fill - alluvial	2
1320	Basal fill of ditch 1259 , primary fill - alluvial	2
1321	Make-up layer within building group 1299	2
1322	Fill of ditch 1324 , backfill	2
1323	Fill of ditch 1324 , primary fill - colluvial	2
1324	Cut of boundary/defensive ditch	2
1325	Fill of gully/ditch 1327 , secondary fill - colluvial	3
1326	Fill of ditch/gully 1327 , primary fill - colluvial	3
1327	Cut of ditch/gully	3
1328	Fill of ditch 1331 , deliberate backfill	2
1329	Fill of ditch 1331 , secondary fill - colluvial	2
1330	Fill of ditch 1331 , primary fill - colluvial	2
1331	Cut of probable boundary ditch	2
1332	Fill of ditch 1336 , tertiary fill - colluvial	3
1333	Fill of ditch 1336 , secondary fill - colluvial	2
1334	Fill of ditch 1336 , secondary fill - colluvial	2
1335	Fill of ditch 1336 , secondary fill - colluvial	2
1336	Cut of ditch boundary/drainage ditch	2
1337	Layer of levelling stone sealing ditch 1309	3
1338	North-west/south-east-aligned ditch below walls 1064 and 1307 . Potential earlier property boundary	2
1339	Twentieth-century levelling deposit	4
1340	Relict subsoil/alluvial layer	4
1341	Putative earth floor	3
1342	Fill of ditch 1343 , secondary fill - colluvial	3
1343	Cut of ditch, later burgage boundary	3
1344	Fill of culvert 1345 , secondary fill - colluvial	2
1345	Cut for small culvert/drain	2
1346	Fill of ditch 1324 , secondary/primary fill - alluvial	2
1347	Fill of putative pit 1348 , backfill/rapid accumulation of sediments	3
1348	Cut of large pit, potentially for storage	3
1349	Granite boulder foundation course forming the eastern side of building group 1299	3
1350	Fill of pit 1164	1
1351	Ditch forming two sub-square enclosures. Possible boundary ditches for burgage plots below buildings Group 1068 and Group 1299	2
1352	Cobbled surface within ditch Group 1013	2-3
1353	Robber trench within ditch Group 1013	3
1354	Soil horizon marking the end of the medieval phases on site	3-4

SITE B

Context No	Interpretation	Assessment Phase
3000	Demolition rubble, general debris from the demolition of the nineteenth-century extension to the Two Lions Inn	4
3001	Natural geology	0
3002	North-eastern wall of building. L-shaped within cut 3024 , butted by 3020 , earlier than paved surface 3003	4
3003	Flag floor	4
3004	Internal dividing wall, butted 3003 and 3002	4
3005	Rubble. Same as 3036	4
3006	North/south-aligned wall	4
3007	Foundation trench for wall 3006	4
3008	Backfill of construction cut 3007	4
3009	Deliberate backfill of gully 3010 , concentration of stones on the southern edge of the feature	4
3010	Cut for possible gully	4
3011	Not used	-
3012	Buried soil horizon?	4
3013	Subsoil	4
3014	Layer sealing earlier features. Possible levelling layer	4
3015	Wall of Structure 3072 , contemporary with 3016	4
3016	Wall of Structure 3072 , contemporary with 3015	4
3017	Demolition rubble, possibly representing the remains of surface	4
3018	Demolition rubble/levelling layer, situated outside walls 3015 and 3016 , possibly from their demolition	4
3019	Construction cut for walls 3020 and 3004	4
3020	Western and north-western walls of building 3049	4
3021	Backfill of construction cut 3019	4
3022	Occupation layer(?) or initial bedding layer, same as 3040 ?	4
3023	Levelling layer	4
3024	Construction cut for wall 3002	4
3025	Not used	-
3026	Backfill of construction cut 3024	4
3027	Thin layer of degraded sandstone debris	4
3028	Possible subsoil, no finds	4
3029	Possible well, excavated to 0.5m, where a layer of cobbles was encountered	4
3030	Deliberate backfill of well 3029	4
3031	Clay lining within cut 3032 , possibly some sort of seal against damp for walls 3015 and 3016	4
3032	Cut for potential robbed-out tank or possible foundation for wall 3016	4
3033	Lower fill of foundation cut 3032	4
3034	Tarmac	4
3035	Hardcore	4
3036	Demolition rubble	4
3037	Buried soil horizon?	4
3038	Subsoil?	4
3039	Layer of redeposited natural material; levelling?	4
3040	Occupation layer?	3
3041	Uppermost layer within walls 3015 and 3016 ; a demolition layer possibly derived from building 3072	4
3042	Clay layer, perhaps bedding for a floor, or a lens within rubble 3041	4
3043	Foundation cut	4
3044	Backfill of foundation cut 3043 . Possibly some evidence of burning	4
3045	Upper fill of construction cut 3043	4
3046	Fill of possible robber cut 3047	4

3047	Robber trench within structure 3049	4
3048	Foundation cut for wall 3015	4
3049	Structure of eighteenth- or nineteenth-century date	4
3050	Possible rubbish pit	3
3051	Single fill of pit 3050 ; deliberate backfill	3
3052	One of several parallel ditches extending across site; possible beam slot? Parallel with 3064	1-2
3053	Fill of ditch 3052 , secondary silting?	1-3
3054	Pit or possible posthole?	4
3055	Secondary silting of pit 3054	4
3056	Possible beam slot?	4
3057	Secondary silting of ditch 3056	4
3058	Possible robber cut	4
3059	Secondary silting of ditch 3058	4
3060	Possible rubbish pit	3
3061	Secondary fill of pit 3060 , deliberate backfill	3
3062	Possible rubbish pit	3
3063	Fill of pit 3062 . Deliberate backfill?	3
3064	Ditch of unknown function, possible beam slot? Parallel with 3052	1-2
3065	Secondary silting of ditch 3064	1-3
3066	Posthole	3
3067	Fill of posthole, secondary silting?	3
3068	Terminus of ditch of unknown function, possible beam slot?	1-2
3069	Secondary silting of terminus 3068	1-2
3070	Possible rubbish pit. Cut ditch 3068	3
3071	Deliberate backfill of pit 3070	3
3072	Structure comprising walls 3015 to the west and 3016 to the south. Possible later extension to structure 3073	
3073	South-west corner exposed of structure, probably contemporary with <i>group</i> 3072 , maybe even part of the same structure	4
3074	Exterior west wall of building 3073 , contemporary with 3075	4
3075	Exterior south wall of building 3073 , contemporary with 3074	4
3076	Possible buried soil horizon/potential floor for structure 3073	4
3077	Flagged floor. Possible passageway	4
3078	Either a pit dug in which to place large glacial erratic 3081 , or the stone was there originally and the pit was an abandoned attempt to remove it	4
3079	Possible primary silting of the sides of pit 3078	4
3080	Deliberate backfill of pit 3078	4
3081	Glacial erratic, possibly in its original location, or possibly moved into pit 3078	4
3082	Sandstone-lined box or tank	4
3083	Ditch of unknown function. Possible beam slot?	1-2
3084	Secondary silting of ditch 3083	1-2
3085	Posthole. Cut ditch 3083	3
3086	Secondary silting of posthole 3085 . Associated stones may be remnants of packing	3
3087	Ditch of unknown function. Possible beam slot? Parallel with ditch 3083	1-2
3088	Secondary silting of ditch 3087	1-2
3089	Cut for posthole or pit	3
3090	Fill of posthole 3089 . Secondary silting?	3
3091	Pit truncated by 3093	1-2
3092	Secondary silting of pit 3091	1-2
3093	Large pit, possibly for storage? Cut into 3079 from top	1-2
3094	Primary fill of pit 3093	1-2
3095	Secondary fill of pit 3093 , deliberate backfill	1-2
3096	Deliberate backfill of pit 3099	3

3097	Cut for rubbish pit	3
3098	Secondary fill of pit 3097	3
3099	Storage pit, cut into pit 3093	3
3100	Secondary fill of gully 3102 . Possible patch of degraded sandstone	4
3101	Secondary fill of gully 3102 , deliberate backfill	4
3102	Gully of unknown function	4
3103	Deliberate backfill of posthole 3104	4
3104	Posthole, apparently in isolation	4
3105	Occupation layer within structure 3073 , although due to its relative depth it pre-dates 3073	4
3106	Occupation layer or levelling layer?	4
3107	Secondary silting of pit 3109	4
3108	Primary fill of pit 3109 . Contained an animal skeleton, not seen fully in plan, either partially or fully articulated, possibly a young cow or horse	4
3109	Cut for pit for animal carcass	4
3110	Occupation layer	4
3111	Shell midden deposit within pit 3112	4
3112	Cut for rubbish pit	4
3113	Levelling layer, unknown origin	4
3114	Not used	-
3115	Secondary silting of feature 3116	4
3116	Possible posthole, or a continuation of gully 3102	4
3117	Not used	-
3118	Not used	-
3119	Gravel deposit, possibly natural in origin	4
3120	Layer of unknown origin	4
3121	Layer of unknown origin	
3122	Not used	-
3123	Gully of unknown function	3
3124	Secondary silting of gully 3123	3
3125	Gully of unknown function	3
3126	Secondary silting of gully 3125	3
3127	Terminus of ditch of unknown function. Possible beam slot (=3129)	1-2
3128	Secondary silting of gully 3127	1-3
3129	Cut for ditch of unknown function. Possible beam slot (=3127)	1-2
3130	Secondary silting of ditch 3129	1-2
3131	Posthole which cuts into ditch 3133 . Would appear too small to be a pit	3
3132	Secondary silting of posthole 3131	3
3133	Possible beam slot (=3137). Cut by posthole 3131	1-2
3134	Secondary silting of ditch 3133	1-2
3135	Gully aligned north/south, cut feature 3137	3
3136	Secondary fill of gully 3135 , a gradual accumulation over time	3
3137	Cut for linear feature, possibly a beam slot. Cut by gully 3135	1-2
3138	Fill of feature 3137 , a gradual accumulation of sandy-silt	1-2
3139	Fill of construction cut 3140 , comprised mainly rounded pebbles backfilled against the western side of wall 3074	4
3140	Foundation trench for wall 3074	4
3141	Fill of posthole 3142 , probably a combination of natural silting and packing	4
3142	Cut for small posthole or stakehole, pre-dates the earlier buildings on site	4
3143	Possible terminus of a steep-sided ditch or pit. Possibly cut by ditch 3145	3
3144	Fill of 3143 . Deliberate backfill of ditch or pit	3
3145	Cut for ditch. Would appear to cut ditch 3143 , but the similarities between the fills made this difficult to ascertain	3
3146	Secondary fill of ditch 3145 , formed by a gradual build-up of material from the sides of the feature	3
3147	Secondary fill of ditch 3145 , truncated by foundation cut 3048	3

3148	North/south-aligned gully, possible beam slot?	3
3149	Backfill of cut 3151 against wall 3150	4
3150	Nineteenth-century extension to the Two Lions Inn	4
3151	Foundation trench for wall 3150	4
3152	Secondary silting of ditch 3153	4
3153	Cut for ditch of unknown function	4
3154	Internal wall, possible return of 3074	
SITE D		
2000	Topsoil	4
2001	Subsoil	4
2002	Natural geology	0

APPENDIX 3: FINANCIAL BREAKDOWN

SCHEDULE FOR POST-EXCAVATION ANALYSIS WORKS

Anticipated invoice month	Task completion as per <i>Section 10.2</i>	Staged payment details	Invoice amount
January 2012	Tasks 1-7	1st Interim payment	£15,000
April 2012	Tasks 9-15 and 19	2nd Interim payment	£15,000
July 2012	Tasks 16-18	3rd Interim payment	£15,000
October 2012	Tasks 20-26	4th instalment on submission of draft publication text	£ 5,000

SCHEDULE FOR PUBLICATION COSTS

January 2013	Tasks 27-33	Final staged payment(based on submission of an illustrated article in the <i>Transactions of the Cumberland and Westmorland Antiquarian and Archaeological Society</i>	£ 5,000
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Total **£55,000**