DEVELOPMENT AT DAMSIDE STREET TO THE REAR OF 54-56 CHURCH STREET, LANCASTER, LANCASHIRE

Archaeological Desk-Based Assessment, Watching Brief and Evaluation

Oxford Archaeology North

March 2008

Northern Developments Ltd

Issue No: 2007-8/747
OA North Job No: L9941
NGR: SD 47668 61870
Planning Reference: 04/01248/FUL

Document Title:	**DEVELOPMENT AT DAMSIDE STREET TO THE REAR OF 54-56 CHURCH STREET, LANCASTER, LANCASHIRE**
Document Type:	**Archaeological Desk-Based Assessment, Watching Brief and Evaluation**
Client Name:	Northern Developments Ltd

Issue Number:	2007-8/747
OA North Job Number:	L9941
National Grid Reference:	SD 4792 6161
Planning Reference:	04/01248/FUL

Prepared by:	Vicky Bullock	Denise Druce	Steve Clark	Andy Bates
Position:	Supervisor	Project Officer	Assistant Supervisor	Project Officer
Date:	December 2007	December 2007	December 2007	March 2008

Checked by:	Stephen Rowland	
Position:	Project Manager	
Date:	March 2008	Signed.....
Approved by:	Alan Lupton	
Position:	Operations Manager	
Date:	March 2008	Signed.....

Oxford Archaeology North
Storey Institute
Meeting House Lane
Lancaster
LA1 1TF
t: (0044) 01524 848666
f: (0044) 01524 848606

w: www.oxfordarch.co.uk
e: info@oxfordarch.co.uk

Janus House
Osney Mead
Oxford
OX2 0EA
t: (0044) 01865 263800
f: (0044) 01865 793496

CONTENTS

SUMMARY

As part of a planning submission (reference 04/01248/FUL) for a residential and commercial development on Damside Street to the rear of 54-56 Church Street, Lancaster (NGR SD 47668 61870), Oxford Archaeology North (OA North) was commissioned by Northern Developments Ltd to undertake a programme of archaeological investigation to further inform the planning process. The programme was established in consultation with Lancashire County Archaeology Service (LCAS) and accordingly, OA North compiled a project design for a desk-based assessment, a watching brief to maintained during geotechnical boreholing and test-pitting of the site, and evaluation excavation by trial trenching to be undertaken prior to the development of the site. The following document reports on the results of each phase of this work.

The desk-based assessment, undertaken in November 2007, covered a radius of 100m around the proposed development site and included visits to the Lancashire Historic Environment Record, the Lancashire County Record Office, and consultation of OA North's library. The development site lies towards the centre of Lancaster, just south of the river Lune. Previous fieldwork at Damside Street has indicated the presence of possible nearby Roman riverside settlement, relating to the fact that the contemporary course of the Lune in this area ran slightly to the south and west of its present course. The gradual movement of the river channel left much of the area very marshy, forming the Green Ayre. This area is not thought to have been developed until the eighteenth century, when it was consolidated with large amounts of refuse and other redeposited material. Today, the proposed development site lies to the rear of plots on Church Street and is currently used as a car park.

During the assessment, 31 sites of cultural heritage interest were identified within the wider area, mostly historic buildings. Two sites are likely to be directly affected by the development: Site **8**, the regionally significant remains of Roman and medieval remains identified on the site (15 Damside Street) during an evaluation undertaken in 1990, and Site **18**, a series of locally significant post-medieval buildings identified from cartographic sources as occupying the site from at least the later eighteenth century.

The watching brief of geotechnical boreholing and test-pitting, undertaken on the 14th and 15th November 2007, was conducted in order to assess the presence of any archaeological and palaeoecologically significant remains on site. The coring, which extracted loose samples, revealed mudstone at a depth of 5m. This was overlain by approximately 3m of apparently riverine deposits, in turn overlain by about 2m of more mixed deposits, some of which, near the street frontage, potentially related to backfilling of cellars, whilst other deposits could be archaeological in origin. The geotechnical test pits excavated through the embankment within the rear portion of the site revealed the presence of a number of structural remains likely to relate to the different phases of building associated with Site **18**, together with a large amount of demolition debris likely to relate to the destruction of the same buildings.

Both the 1990 evaluation and the present scheme of trial trenching revealed the presence of highly significant medieval and post-medieval archaeological remains at a shallow depth within the eastern part of the site. The 1990 works indicated that these

remains were underlain by 1.2m-1.5m of water-lain silt deposits which in turn sealed Roman remains, likely to relate to waterfront activity. Towards the centre and west of the site, the present evaluation encountered evidence of widespread disturbance, commensurate with the removal of industrial period cellars, to a depth of around 1.7m. The modern infill of this disturbance appeared to seal water-lain silt deposits, although the presence of groundwater at shallow depth impeded an *in situ* examination of this material. Such severe truncation is likely to have removed all but the deepest medieval and post-medieval features in this area, although the depth of the Roman and post-Roman/early medieval deposits would mean that they are likely to have survived even within this area, and would be preserved across the site. Outside of this area of disturbance, there is a good chance that pockets of medieval and post-medieval stratigraphy, together with industrial period structural remains, may be preserved along the street frontage. Such remains, together with those identified within the south-eastern corner of the site will be extremely vulnerable to shallow groundworks which might otherwise allow the more deeply buried Roman and post-Roman silt layers to be preserved *in situ*. All of the archaeological remains, including the more deeply buried strata, would be impacted upon by piling, both in terms of the initial insertion, through dewatering of waterlogged deposits and, longer term, when the piles are dug out following demolition of the proposed structure.

Although an appropriate scheme of mitigation cannot be devised until the designs for the building are finalised, it is recommended that a meeting should be held between all interested parties to ensure that the final designs and programme of archaeological mitigation are mutually appropriate.

ACKNOWLEDGEMENTS

Oxford Archaeology North (OA North) would like to thank Eddie Ward, Allesandro Morganella and Martyn Boak of Northern Developments Ltd, and also Andrew Stanyon, for commissioning the project and for their liaison. Thanks are also due to Ken Davies of the Historic Environment Record Office, Preston, and all the staff of the County Record Office in Preston for their assistance during the research for the desk-based assessment. OA North are particularly grateful to Peter Iles of Lancashire County Archaeology Service for his advice and liaison throughout each stage of the project. OA North is also thankful to the environmental consultants Ramboll Whitbybird, in particular Zoe Miller and Mark Bell, and also Richard Wood and Paul Wilkinson, from White Rose Drilling, for their co-operation and valuable assistance on site.

Denise Druce observed the coring at the site and also described the sediments and assessed their archaeological/palaeoenvironmental potential, whilst Steve Clarke maintained the archaeological watching brief during the test-pitting. The desk-based assessment and site visit was undertaken by Vicky Bullock, whilst the evaluation was directed by Andy Bates, assisted by Aidan Parker, Steve Tamburrello and Dan Taylor. The report was compiled by Denise Druce, Steve Clarke, Vicky Bullock, Andy Bates and Stephen Rowland. Sean McPhillips examined and reported upon the finds, and the drawings were produced by Marie Rowland. The project was managed by Stephen Rowland, who also edited the report.

1. INTRODUCTION

1.1 CIRCUMSTANCES OF PROJECT

1.1.1 In 2004, Northern Developments Ltd (NDL) submitted a planning application (reference 04/01248/FUL) for the development of a plot of land on Damside Street, to the rear of 54-56 Church Street, Lancaster, Lancashire (NGR SD 47668 61870). The site lies opposite Lancaster Bus Station and is divided into a flat area adjoining Damside Street and currently used as a carpark, and a smaller, embanked area to the rear of the Church Street properties which is presently covered by scrub. Although the foundation plan has yet to be established, the development will be multi-storied and will consist of four retail units and 17 habitable apartments. The site lies within an area of archaeological potential and, accordingly, Lancashire County Archaeological Service (LCAS) requested that a programme of provisional archaeological investigation, comprising a desk-based assessment and a trial trench evaluation, should be undertaken of the site prior to development taking place. Furthermore, NDL proposed to undertake a programme of geotechnical investigation on the site, including coring and the hand excavation of test pits. The programme of coring was to involve the drilling of three boreholes using a cable percussion rig, either to the level of the natural bedrock, or to a maximum depth of 15m. Through consultation with LCAS, it was established that these intrusive works should be monitored in order to mitigate any damage to shallow deposits and to better understand the archaeological potential of the site and to inform any strategy of archaeological mitigation in the future. Following submission of costs, Oxford Archaeology North (OA North) was commissioned by NDL to undertake the programme of archaeological works.

1.1.2 The desk-based assessment, undertaken in November 2007, comprised a search of both published and unpublished records held by the Historic Environment Record (HER) in Preston, the Lancashire County Record Office, also in Preston, and the archives and library held at OA North. The significance criteria detailed in PPG 16 (DoE 1990) was employed during the assessment. In addition, a site inspection was carried out on the site of the proposed development in order to relate the landscape and surroundings to the results of the desk-based assessment.

1.1.3 OA North maintained a watching brief during the programme of geotechnical site investigation works in November 2007. An OA North archaeologist monitored and recorded the excavation of a number of small trial pits, whilst an OA North palaeoenvironmentalist visited the site during the borehole investigations and made sediment descriptions in the field where appropriate (where loose sediments from the coring were bulk-sampled in bags). A provision was also put into place where the palaeoenvironmental specialist from OA North could visit the offices of the environmental consultants in order to record any sediments sampled in sealed cores, although in the event this was not necessary. The recorded sediments provided the information upon which any geoarchaeological interpretations and palaeoenvironmental potential were based.

1.1.4 Three archaeological trial trenches were excavated at the site in March 2008, in order to evaluate the archaeological potential of the site through the investigation of 5% of the development area. Two linear trenches were placed within the south-eastern and north-western parts of the flat area of the development site (presently used as a carpark) in order to evaluate the extent of medieval stratigraphy and industrial period structures. A third trench, measuring 2m square, was sited on the embankment to the rear of the site, as it was felt that there was some potential for the preservation of medieval and Roman stratigraphy in this area. The following report sets out the results of each phase of the works in the form of a short document outlining the findings to date. The report includes a statement of the significance of the archaeological resource within the area, of the potential of the site itself, and an assessment of the impact of the proposed development.

2. METHODOLOGY

2.1 PROJECT DESIGN

2.1.1 The LCAS-approved OA North project design (*Appendix 1*) was adhered to as fully as possible, and the work was consistent with the relevant standards and procedures of the Institute of Field Archaeologists (1999), and generally accepted best practice. During the evaluation it was necessary to make several deviations from the original project design (*Section 2.5.1*); all such variations to the programme were made in consultation with LCAS and with the client.

2.2 DESK-BASED ASSESSMENT

2.2.1 The desk-based assessment was undertaken to identify the archaeological potential of the proposed development site. The study focused on an area within a 0.1km radius of the proposed development site, covering the site itself and its immediate surroundings. Relevant information from a wider area was summarised to place the results of the desk-based assessment into an archaeological and historical context. The known archaeological sites within the 0.1km study area have been included in the Site Gazetteer (*Section 4*) and the results were analysed according to the Secretary of State's criteria for assessing the significance of ancient monuments as set out in PPG 16 (DoE 1990). In order to undertake the desk-based assessment, several sources of information were consulted:

2.2.2 ***Historic Environment Record (HER):*** the LHER, a list of all known archaeological sites within the county, was consulted to establish the presence, extent and character of sites of archaeological interest already recognised within the study area and its environs.

2.2.3 ***County Record Office (CRO), Preston:*** the CRO in Preston was visited to consult primary documents and to consult maps and secondary published sources relating to the study area.

2.2.4 ***Oxford Archaeology North:*** OA North has an extensive archive of secondary sources relevant to the study area, as well as numerous unpublished client reports on work carried out both as OA North and in its former guise of Lancaster University Archaeological Unit (LUAU). These were consulted where necessary.

2.3 SITE INSPECTION

2.3.1 The site was visited on 13th November 2007 in order to relate the existing topography and land use to research findings, to assess evidence not available through documentary sources, and to highlight the presence of any areas of surface detail or archaeological interest. The visit also provided an understanding of the wider impact of the proposed redevelopment and the

presence of any immediately visible constraints to the undertaking of intrusive investigation works.

2.3.2 The survey noted present land use, the condition and visibility of features identified in the documentary research and any features of potential archaeological interest, any areas of potentially significant disturbance, and hazards and constraints to undertaking further archaeological work on site (Plates 1, 2 and 3).

2.4 WATCHING BRIEF

2.4.1 The watching brief monitored the hand excavation of a series test pits into the surface of the carpark, and of the embankment to the rear of the site. The programme of field observation recorded the extent and character of any surviving archaeological features, all significant horizons exposed, and any artefacts found during the excavations. All recording utilised *pro-forma* recording sheets, together with plans and sections produced at an appropriate scale and a fully indexed photographic record in monochrome print, colour slide and digital formats.

2.4.2 ***Coring Observation and Sediment Descriptions:*** three boreholes were drilled at various points across the site (Fig 13) using a cable percussion rig; sampling was made with either 0.5m long plastic casing or as bulk samples, depending on the nature of the sediment. The works were monitored by an OA North environmental specialist, who liased with the Ramboll Whitbybird soil specialist/field director in order to produce a record of the extracted sediments. A series of field notes was made, describing the bulk samples and their archaeological and palaeoenvironmental potential. Although provision had been made to undertake laboratory-based descriptions during the opening of any sealed cores, all of the material was retrieved in a loose state and could be recorded in the field. The collated sediment descriptions were entered into a log *pro-forma* and an Excel spreadsheet. The results formed the basis with which to assess the geoarchaeological interpretation and palaeoenvironmental potential of the site.

2.5 TRIAL TRENCH EVALUATION

2.5.1 ***Trench configuration:*** in total, three trial trenches were excavated (Fig 16). Trench 1 was located within the western part of the site to establish the extent of cellaring, and the survival of industrial period structural remains identified from the map regression undertaken during the desk-based assessment. It was planned that Trench 1 should measure 8m north-east/south-west by 2m wide, and would then be extended to encompass the full extent of any cellar in this area. However, conditions on the ground, whereby internal cellar walls appeared to have been removed, and the presence of groundwater at a depth of 0.72m below ground level (6m OD), militated against this approach. Therefore, the principal axis (Segment A) of the trench was 9.6m long, with two perpendicular extensions. The most northerly of these extensions, Segment B, was 6.6m long and sought to identify the extent of a wall identified at the

northern end of Segment A. The more southerly extension, Segment C, was 11.7m long, and sought to establish the easterly extent of twentieth-century disturbance that had been identified within Segment A. Trench 2 was excavated on the embankment at the rear of the proposed development site in order to establish the presence of any surviving medieval and Roman stratigraphy. The trench measured 2.3m by 2.2m, and was excavated to a maximum depth of 3m. Trench 3, measuring 8m by 2m, was excavated over potentially undisturbed medieval deposits in the eastern part of the site.

2.5.2 ***Excavation:*** before work commenced the development area was fenced off with mesh fencing. Following scanning with cable avoidance tool, the excavation of the trenches proceeded with an 8-ton 360º mechanical excavator, fitted first with a pecker and toothed bucket to remove surface tarmac, and then with a 1.8m wide toothless bucket. The machine operated under archaeological supervision, down to either the first archaeological deposits or to fluvial deposits, whereupon any further excavation was completed manually. All spoil was scanned for artefacts. Excavation within the majority of Trench 1 was undertaken until ground water was reached, except at the eastern end of Segment C. There, to assess the depth of twentieth-century stone infill, excavation proceeded below the water table to a depth of 1.79m, ceasing once deposits other than stone in-fill were reached. The depth of Trenches 1 and 2 meant that they could not be entered for health and safety reasons, and were recorded from the surface.

2.5.3 Recording comprised a full description and preliminary classification of the deposits and materials revealed on OA North *pro-forma* sheets. The trenches were located with a Total Station Theodolite (TST) and tied into the Ordnance Survey grid. The field survey data and was incorporated with digital map data in a CAD system to create the figures used in this report. Hand-drawn plans were produced showing the contents of the trenches, with representative sections being drawn at a scale of 1:10 or 1:20 as appropriate. An indexed photographic record using monochrome, colour slide and digital formats was maintained. The surface tarmac and concrete was removed from the site, and replaced with stone chippings sprinkled with concrete to provide a firm surface upon reinstatement of the trenches.

2.6 ARCHIVE

2.6.1 A full professional archive has been compiled in accordance with the project design (*Appendix 1*), and in accordance with current IFA and English Heritage guidelines (English Heritage 1991). The paper and digital archive will be deposited with the Lancashire Record Office on completion of the project.

3. BACKGROUND

3.1 LOCATION, TOPOGRAPHY AND GEOLOGY

3.1.1 The proposed development site lies on Damside Street, opposite the Bus Station, in the centre of Lancaster (NGR SD 47668 61870). Damside Street lies immediately to the north of Church Street, historically one of Lancaster's principal streets. The site is currently used as a car park.

3.1.2 The solid geology of Lancaster consists predominantly of Silesian (Upper Carboniferous) grey-brown or reddened, medium to coarse-grained sandstones of the Pendle Grit formation, which is part of the Millstone Grit Group (British Geological Survey 1992). These sandstones are thickly bedded with thin siltstone partings, but with mixed sandstone/siltstone units near the top. The overlying deposits comprise mixed drift geology, mapped predominantly as glaciofluvial sheet deposits of clayey sands and gravels.

3.2 HISTORICAL AND ARCHAEOLOGICAL BACKGROUND

3.2.1 ***Prehistoric:*** there is only scattered and fragmentary evidence of prehistoric activity in and around Lancaster (Penney 1981, 9), this being limited to a number of find spots recorded on the Historic Environment Record. These include a Neolithic Mortlake bowl from Church Street, three possible Bronze Age burials from the Penny Street area, and various flint objects from around Vicarage Fields, whilst a bronze palstave is reputed to have come from Castle Hill (OA North 2003).

3.2.2 ***Roman:*** there is extensive evidence of the Roman settlement at Lancaster, which originated in the early AD70s with a fort founded on Castle Hill (Shotter 1996). A series of forts were built on Castle Hill, the latest phase being a major rebuilding during the fourth century, commanding a position overlooking the crossing of the River Lune (LUAU 1992). This last fortification included a section of wall (which still stands in places and is known as the Wery Wall), thought to have been intended to protect the harbour, and it is likely that the river may have lain further to the south in Roman times, possibly along a line now occupied by North Road and Damside Street (LUAU 1991).

3.2.3 The full extant of Lancaster's extramural civilian settlement, or *vicus*, remains uncertain but it seems that the principal focus was along what is now Church Street (immediately to the south of the present development site). This has been highlighted by the recent excavations on the site of the former Mitchell's Brewery, which encountered considerable Roman remains (LUAU 2000). The eighteenth-century rebuilding of many properties in Church Street and the consequent excavation of cellars along the entire street frontage simultaneously revealed, and destroyed, much of the evidence for Roman settlement (LUAU 2000). The fullest description of material from the

construction of an early cellar is by West (1779) of finds made during the building of 80 Church Street in 1776:

"On sinking cellars...at the upper part of Church Street...was discovered, at about six feet below the present surface of the street, a supposed Roman burying place...two fragments of thick walls five yards distant from each other…seeming to continue under Church Street....There is a descent of about seventy or eighty yards from the back part of the house, to where it is thought the river Lon [sic] anciently ran, but now built upon. The ground on the said back part was levelled for a great many yards, equal with the cellar floor, where also were found, from three to six feet deep according to the descent...[Roman objects]...The stratum of ashes and bones was from a foot to about five feet thick. It no doubt rounds quite under Church Street, if not farther, as in digging a drain on the opposite side of Church Street ...at about six feet under the surface, was found the same sort of stratum of ashes, bones, *paterae...*"

3.2.4 Many other finds are described by nineteenth-century authors, notably Simpson (1852) and Watkin (1883), who records that about 100 yards east of 80 Church Street, and on the opposite side of the road, cellaring revealed:

"…several large hewn stones, and one about six feet under the surface supposed to be about three tons in weight...under which were found a great many Roman coins of Domitian, Vespasian etc. it is thought to be the corner stone of a temple or some other public building".

3.2.5 All of the chance finds from the area seem consistent with civilian occupation, and it is notable that very few finds from these collections date from later than the mid-third century; this has been postulated as evidence for the abrupt decline of the settlement at that date. The small-scale excavations in Church Street in the past have concentrated on the relatively untouched islands of stratified deposits between cellars and those areas where it had been demonstrated that the stratified deposit was of such a depth (six to eleven feet) that the earliest pre-Roman and Roman layers survive beneath cellar floors (LUAU 2000a, 7).

3.2.6 There is a marked thinning of chance finds in the eastern part of Church Street (the greatest concentration of finds being between numbers 80 and 41), away from the focus of the fort complex, although there is evidence of settlement extending eastward almost as far as Cheapside, including occupation levels preserved in small areas of undisturbed stratigraphy directly behind the cellared street frontage observed during the construction of MacDonalds in Cheapside (Bellis and Penny 1979). The occurrence of funerary material in Cheapside and below the St Nicholas Shopping Centre, suggests domestic occupation had become considerably thinner by this point (LUAU 2000a). with funerary activity also identified on Penny Street and on the site of Lancaster Market (OA North 2000a; Drury forthcoming). The funerary material may imply that Cheapside lies close to the perimeter of the extramural settlement, as Roman cemeteries conventionally lay beyond the bounds of the settlement. The presence of further funerary remains from King Street, Queen Street, Aldcliffe Road, Spring Garden Street and the more southerly reaches of

Penny Street would certainly suggest that these areas lay close to a road leading into the settlement, but outside the bounds of concentrated habitation.

3.2.7 Fieldwork at Damside Street (LUAU 1991), probably actually within the present development area, uncovered Roman occupation debris interleaved with natural silts, indicative of nearby Roman riverside settlement and relating to the fact the that the area to the immediate south of Damside Street represents a possible interface of the *vicus* with the contemporary course of the River (*Section 3.4*). By the late Roman period, however, sterile silts were forming in this area, so that any contemporary riverside settlement had shifted elsewhere. Excavations on the corner of St George's Quay and Damside Street also identified Roman and medieval deposits, although these were disturbed by post-medieval remains (OA North 2003c).

3.2.8 ***Early Medieval:*** following the collapse of Roman administration it is likely that parts of the city remained in constant use, and that remains of stone buildings and parts of the fort may have been visible for a number of centuries (White 2000, 33). It is known that a church existed within the fort area of Castle Hill by the ninth century (Newman 1996), as testified by the finding within the priory precinct of a seventh-century Anglian Runic cross and several fragments of ninth- and tenth-century Anglo-Scandinavian crosses. A hoard of Northumbrian *Stycas* found in the adjacent Vicarage Field may also relate to this activity. This church seems likely to have formed the centre of a vill (*Chercaloncastre* or Church Lancaster) which, by 1066, was dependent on the nearby manor of Halton (Penney 1981, 13-14) In addition, another vill (*Loncastre*) existed, possibly centred around the Stonewell area, although its precise location has been disputed (White 1993, 11).

3.2.9 ***Medieval:*** knowledge of later medieval Lancaster has been largely derived from documentary sources, the archaeological record for this period in Lancaster being limited. The centre of Lordship was moved to Lancaster soon after the Domesday Survey (1086), Lancaster Castle being founded by 1094 (White 1993, 19). In 1193 Lancaster received its first charter granting borough status, with Church Street, Penny Street and Market Street as its main thoroughfares (*op cit, 26*-29). The settlement of these areas is likely to precede this date as, during fieldwork on Damside Street, the twelfth-century boundary of a burgage plot fronting Church Street was found cutting the Late Roman river silts in this area (LUAU 1991; 1992). The line of Church Street and its eastward continuation as St Leonard's Gate mirrors very closely the shape of the Lune in Roman times (running along what is now Damside street and North Road), and is likely to be an indication of the shape of the meander in the twelfth century. References to Calkeld Lane are known as early as the thirteenth century (Penney 1981), a word derived from the Norse for 'cold water' (*kaldr* and *kelda*; Ekwall 1922), suggesting that the area was of some significance in the early medieval period (LUAU 1992, 3). A mill is thought to have existed from the twelfth century situated opposite the north end of Calkeld Lane on the edge of Green Ayre, with the mill leat taking the route of present day Damside Street (*ibid*).

3.2.10 A bridge, probably constructed of timber, across the River Lune is referred to as early as 1215 (LUAU 1992, 3). A stone structure was built in the fifteenth

century, and is shown on Speed's map of 1610. The port of Lancaster was apparently not well developed during the medieval period, although the earliest map evidence, dating to the seventeenth century, shows what appears to be a quay (*ibid*).

3.2.11 ***Post-Medieval:*** it would appear that Lancaster passed through a period of stagnation during the sixteenth and seventeenth centuries. However, during the eighteenth century Lancaster's fortunes changed, and its port developed at a tremendous rate. Increased trade with the West Indies lead to Lancaster becoming one of the foremost seaports in England, with St George's Quay constructed in 1750 by the Port Commission (Dalziel 2001). As a consequence, the population increased and the city expanded, with a number of formerly empty blocks becoming filled. The land to the east of the medieval town quickly became developed, with the marshy Green Ayre consolidated with large amounts of dumped material (Fig 5). Damside Street, skirting the Green Ayre, was itself created during this time, although some of the buildings along its south side had probably been established for some time (Penney 1981, 25). An archaeological evaluation on the site of the bus station on Damside Street, just to the north-west of the present site, revealed clear evidence of eighteenth-century cellars dug into levelling layers beneath which were isolated segments of palaeochannel deposits (LUAU 2000b). The study area has seen considerable redevelopment over the last two centuries, which is best traced through the available cartographic sources (*Section 3.3*).

3.3 MAP REGRESSION ANALYSIS

3.3.1 ***Speed's 1610 Plan of Lancaster (Fig 3):*** this is a sketch map of the basic settlement of Lancaster. The main thoroughfares of the historic town are shown, and most are lined with buildings, including Church Street to the south of the proposed development area. The north-western part of Damside Street, although not named, is indicated running between the Green Ayre, together with the mill dam and associated mill to the north-east, and the rear plots of the Church street properties to the south. The present development site would appear to encompass the rear portions of a number of such plots.

3.3.2 ***Kenneth Docton's 1684 Map of Lancaster (Fig 4):*** Docton's map is a twentieth-century interpretation of collated seventeenth-century information. The map again indicates the presence of the mill dam at the northern extent of the proposed development site, although a road approximating to that of Damside Street would not appear to match the full extent of that shown by Speed. Individual burgage plots are shown running behind the Church Street frontages down towards the Green Ayre, within which the proposed development area encompasses three such plots.

3.3.3 ***Mackreth's 1778 Plan of Lancaster (Fig 5):*** this is the earliest map which shows the study area in detail. It clearly illustrates the expansion of the town in the eighteenth century. The rise in business and population was accommodated by the development of the Green Ayre, and by the subdivision of the long medieval burgage plots. Associated with this was the building of new roads, such as Damside Street (which lies on a slightly different alignment to its

present course), Cable Street, Chapel Street and Dye House Lane. The rear of the Church Street plots fronting Damside Street have almost all been built upon, including elements of at least three buildings that lie within the proposed development area.

3.3.4 ***Binns 1821 Map of the Town and Castle of Lancaster (Fig 6):*** this map shows further development in the town and on Damside Street itself. There are now buildings on both sides of Damside and Church Street, including along the entirety of the old street frontage within the proposed development area. To the rear of those buildings lining the street front are several perpendicular structures, outbuildings, and several garden areas.

3.3.5 ***Ordnance Survey 1849 first edition 1:10560 (Fig 7):*** this map shows little significant change in the area but does show the buildings lining the street front within the study area in greater detail. These would appear to comprise two larger buildings running approximately three fifths of the length of the plot, and a terrace of four smaller buildings at the front of the plot.

3.3.6 ***Harrison and Hall 1877 Plan of the Town and Castle of Lancaster (Fig 8):*** there has been further development on Cable street, including the building of the new public baths and wash house. The railway line and associated buildings have also been constructed along the side of the river. Damside and Church Street have not significantly changed, although within the development plot itself the central building has been extended to the rear to encompass almost the full depth of the plot. The building on the corner of Church Street and New Road has become a bank.

3.3.7 ***Ordnance Survey 1893 first edition 25" to 1 Mile (Fig 9):*** within the development area it would appear that there has been some remodelling of the larger buildings on the site. However, structural activity in the area is so intense that it is uncertain whether these structures have been demolished and partially rebuilt, or if they have been extended and subdivided. Certainly, almost the whole of the site is occupied by structures, including small blocks within the southern and eastern parts of the development which have been constructed since 1877.

3.3.8 ***Ordnance Survey 1913 25" to 1 Mile (Fig 10):*** Church Street, Damside Street and the immediate surrounding area have not significantly changed from the 1893 map, although the small structure built within the eastern part of the development site between 1877 and 1893 has been demolished.

3.3.9 ***Ordnance Survey 1931 25" to 1 Mile (Fig 11):*** major changes have taken place within the development site and surrounding area. Damside Street has been slightly realigned on a more north-west/south-east axis, as it is today. Opposite the site, the small terraces that lined the northern side of Damside Street and Fleet Street have been demolished to make way for a 'car parking ground'. The smaller buildings on the southern side of Damside Street have shared a similar fate in order to accommodate the realignment of the street frontage. Within the development area, only those buildings within its western portion and a number of small buildings to the south would appear to have survived; the rest have been demolished. Whilst a larger structure has been

built within the centre of the site, the area to the west, although subdivided into two rectangular plots, is otherwise vacant.

3.3.10 ***Ordnance Survey 2006 1:10,000 (Fig 12):*** there have been large scale changes within the townscape, including the demolition of the terraces to the north-east of Fleet Street and the construction of the bus station. There has been whole-sale demolition within the development area itself and, but for a few walls, no structures are present.

3.4 PREVIOUS ARCHAEOLOGICAL INTERVENTIONS

3.4.1 There have been a number of recent archaeological projects within the study area producing evidence of activity from the Roman period onwards, and sites of cultural heritage interest identified as a result of this work have been included in the gazetteer (*Section 4*). The results of the majority of these investigations have been summarised in the archaeological and historical background, but it is appropriate to revisit the findings of the evaluation undertaken at 15 Damside Street in 1990 (LUAU 1991).

3.4.2 The evaluation was preceded by a borehole survey just to the north of the site, which identified the survival of up to 4m of undisturbed stratigraphy containing pottery, bone, charcoal and palaeoenvironmental remains indicative of human activity. The single evaluation trench, measuring 3.5m north/south by 2m, was located on the flat lower ground on the eastern side of the property, and identified several distinct phases of activity. The presented depths below ground level are those from the 1991 report, but it should be noted that the 1990 evaluation appears to have taken place prior to the instatement of the current carpark surface on the site. Some adjustment of these depths is likely to be required, perhaps in the region of 0.3m, in order to make them correlate with the current situation.

3.4.3 Although the uppermost deposit revealed by the evaluation had clearly been disturbed, and yielded modern finds, it was cut by a ditch which contained animal bone and medieval pottery within its single fill. It is, therefore, possible that medieval remains lay at the level of the street frontage, whilst any post-medieval remains had been largely truncated, as demonstrated by the base of a putative tanning or cess pit. Certainly, the absence of post-medieval finds from any of the underlying deposits would indicate that these were almost certainly medieval in date. Thus, the indisputable medieval deposits lay between 0.3m and *c* 1.2m below ground level and comprised two distinct horizons (the lower containing preserved plant remains), each with associated negative features, perhaps indicative of two phases of activity. Within the northern part of the evaluation trench, there was evidence for an east/west aligned ditch, likely to represent the northern boundary of long burgages running off of the Church street frontage. This ditch appeared to have been reinstated on at least two occasions following its original excavation in the first phase of medieval activity, and were likely to be the predecessors of the ditch observed cutting the disturbed upper horizon. Other features included three pits in various states of truncation and which contained medieval and residual Roman finds, as well as waterlogged organic material, and are typical of medieval backyard activity.

3.4.4 At a depth of 1.2m below ground level, there was a marked change in the stratigraphy, which comprised a succession of layers devoid of archaeological features or finds. These layers varied in their thickness (between 0.1m and 0.5m), coarseness of sediment, and also their organic content, but all appeared to have been naturally deposited and most had a tendency to dip northward. Although these silts may be riverine in origin, their lack of coarse components and considerable depth suggests that this is unlikely. They may have been laid down by a post-Roman marine transgression, evidence for which has been found elsewhere along the Fylde coastline.

3.4.5 At several points within the stratigraphic sequence, these sterile layers were interleaved with more pebbly deposits containing sherds of Roman pottery, those from the upper layer being smaller and more abraded than those from the lower ones. The fact that the uppermost of these pottery-bearing horizons had what appeared to be a stake inserted into it, may suggest that these horizons had developed *in situ* as a result of local activity; however, it is also possible that they represent colluvial deposits derived originally from the bluff on which Church Street stands.

3.4.6 The base of this largely natural sequence, at 2.6-3.1m below ground level, was marked by the presence of part of an apparent structure, formed of courses of roughly-worked and natural stones approximately 0.3m across and built on a shallow layer of silty sand. The backfill for the associated construction cut contained fragments of animal bone, burnt bone, Roman glass, and early second-century Roman pottery. A number of irregularly-spaced, small, sub-rectangular organic stains were identified around the external edge of this cut and may represent the remains of stakes around the structure. Removal of the structure revealed a further deposit, 0.1m thick and containing animal bone, before the natural boulder clay (0.6m thick) and then the red sandstone bedrock were reached at respective depths of 4.25m and 4.75m below ground level.

3.5 WALKOVER SURVEY

3.5.1 The site is divided into two distinct areas, with the tarmac-surfaced carpark to the north, and a scrub-covered steeply embanked area rising up to the rear of the Church Street properties to the south. A number of extant structural remains were identified on the surface of the site (Fig 13). Together with a number of boundary walls, these included partially-demolished elements of the later post-medieval buildings that formerly occupied the site and which in some instances had been used to retain the southern embankment. Towards the centre of the site, at the boundary of the embankment and the carpark, there was a distinct area of structural remains, comprising wall stubs, concrete surfaces, and also some steps (Fig 14).

4. GAZETTEER OF SITES

Site number **01**
Site name Town Mill
NGR SD 47720 61860
Site type Corn Mill, Water mill
Period Elizabethan to eighteenth century, 1574 to 1769
HER No 458
Sources Binns 1821; Harrison and Hall 1877; Farrer and Brownbill 1914; Docton 1957; Horesfield 1999

Description In 1574 the Mayor and Corporation granted to Robert Dalton of Thurnham a lease of a suitable plot on Green Ayre (then waste and open pasture), on which he was to build a large house for one or two watermills, at the point he considered most suitable; he was allowed to make a mill stream and a dam. The mill itself stood opposite the end of Calkeld Lane, while the leat skirts Green Ayre, and a northward projection of the leat, possibly a mill pond, surrounds the area of the mill itself. Sold to William Bradshaw of Halton Hall in 1745 and demolished in 1769; no trace of the mill remains, the site being occupied by modern buildings. When Sir Richard Owen inspected Lancaster in 1844, he found the mill race to be a prolonged cesspool, a situation that continued until the floor of the mill race was concreted in 1891. Gradual encroachment by the development and infrastructure meant that the race was gradually subsumed, but the northern part was still open in 1848 when the survey for the 1849 OS map was undertaken.

Assessment The site of the mill lies to the east of the present development area, and will not be affected, whilst the canalised leat is likely to run beneath Damside street and is unlikely to be affected by the development

---

Site number **02**
Site name Church Street Amphora
NGR SD 47590 61830
Site type Findspot
Period Roman
HER No 18982
Sources Lancaster City Museum
Description Neck and arms of amphora found in 1925 on corner of Church Street and New Street, Lancaster.
Assessment The site lies outside the development area and is unlikely to be affected

---

Site number **03**
Site name North Road piles
NGR SD 47771 61838
Site type Archaeological watching brief
Period Undated, but probably post-medieval
HER No 25242
Sources GMAU 2002
Description A watching brief at 63 North Road located piles inserted into riverine deposits indicative of earlier development, apparently of eighteenth-century date.
Assessment The site lies outside the development area and is unlikely to be affected

---

Site number **04**
Site name Church Street Co-op Settlement Remains
NGR SD 47610 61830
Site type Building, findspots
Period Roman

HER No	471
Sources	Watkin 1883; Lancaster Museum Records LM628
Description	This site relates to a series of eighteenth- to mid-twentieth-century discoveries of Roman remains, the locations of which are only roughly known. During building works in the area of the present Co-op, *c* 1770, several large stones were found, possibly the remains of a temple, under which were discovered a great number of Roman coins (attributed to *inter alia* Vespasian). In about 1880, pottery, querns, amphora sherds and a mortaria stamped 'TIRV 100' were found on the site, with further ceramics found in 1901 (including medieval sherds) and 1957. About 100 yards further west down Church Street bones, bricks, tiles, pottery, coins, a lamp, a well, some walling and querns were found at the house of Dr Wilson in about 1770. Opposite and west of Dr Wilson's house, near John O' Gaunt, ashes, bones, pottery, bronze objects, a pipe clay figurine, glass, Samian ware, and coins were found in around 1776. Pottery and amphora fragments were found in same area in 1901 along with medieval potsherds. A Samian fragment was found on site of new Co-op in March 1957.
Assessment	The site lies outside the development area and is unlikely to be affected.

Site number	**05**
Site name	Lancaster Bus Station Well
NGR	SD 47691 61894
Site type	Well
Period	Eighteenth century?
HER No	2331
Sources	Peter Iles pers comm; OS 1849
Description	Stone-lined well, *c* 0.8m diameter and *c* 4.2m deep discovered during construction works at Lancaster Bus Station, Wood Street. Lined with roughly-coursed unmortared stones, up to 0.3m across, and capped by large stone slabs *c* 1.2m x 0.2m x 0.4m. Infilled with granular material and capped with a concrete slab during development. No well or pump is marked in this position on the 1849 OS map, although pumps are marked in the rear yards of nearby properties fronting onto Cable Street.
Assessment	The site lies outside the development area and will not be affected

---

Site	**06**
Site name	China Lane
NGR	SD 47580 61860
Site type	Street
Period	Medieval
HER No	2382
Sources	Penney 1981
Description	China Lane was first recorded in 1362. It has since been widened and is now known as China Street.
Assessment	The site lies outside the development area and is unlikely to be affected

---

Site number	**07**
Site name	Cheapside
NGR	SD 47740 61850
Site type	Road
Period	Medieval to Tudor, 1401 to 1500
HER No	2379
Sources	Penney 1981
Description	Cheapside was formerly known as Butcher's Street and Pudding Lane, recorded in 1451 as 'Podynglone'.
Assessment	The site lies outside the development area and will not be affected

Site number	**08**
Site name	15 Damside Street
NGR	SD 47652 61870
Site type	Excavation
Period	Roman, medieval & post-medieval
HER No	18880
Sources	LUAU 1990
Description	*See Section 3.4*
Assessment	The site lies within the development area and is highly likely to be affected

---

Site	**09**
Site name	54 Church Street
NGR	SD 47644 61835
Site type	Historic Building
Period	Post-medieval
HER No	15753
Listed Building No	7-77
Sources	DoNH. -. List of Buildings of Special Architectural or Historic Interest. 1685-1/7/77
Description	Two eighteenth-century houses, now a shop. To the rear is a gabled wall of four storeys including a basement, which has a doorway with chamfered surround of a seventeenth-century type and a small blocked window.
Assessment	The site lies just to the south of the development area and is unlikely to be affected.

Site number	**10**
Site name	Damside Street Bank Barn
NGR	SD 47620 61895
Site type	Historic Building
Period	Post-medieval
HER No	19142
Sources	LDAS 1980
Description	A late seventeenth- or early eighteenth-century bank barn which must once have occupied land which sloped down to the mill stream and the River Lune. It was subsequently incorporated into a nineteenth-century warehouse, which was partly demolished in 1979.
Assessment	The site lies outside the development area and will not be affected

---

Site	**11**
Site name	52 Church Street
NGR	SD 47650 61840
Site type	Archaeological Watching Brief
Period	Post-medieval
HER No	3973
Sources	LUAU 1999a
Description	A watching brief was undertaken during February 1999 by LUAU, in the course of a pedestrianisation development in Church Street, Lancaster. The cellars of 44 (15738) and 52 Church Street were examined, having been exposed as a result of the development. The cellar of 52 Church Street was rectangular in shape and projected 1.55m into the street out from the principal facade of the building. The cellar doorway incorporates long and short quoining, made up of large tabular stone blocks. The roof of the cellar comprised three large flagstones, which had been fitted closely together. Although the cellar walls are keyed into the principal facade of the building, the overall form of construction would indicate that the cellar post-dates the building of the basement wall.
Assessment	The site lies just to the south of the development area and is unlikely to be affected.

Site number	**12**
Site name	Cable Street Warehouse
NGR	SD 47603 61982
Site type	Warehouse
Period	Post-medieval, *c* 1778
HER No	25326
Sources	OA North 2003a
Description	Cable Street Warehouse is believed to be connected to number 1 Cable Street. It is not known when the warehouse was first built but it appears to be present in 1778. The warehouse has been raised in height on more than one occasion as well as being extended to both the west and north. The east side has been recently modernised.
Assessment	The site lies outside the development area and will not be affected

---

Site number	**13**
Site name	Church Street Roman Findspots
NGR	SD 47630 61830
Site type	Findspots
Period	Roman
HER No	18981
Sources	Lancaster Museum Catalogue; Watkin 1883
Description	Roman finds from Church Street made during the nineteenth century, including: five rings (three bronze two iron), a Roman button; bronze items found in 1850s; a rouletted beaker; stamped Samianware, glass, horns, iron etc; Quernmore fabric flagon; 'Roman charm of pot curled like a snake'; coin of Constantine (AD 306-337), two coins of Trajan (AD 98-117) and a quern. Samianware stamped A POLAUSTI, TICOTAKI M, SULPICIANI CADGATE.MA, QUINTIILIANI, DIVES, ANIAECIO.HB, DAGODVNVV is said to have been found at the Bank in Church Street in 1870. Copper coins of Vespasian (69-79 AD) and Trajan, a double-headed coin of Antoninus Pius (AD 138-161) and of M Aurelius (AD 161-180) were also found.
Assessment	The site lies outside the development area and will not be affected

---

Site number	**14**
Site name	Sainsbury's Roman Findspot, Cable Street
NGR	SD 47760 61940
Site type	Findspot
Period	Claudian, Roman, 43 AD to 409 AD
HER No	19411
Sources	Lancaster City Museum
Description	Bronze *dupondius* of Claudius (AD 41-54)/Tiberius (AD 14-37).
Assessment	The site lies outside the development area and will not be affected

---

Site number	**15**
Site name	Public Baths
NGR	SD 47776 62002
Site type	Baths
Period	Post-medieval, pre-1893
HER No	21800
Sources	OS 1849; OS 1893
Description	Site of public baths built between 1848 and 1893, at the location currently occupied by Sainsbury's supermarket; no longer extant
Assessment	The site lies outside the development area and is unlikely to be affected

Site number	**16**
Site name	Cable Street School
NGR	SD 47784 61961
Site type	School
Period	Post-medieval, pre-1893
HER No	21801
Sources	OS 1849; OS 1893
Description	Site of a school built between1849 and 1893 at the location currently occupied by the Cable Street Fire Station; no longer extant.
Assessment	The site lies outside the development area and will not be affected

---

Site number	**17**
Site name	Lancaster Bus Station
NGR	SD 47659 61902
Site type	Archaeological Evaluation
Period	Undated
HER No	20201
Sources	LUAU 2000b
Description	Archaeological evaluation carried out in June 2000 of land between Cable Street, Damside Street and Wood Street. The site lies over a presumed former course of the River Lune, which, during the prehistoric and Roman periods is thought to have occupied a course now followed by Damside Street. In total, 83 fragments of artefacts/ecofacts were recovered from the evaluation, but have since been discarded
Assessment	The site lies outside the development area and will not be affected

---

Site number	**18**
Site name	Damside Street Buildings
NGR	SD 47659 61902
Site type	Historic Building
Period	Post-medieval: post-1610, pre-1778, pre-1821 to *c*1990
HER No	20201
Sources	Speed 1610; Mackreth 1778; Binns 1821; OS 1849-1990
Description	A terrace of buildings on the original Damside Street frontage falling within the area of the present development site. First observed on Mackreth's map of 1778, the buildings were developed along the length of the frontage and towards the rear of the plot to encompass virtually the whole of the development area by the early twentieth century. By 1931, however, Damside Street had been realigned, and almost all of the buildings on the street frontage demolished, with some rebuilding. By 2006, even these structures were demolished.
Assessment	The site lies within the development area and will be affected

---

Site number	**19**
Site name	65 Church Street
NGR	SD 47560 61850
Site type	Findspot
Period	Neolithic and Roman
HER No	2020
Sources	OS 1980; White 1974
Description	Archaeological works undertaken in the early 1970s uncovered remains of intense Roman activity, including well-preserved stratigraphy, several phases of building remains and a large assemblage of finds. The trench-built foundation of the earliest Roman building on the site was cut through a putative buried turf line, from which were found 24 sherds of a vessel indentified as a Neolithic bowl of Mortlake type, and thus some 3000 years earlier than the Roman building.
Assessment	The site lies very close to the development area and may be indicative of remains likely to be affected.

Site number	**20**
Site name	41 Church Street
NGR	SD 47650 61810
Site type	Findspot
Period	Roman
HER No	2041
Sources	White 1974
Description	A number of Roman potsherds were discovered in the cellar of 41 Church Street during reconstruction work. The pottery included two heavily burnt pieces which could have come from a stratum of burnt timber above the Roman road level, and thus could provide a late second-century date for what appears to have been the destruction and collapse of a timber building. Unstratified, unfortunately, but probably associated with the levels below the road material, was a Samian stamp, OF. PRIMI, the factory of Primus
Assessment	The site lies outside the development area and is unlikely to be affected.

Site number	**21**
Site name	New Masonic Hall, Church Street
NGR	SD 47560 61870
Site type	Findspot
Period	Roman
HER No	2043
Sources	Leather 1973; Lancaster City Museum 1957
Description	Column base, clearly defined foundation trench and Roman Samian (AUSTRUS) pottery found in 1958.
Assessment	The site lies outside the development area and is unlikely to be affected.

Site number	**22**
Site name	Calkeld Lane
NGR	SD 47710 61800
Site type	Road
Period	Medieval
HER No	2381
Sources	Penney 1981
Description	Calkeld Lane was first recorded between 1220-50 when Furness Abbey records give details of a messuage on 'Caldekelde'.
Assessment	The site lies outside the development area and will not be affected.

Site number	**23**
Site name	41 Church Street
NGR	SD 47650 61810
Site type	Excavation
Period	Roman/Medieval
HER No	3500
Sources	Penney 1980; Penney 1981-2
Description	Excavation of an undisturbed island of *vicus* deposits between two cellars was undertaken. The earliest activity comprised postholes into the natural sand which may be prehistoric in date, but their alignment at right angles to the Roman road suggests that they represent the earliest Roman activity on the site. Levelling in the second century was followed by the construction of a timber beam slot building, possibly a granary, as there was a deposit of charred grain from this area and there is no appearance of a floor to the building at ground level. A section of charred woven wickerwork was also recovered. This putative barn subsequently burned down and a road was laid over the site. In the late second-early third centuries a thin layer of soil was deposited over the road. Roman pottery from the site included a fragment of black-burnished flanged bowl of mid-second century

	date, part of a Severn Valley ware jar (late second-early third century) and at least one fourth-century barbotine sherd. Two pieces of unglazed, heavily gritted medieval pottery were the only medieval items recovered, and there were no stratified remains of this period; presumably all the medieval material has been destroyed by later disturbance. A pit on the site contained mixed Roman and later post-medieval material whilst a single sherd of seventeenth-century Cistercian-type ware was also recovered from the site.
Assessment	The site lies outside the development area and is unlikely to be affected

---

Site number	**24**
Site name	Sun Inn, Church Street Roman Findspot
NGR	SD 47570 61850
Site type	Findspot
Period	Roman
HER No	3504
Sources	Penney 1980; Penney 1981-2
Description	Whilst a service trench was being dug in summer 1979 on the south side of Church Street opposite the Sun Hotel, a variety of Roman tile, pottery (including the rim of a Samian bowl), glass and bone was found.
Assessment	The site lies outside the development area and is unlikely to be affected

---

Site	**25**
Site name	33, 37 and 39 Church Street
NGR	SD 47673 61802
Site type	Archaeological building survey
Period	Post-medieval
HER No	23684
Sources	LUAU 1999b
Description	Archaeological building survey undertaken by Lancaster University Archaeological Unit as part of their larger study of the Mitchell's Brewery site.
Assessment	The site lies outside the development area and will not be affected

---

Site	**26**
Site name	30-32 Church Street
NGR	SD 47696 61815
Site type	Public House
Period	Nineteenth century
HER No	21778
Sources	OS 1849; OS 1893
Description	Public House first identified on first edition Ordnance survey map of 1849.
Assessment	The site lies outside the development area and will not be affected

---

Site	**27**
Site name	Blue Anchor Lane
NGR	SD 47660 61780
Site type	Thoroughfare, house and road
Period	Post-medieval
HER No	19136
Sources	ME McClintock pers comm; Penney 1983; Bollands 1981
Description	Anchor Lane is a thoroughfare connecting Market Square and Church Street, and was once lined with houses, most of which have long since been demolished, although part of the surviving wall consists of their blocked-up facades. The remaining structures comprise an extremely scarce example of working class urban vernacular housing, much of which Lancaster lost in the 1950s.
Assessment	The site lies outside the development area and will not be affected

Site	**28**
Site name	Mitchell's Brewery Site
NGR	SD 47679 61781
Site type	Excavations 1988/1992
Period	Roman, medieval, post-medieval
HER No	18879
Sources	Williams and Newman 1989; English Heritage 1989; Lawson-Price 1992; LUAU 1993; LUAU 2000a
Description	This large parcel of land in the core of Roman and medieval Lancaster became vacant in 1988 when the brewery was transferred to a new site. Five trial trenches were excavated in February 1988 to evaluate the quality of archaeological deposits. These confirmed that in some areas significant depths of intact archaeological stratigraphy survived. Phase 1 of excavations took place August - November 1988 and identified a good sequence of Roman occupation was found, and the presence of Roman remains some 200m from east gate of early fort indicates a substantial settlement. Earliest structural remains, dating to *c* AD 100, comprised a section of a large timber building at least 18m long, with a series of parallel trenches 6.5m long and identified either as a granary, or for agricultural purposes. An alleyway was laid out in the third century over the earlier buildings at right-angles to Church Street, probably with timber structures on either side. Coin evidence suggests site abandoned middle of fourth century. Finds included over 30 coins, pottery, a small fragment of a clay mask used in religious ceremonies and a gold earring incorporating two duck heads in its design. The Second phase of excavations, undertaken July - September 1992, revealed two further early Roman timber structures close to street frontage. The largest was at least 10m long. The easternmost timber building appeared to have been refurbished on several occasions; a large number of postholes were associated with the second phase of this structure, which may imply some sort of walkway with pentice roof or a veranda. A spread of industrial debris was associated with its later use. To the south, two deep rectangular shafts with timber-lined vertical sides were revealed, which may have acted as wells or storage pits. A number of intercutting rubbish pits were also identified in the same area. The excavation detected some reorganisation of this part of the site in the later Roman period. An alleyway or yard was constructed over the western timber building and traces of another building, consisting simply of a line of stones orientated east/west were identified south of the alleyway. Several medieval rubbish pits were excavated, and possible traces of a medieval property boundary identified. A substantial stone-lined well was located in the south-west corner of the site, which had clearly fallen out of use no later than the thirteenth century, and a second circular stone well was located close to the street frontage. A fine rectangular post-medieval stone-lined tank was identified which, together with a large post-medieval pit, pre-dated the construction of the brewery
Assessment	The site lies outside the development area and is unlikely to be affected

Site	**29**
Site name	Lancaster coin find
NGR	SD 47600 61800
Site type	Coin find Spot
Period	Roman; Hadrianic
HER No	18932
Sources	Lancaster City Musuem No. 883
Description	Second century AD bronze dupondius, probably of Hadrian (AD 117-138), very worn condition. Found in Lancaster, exact findspot not known.
Assessment	The site lies outside the development area and is unlikely to be affected

Site	**30**
Site name	Church Street Find Spot
NGR	SD 47570 61861
Site type	Find Spot
Period	Roman; Hadrianic
HER No	18978
Sources	Lancaster Guardian 22 August 1868
Description	Trenches dug in 1868 on the site of Mr Parkinson's (plumber and painter) premises revealed coins of Hadrian (AD 117-138) and Julia Domna (AD 193-211) and two querns (one fragmentary).
Assessment	The site lies outside the development area and is unlikely to be affected

Site	**31**
Site name	38 Church Street
NGR	SD 47570 61861
Site type	Find Spot
Period	Roman; Hadrianic
HER No	18979
Sources	Lancaster City Museum LM 423
Description	Square cap to stone column found at rear of Lancaster Guardian Offices at a depth of 4 feet (1.2m)
Assessment	The site lies outside the development area and is unlikely to be affected

5. SIGNIFICANCE OF THE REMAINS

5.1 INTRODUCTION

5.1.1 In total, using the HER data and historic cartographic sources, 31 sites of cultural heritage interest have been identified within a 100m radius of the development area, and are listed on the gazetteer (*Section 4*). One, Site **09** (54 Church Street) is a listed building, and is included on the gazetteer due to its close proximity to the proposed development site. None of the remaining sites has any statutory designation, although some are extremely significant.

Period	No of sites	Sites
Prehistoric	2	Archaeological investigations: Sites **17** (Lancaster Bus Station riverine deposits) and **19** (Church Street Neolithic Mortlake bowl)
Roman	15	Chance finds: Sites **02** (Church Street Amphora), **13** (Church Street Roman Findspots), **14** (Sainsbury's Roman Findspot, Cable Street), **20** (41 Church Street), **24** (Sun Inn, Church Street Roman Findspot), **29** (Lancaster coin find), **30** (Church Street Find Spot); Settlement remains: Sites **04** (Church Street Co-op Settlement Remains), **21** (New Masonic Hall, Church Street) and **31** (38 Church Street) Stratified remains subject to archaeological investigation: Sites **08** (15 Damside Street evaluation) and **17** (Lancaster Bus Station riverine deposits), **19** (65 Church Street Roman Structures), **23** (41 Church Street Roman Building), **28** (Mitchell's Brewery Site)
Medieval	6	Extant remains: Sites **06** (China Lane), **07** (Cheapside), **22** (Calkeld Lane), Archaeological investigations: Sites **08** (15 Damside Street evaluation), **23** (41 Church Street Medieval Findspot), and **28** (Mitchell's Brewery Site)
Post-medieval	15	Former structures: Sites **01** (Town Mill and Leat), **15** (Public Baths), **16** (Cable Street School), **18** (Damside Street Buildings), **25** (33, 37 and 39 Church Street) Extant structures: Sites **09** (54 Church Street), **10** (Damside Street Bank Barn), **11** (52 Church Street), **12** (Cable Street Warehouse), **26** (30-32 Church Street), **27** (Blue Anchor Lane), Archaeological investigations: Sites **03** (North Road Piles), **05** (Lancaster Bus Station Well), **08** (15 Damside Street evaluation) and **28** (Mitchell's Brewery Site)

Table 2: Summary of gazetteer sites by period

Building	Grade	Listed Building No	DoNH List of BSAHI	HER No
11 Chapel Street, Lancaster	II	7-67		15271
7 Chapel Street, Lancaster	II	7-65		15691
9 Chapel Street, Lancaster	II	7-66		15698
40 and 42 Cable Street, Lancaster				2199
St John's Church, North Road, Lancaster	II	7-217		2374
Priory Hotel, Chapel Street, Lancaster	II	7-68		15722
Pyes building, New Road	II	7-198		15928
Hully's House, corner of New road and Church Street, Lancaster (demolished)				2373
1 and 3 Cable Street, Lancaster	II	7-25		15666
5 Cable Street, Lancaster	II	7-26		15667
9 and 11 Cable Street, Lancaster	II	7-27		15669
46 and 48 Church Street, Lancaster	II	7-75		15740
54 Church Street, Lancaster	II	7-77		15753
57, 59 and 61 Church Street, Lancaster	II	7-78		15756
3-5 Damside Street				25236
1 Water Street, Lancaster				16119
47 North Road, Lancaster				15945
4 New Street, Lancaster	II	7-199		15929
National Westminster Bank, 68 Church Street, Lancaster	II	7-82		15760
Royal Bank of Scotland, 2 New Street, Lancaster	II	7-199		15929
Centenary church, St. Leonard's Gate, Lancaster	II			16055
33 Church Street, Lancaster			26846	15736
42 and 44 Church Street, Lancaster			27211	15738
Co-operative Stores, 47-53 Church Street, Lancaster			15752	
27, 59 and 61 Church Street, Sun Inn, Lancaster			29037	15756/ 15759
Masonic Hall, 74 Church Street, Lancaster			31299	15763
6 New Street, Lancaster			31299	15931
8 New Street, Lancaster			7-202	15932

Table 3: Listed Buildings and Buildings of Special Architectural or Historic Interest within a 100m radius of the development site

5.1.2 In addition, there are 14 Listed buildings (not including Site **09**, 54 Church Street) and 7 buildings of Special Architectural or Historic Interest (BSAHI) within a 100m radius (Table 2). Although none of these listed buildings will be directly impacted upon by the development, their consideration is of some value. Firstly, these buildings help to trace the chronological and architectural development of the area; as a rule, older, well-appointed commercial properties are more common in Church Street, whilst those in the side streets and the land reclaimed from the Green Ayre are more mixed in terms of status and function, with a number of municipal structures. Secondly, a review of the construction techniques and materials of the listed buildings provides some clues concerning the likely nature of any demolished remains within the proposed development area. As such, the majority of buildings are composed of local sandstone, often with ashlar facings to the street front, and coursed rubble elsewhere. The presence of cellars within most of these buildings is

important, not least because cellaring is likely to have a negative impact on below ground remains.

5.2 CRITERIA

5.2.1 There are a number of different methodologies used to assess the archaeological significance of sites; that to be used here is the 'Secretary of State's criteria for scheduling ancient monuments' which is included as Annex 4 of PPG 16 (DoE 1990). With the exception of the listed buildings, the significance of which are recognised through their listed status, the sites previously listed (*Section 4*) were each considered using the criteria, with the results presented below.

5.2.2 ***Period***: almost half of the sites identified within the study area are of Roman date and these, relating to Lancaster's origins as a Roman settlement, are highly important. Moreover, the fact that four of these sites (Sites **08**, 15 Damside Street; **19**, 65 Church Street Roman Structures; **23**, 41 Church Street Roman Building; and **28**, Mitchell's Brewery Site) represent scientifically excavated settlement remains characteristic of *Vici*, means that they are of regional significance. Again, given the importance of Lancaster in the Middle Ages, the evidence for medieval occupation revealed by archaeological works at Sites **08** and **28**, 15 Damside Street and the Mitchell's Brewery Site, respectively, is of high regional significance. Both these sites revealed archaeological remains of a wide date range, helping to further the understanding of the development of the area from the Roman, medieval and post-medieval periods. Although there are no visible medieval remains, each of the three medieval streets (Sites **06**, China Lane, **07**, Cheapside and **22**, Calkeld Lane) are again important in tracing the development of the medieval town. It is likely that Site **01**, the mill, has its origins in the medieval period, but even were it to be later, such installations are significant features of the pre-industrial landscape. The remaining sites are probably less important, although of some local significance: the post-medieval buildings in particular help to map out the contemporary development and economic growth of Lancaster, while those that have been listed are considered to retain characteristic period features.

5.2.3 ***Rarity:*** nationally, none of the sites are particularly rare, but certain of the sites are much less common regionally or locally. Evidence for Roman domestic or religious structures is hardly common in Lancaster, and for this reason, the remains of Roman settlement activity can be considered to be of regional rarity and significance. For a town of considerable political influence and dominated by its medieval castle and priory, evidence for medieval domestic activity within Lancaster is actually rather rare: as such, any such remains from the town are of considerable significance. Similarly, although water mills are common nationally and regionally, Site **01**, the Lancaster Town Mill, is one of very few within the urban area. Although the number of listed and historic buildings within the development area seems quite large, they represent the small proportion of structures that have survived the twentieth century development of Lancaster, and should be considered to be of some local significance.

5.2.4 ***Documentation:*** the historical development of the study area from the later eighteenth century can be traced reasonably well from cartographic sources, and is enhanced by entries in commercial directories. Further documentary research may furnish additional evidence, including more precise dating of the construction of the relevant buildings, although this is unlikely to alter the outline presented in this assessment. In the case of those sites subject to archaeological investigation, particularly those pertaining to Roman and medieval settlement remains, there is an extensive documentary archive of primary and processed data to aid in the understanding of these sites. The existence of other sites, and our understanding of them, for example, the medieval streets and the Roman finds made in the nineteenth century, notably Sites **04** (Church Street Co-op Settlement Remains), **21** (New Masonic Hall, Church Street) and **31** (38 Church Street), is almost entirely dependent on documentary records in varying states of incompleteness.

5.2.5 ***Group Value***: none of the sites form an intrinsically linked group in terms of functional relationships. However, it could be argued that the Roman and medieval settlement remains, the medieval streets and the post-medieval historic buildings are integrated elements of the townscape within each period. The post-medieval buildings are particularly important in providing collective evidence of the eighteenth- and nineteenth-century commercial, industrial and domestic development of Lancaster.

5.2.6 ***Survival/Condition:*** within the wider area, many of the historic buildings survive in a good state of preservation and have become integrated into the modern urban fabric. The presence of chance finds within the wider area, together with deeply-buried Roman and the medieval remains identified at Sites **08** and **28**, does suggest that contemporary remains may survive in the area, even below or between cellars relating to Site 18, the post-medieval buildings that formerly occupied the development site. It seems probable that elements of these later post-medieval structures may be quite well-preserved on site, although the results of the evaluation within the eastern part of the site would suggest that there is less potential for the preservation of early post-medieval remains. The area of heaviest impact from cellaring is likely to be the north-west corner of the site, since this is closest to the original street frontage and where the larger buildings were located: one might expect their cellars to be large in all three dimensions. Towards the east and rear of the site, one would expect this impact to lesson, since this area seems to have been used mainly for rear yards and was only latterly developed with a number of outshuts and extensions that are less likely to have been basemented.

5.2.7 ***Fragility/Vulnerability:*** only Sites **08** and **18** lie within the proposed development area and are thus vulnerable to the present development. On the basis of the results of the previous evaluation on the site, it is likely that stratified medieval remains lie almost immediately below the carpark surface, and would be vulnerable to all negative groundworks, the scale of impact being dependent on their actual depth. Site **11**, 52 Church Street, adjoins the rear of the development site. Although any physical damage to this site is highly unlikely, an unsympathetic design for the proposed buildings could compromise the characterful setting and rear aspect of this and other Church Street properties.

5.2.8 ***Diversity:*** the majority of sites show little diversity in terms of use, function or date. However, Sites **08/18** and **28** are highly significant in that they show diversity relating to Roman settlement, medieval domestic activity and mixed residential, commercial, and small-scale industrial use between the early nineteenth and twentieth centuries.

5.2.9 ***Potential:*** incorporating as it does Sites 08 and 18, the proposed development site has enormous potential for the preservation of regionally significant archaeological remains. Scientific excavation of such remains has the potential to develop the existing knowledge of the site, and to improve an understanding of activity along the Roman water front and of the nature of post-Roman and medieval activity in the area.

5.3 SIGNIFICANCE

5.3.1 A large number of significant sites have been recognised within the 100m study area focused on the proposed development area. These include a high proportion of buildings that are either listed or considered to be of special historical significance. However, these will not be affected by the proposed development, except in a visual way; any visual impact is unlikely to be as severe as that of the modern bus station. In terms of direct impact, only Sites **08** and **18** can be said to be directly affected. Site **08**, demonstrating Roman, medieval and post-medieval activity on the site, is regionally significant; Site **18**, representing post-medieval urban development, is locally significant. Of the remaining sites, a number relate to find spots and to evidence of activity pertaining to the Roman, medieval and post-medieval development of the town, whilst the Mortlake bowl from Site **19** hints at even earlier activity in the vicinity. These, particularly when considered together, are highly significant clues to the development of historic Lancaster. Moreover, the nature of these sites would indicate that there is potential for similar remains to be found within the development area itself.

6. THE SEDIMENTS

6.1 SEDIMENT DESCRIPTIONS

6.11 The location of the three boreholes (BH) dug at Damside Street are shown on Figure 13 and the sediment descriptions made in the field are given in *Appendix 2*. The sediments from the three cores are broadly consistent, with roughly 2m of distinctive made ground sealing 3m of natural deposits, comprising sandy silt and clay in BH1, and sandy silt and clay with angular gravels and small rounded pebbles in BH2 and BH3. They may represent river deposits, which have accumulated above the natural geology of sandstone or mudstone, situated at 5m below the ground surface. No readily identifiable specific archaeological horizons were identified by the programme of boreholing, although an obstruction, possibly timber, was encountered at 1.7m depth in BH2. This was assumed to be part of an underlying structure.

6.2 DISCUSSION AND POTENTIAL

6.2.1 Given the location of the site near to the present course of the River Lune, much deeper deposits of riverine alluvium might be anticipated. However, the data obtained by the programme of coring at Damside Street shows that the soft sediments overlying the natural geology in this part of Lancaster are relatively shallow, with depths of no more than 3m, and the depths of these natural sediments are broadly analogous to those identified in the borehole taken in 1990 (LUAU 1990). However, the character of sediments observed in 1990 and 2007 is slightly different. The sediments examined in 1990 contained so little coarse material that it was suggested that they related to a post-Roman marine transgression (*ibid*); as such, they are similar to the clay and silt recorded in BH1, which suggests that these deposits may well have been laid down under lower energy conditions. Conversely, the high level of gravel and pebbles in the sediments in BH2 & 3 taken in 2007 suggest that these deposits were laid down under fairly high-energy fluvial conditions.

6.2.2 Samples of well-stratified alluvial deposits could provide important data on the development of the river system and the historic environment of Lancaster. However, the unconsolidated nature of the sediments meant that most of the sampling was made in bulk, and this, coupled with their mixed nature, and relatively shallow depths, means they have little palaeoenvironmental potential. The discovery that the solid geology is at 5m below the ground surface, however, may add to our understanding of the geoarchaeological interpretation of this part of Lancaster.

7. WATCHING BRIEF RESULTS

7.1 INTRODUCTION

7.1.1 The test pits were positioned in the south half of the site where the ground was banked up to approximately 30 degrees against the rear of the Church Street buildings. Pit 1 and Pit 2 was situated at the bottom of the slope on the east side, Pit 3 towards the middle and Pit 4 at the top of the slope (Fig 13).

7.2 RESULTS

7.2.2 ***Test Pit 1***: this pit measured 1.5m by 0.7m with a maximum depth of 0.8m. The section revealed a very thin layer of topsoil, ***10***, a blackish-brown friable sandy clay, over a subsoil of redeposited topsoil and building rubble. Below the topsoil were the 0.75m high and 0.6m wide footings of an east/west cement-bonded sandstone wall, ***11***, which was a continuation of an extant wall to the west (Figs 13 and 15). On the north side of wall ***11*** was a surface of sandstone flags, ***12***, at a depth of 0.65m. A square cut slab of 0.04m thick slate, ***13***, was set vertically against the south side of the wall, Above the sandstone surface was redeposited topsoil and building rubble, ***14***.

7.2.3 ***Test Pit 2***: this circular pit of 0.5m circumference was excavated to a depth of 1m. The topsoil, ***20***, was an uneven layer between 0.05m and 0.1m in depth, over a thin deposit of orange/brown sandy gravel, ***21***. The deposit below was redeposited topsoil mixed with building rubble, ***23***. No features of interest were revealed.

7.2.4 ***Test Pit 3***: this pit measured 0.9m by 0.5m and was excavated to a depth of 0.4m where a layer of concrete, ***32***, was encountered (Fig 16). This was sealed by subsoil ***31***, a 0.35m deep layer of mixed redeposited topsoil and building rubble and then the blackish-brown friable sandy clay topsoil, ***30***, 0.05m in depth.

7.2.5 ***Test Pit 4***: this pit measured 0.4m square and was excavated to a depth of 1.2m. As with the previous pits, there was a thin layer of topsoil over redeposited topsoil and building rubble. No features of interest were revealed.

7.2.6 ***Test Pit 5***: this pit measured approximately 0.8m by 0.5m and 1m in depth. The very thin layer of topsoil, ***50***, had developed over layer ***51***, comprising redeposited topsoil containing large pieces of masonry and building rubble. No features of interest were revealed.

8. EVALUATION RESULTS

8.1 INTRODUCTION

8.1.1 Three trial trenches were excavated as detailed in the methodology (*Section 2*.5; Fig 15). An overview of the results is given below, with detailed description of each deposit and archaeological feature provided in *Appendix 3*, and a finds catalogue in *Appendix 4*.

8.2 TRENCH 1

8.2.1 Following the removal of the modern tarmac carpark surface, a deposit of stone chippings (***100***) was located within almost the entirety of the investigated trench area. The presence of several permeable membranes interspersing the layered chippings suggested a later twentieth-century date of deposition. Across the majority of the trench, this deposit was excavated to a depth of 0.72m below the tarmac (6m OD), at which depth groundwater was encountered. At the eastern end of Segment C, deposit ***100*** gave way to a darker rubble deposit, ***106***, characteristic of a cellar fill comprising demolition debris. At this point, in agreement with LCAS, a sondage was machine-excavated through deposit ***100*** below the level of the water table (Figs 18 and 19). This excavation proceeded to a depth of 1.79m below ground level, where upon a dark grey silty clay sediment was encountered, deposit ***108***. It is possible that this sediment was also cellar backfill, but, as this could not be confirmed, further blind excavation of potentially significant deposits was not considered prudent.

8.2.2 At the northern end of Segment A, wall ***103*** was located at a depth of 0.5m below ground level (Fig 18; Plate 8). The wall entered the trench from the north-east, before turning at right angles, and was traced for a length of 3.5m to the south-east within Segment B. Wall ***103*** was abutted to the north-west by deposit ***102***; this was similar in character to a cellar backfill, but contained modern objects, suggesting either a late date of deposition, or perhaps later disturbance. The space between wall ***103*** and the street frontage was occupied by deposit ***101***. The absence of modern material or substantial demolition debris from this deposit indicated that it might represent either an early cellar backfill, or perhaps a post-medieval levelling deposit, and contrasted with the more rubbly nature of layers ***106*** and ***107***, which had been deposited against the south-western (external) face of wall ***103***. Both these latter deposits, layer ***101*** and the south-east end of wall ***103*** were later truncated, the resultant disturbance being infilled with deposit ***105***.

8.3 TRENCH 2

8.3.1 Trench 2 measured 2.3m by 2.2m in size, excavated to a depth of 3m. After the removal of topsoil, ***200***, four consecutive levelling layers were identified, ***201***, ***202***, ***203*** and ***204*** (Plate 9). Post-medieval pottery was recovered from layer ***203***, whilst layer ***204***, the lowest, may potentially pre-date the post-

medieval period, although its character suggests it is a levelling deposit similar to those above it. Fluvial sediment, ***205***, was located at the base of investigation. Due to its depth, a rapid record of the excavation was made, and the trench subsequently backfilled.

8.4 TRENCH 3

8.4.1 Trench 3 was excavated in the location of potentially undisturbed medieval deposits (Fig 16). It measured 6.5m in length and 2m wide, orientated on a north-west/south-east alignment, with the earliest archaeological features (structural remains) lying immediately below the modern surface. The depth of the overburden varied across the trench from 0.65m to 1m, and comprised concrete ***304*** and levelling deposits ***306*** and ***307***. A concrete stanchion, ***305***, was located in the eastern corner of the trench, whilst to the west, a service trench, ***319***, containing an active ceramic pipe, was sealed by overburden ***306***.

8.4.2 Stratigraphically below the overburden, the deposits within the trench were divided to the north-west and south-east by the presence of sandstone wall ***300***. The wall measured 0.7m wide and 0.45m high, having been laid on a bed of dark grey mortar or cement. To the south-west, wall ***300*** was bonded to 0.64m high wall ***316***, which ran 4.18m to the south-east and defined the south-western edge of Trench 3. The fabric and construction of wall ***316*** was identical to ***300***. To the south-east, the foundation trench for wall ***300***, cut ***314***, truncated a buried soil horizon, ***301***, which survived to a maximum depth of 0.83m (*Section 8.6*; Fig 20; Plate 12). Although essentially homogenous, a very slight difference could be discerned in section between the upper, *c* 0.2m thick, and lower, *c* 0.5m thick, parts of the soil horizon, although the intervening margin was somewhat diffuse. Both Roman and medieval pottery was recovered from the said horizon, with post-medieval pottery only recovered the upper levels. A series of monolith samples were taken to aid the interpretation of this horizon.

8.4.3 To the north-west of wall ***300***, the relationships with earlier deposits had been truncated by the insertion of later service trench ***319***, although it was apparent that buried soil horizon ***301*** was also present within this part of the trench. Removal of the soil horizon within the northern corner of Trench 3 (recorded as context ***309*** for reasons of finds recovery from immediately underlying deposits) revealed a layer of flat stones, ***308***, at a depth of 1.2m below ground level. Continuing beyond the limits of excavation, this feature measured at least 0.75m long and 0.5m wide (Figs 19 and 20; Plate 13) and comprised sub-angular stones loosely packed together within the soil. There was no sign that these stones were located within a cut and, whilst such evidence could have been removed by the re-working of soil horizon ***301/309***, it is also possible that this feature pre-dates the soil horizon.

8.4.4 Both feature ***308*** and soil horizon ***301*** had been laid/deposited directly over a layer of water lain silt, ***302***, which was encountered at depths of 1.4m-1.6m below ground level. Layer ***302*** was *c* 0.3m thick, and contained Roman pottery (*Section 8.5*). A sondage through silt ***302*** exposed another silt layer ***303*** (Plate

11) and demonstrated that both layers dipped northward, in the direction of the River Lune.

8.5 FINDS

8.5.1 ***Introduction:*** a small assemblage of 41 artefacts was recovered during the evaluation, the majority from Trenches 2 and 3, with smaller amounts from geotechnical Borehole 1 (*Section 6*). Pottery (21 sherds) represents half of the assemblage, with smaller amounts of ceramic building material (cbm; 3), glass (3), wood (4), industrial residue (1) and animal bone (9). The assemblage has a broad date range from the second century AD to the late nineteenth century. The condition of the material is fair and, although most of the finds would appear to have been reworked from earlier deposits, few fragments bore evidence of significant disturbance, fragmentation and abrasion. A summary of the finds catalogue is presented in *Appendix 4*.

8.5.2 ***Pottery***: in total, 21 sherds were recovered, all either residual or from disturbed deposits. Of these, several sherds date to the Roman (8) and medieval (2) periods, although the remainder of the assemblage (11) is largely represented by vessels dating between the late seventeenth to mid-nineteenth century. The Roman pottery was examined according to the Guidelines of the Study Group for Romano-British Pottery for basic archiving (Darling 2004). The remaining sherds have been assessed using the guidelines laid out by Orton *et al* (1993), and are described below in chronological order

8.5.3 ***Roman*:** an examination of the assemblage revealed several fragments of locally-produced wares, such as three hard oxidised bowl sherds recovered from soil horizon ***301*** and alluvium ***303*** in Trench 3. Such artefacts probably derived from the Quernmore kilns during the late first to mid-second century AD, and are paralleled by those recovered during the 1990 evaluation (LUAU 1991). A single white-slipped oxidised bowl of Wilderspool-type, recovered from Bore Hole 1, is of comparable date. Several other sherds can also be closely dated, such as two fragments from a Samian cup (Form 80, Webster 1996) recovered from soil horizon ***301***. This type of cup was produced in the Lezoux region of Central Gaul during the first half of the second century. Other dateable fragments include part of an imported grey ware bowl from alluvial deposit ***302***. Produced in North Gaul during the second and third centuries, the presence of such material in north-west England is uncommon. However, a very similar late second-century bowl sherd from Lancaster, identified by Vivien Swan, was recovered during the 2002 excavations within the Roman fort, to the rear of Judges Lodgings on Castle Hill (OA North 2003d). The remaining Roman sherd from Damside Street derives from a light red-brown colour-coated beaker commonly produced in the Nene Valley during the late second and third centuries. The presence of these later sherds demonstrates extensive Roman activity from the late first to third centuries, and similar examples were recovered from the site in 1990 (LUAU 1991).

8.5.4 ***Medieval*:** two reasonably well-preserved fragments include a partially-reduced dark green-glazed jug handle from soil horizon ***309***. The handle form is typical of products from the Ellel kilns dating to the late twelfth to

fourteenth centuries (White 1993), although the fact that the Damside example is glazed is unusual (Ian Miller pers comm). The other sherd, from soil horizon ***301***, comprises a fragment of an olive green-glazed fully-reduced jug, which can be dated to the thirteenth or fourteenth centuries.

8.5.5 ***Post-medieval and industrial:*** the 11 sherds represent a small range of domestic tablewares, including bowls and dishes dating from the later seventeenth century at the earliest, and continuing into the eighteenth century. A brief examination of the fabrics revealed a few small fragments of hard-fired blackwares, which seem to suggest that most originate with Rainford and the early Staffordshire producers, although a single black-glazed bowl with a purple/red fabric possibly derived from the Ticknall kilns in Derbyshire. Other sherds typical of the same period include a fragment of manganese-streaked Mottled Ware, light brown-glazed red earthenware and a few small fragments of the coarser red-bodied blackwares that continued as local products, into the twentieth century. In addition, a single rim fragment from a Westerwald-produced chamber pot can be closely dated to the mid-eighteenth century. The nineteenth-century material is typically fine tablewares, with a small range of blue and white under-glaze transfer-printed earthenwares, and a single unglazed red earthenware flower pot.

8.5.6 ***Ceramic building material:*** a single piece of *imbrex* roof tile and a lump of incidentally fired clay or daub, were collected from soil horizon ***301***, whilst a second tile fragment was recovered from alluvium ***302***. Although the burnt daub is not intrinsically dateable, each of the tile fragments probably date to the Roman period, although the pieces are too small to ascribe a date with confidence.

8.5.7 ***Glass:*** the three fragments recovered from wall ***300*** and soil horizon ***301*** derived from wine bottles. Albeit incomplete, the bottles can be broadly dated to the eighteenth or nineteenth century.

8.5.8 ***Wood:*** four strips of desiccated oak bark were recovered from alluvial deposit ***302***. The strips possibly represent evidence of wood shavings, and their state of preservation may relate to partial or intermittent waterlogging of this horizon.

8.5.9 ***Industrial residue:*** a single piece of fuel waste weighing less than 2 grams was recovered from alluvial deposit ***302***. The fragment aids little in the interpretation of the site and has no intrinsic value.

8.5.10 ***Animal bone:*** twelve animal bone fragments were recovered from the site, all from Trench 3. Wall foundation ***300*** contained a single large mammal rib fragment, which had been sawn through. Soil horizon ***301***, contained seven bones from various parts of the body, including those of pig, cattle and large mammal (cow/horse/red deer). The cattle bones included a scapula with chop marks relating to the dismemberment of the shoulder joint. Alluvial layer ***302*** contained four unidentifiable bone fragments.

8.6 BURIED SOIL HORIZON *301*

8.6.1 Possible buried soil ***301*** was identified during the excavation of Trench 3, and was sampled through a series of 10 litre bulk samples (Samples 3 to 10) and by the removal of two sequences of monolith tins (Samples 1 and 2). In order to investigate the deposit in more detail, monoliths sequence Sample 1, taken at a depth of 0.57m-1.5m below the present ground surface, was cleaned and described back at the OA North offices. The following lithology was observed:

Depth below ground level	Observations
0.57-0.63m	Silt with inclusions of degraded sandstone (levelling layer/made ground); 10YR 3/3 dark brown
0.63-0.97m	Silty soil with gravel and pebbles and occasional inclusions of degraded sandstone (possible post-depositional disturbance); 10YR 3/2 very dark greyish-brown
0.97-1.15m	Silty soil with gravel and occasional pebbles (possible post-depositional disturbance); 10 YR 3/2
1.15-1.37m	Silty soil with gravel; 10YR 2/2 very dark brown
1.37-1.405m	Silty sand; 10YR 2/2
1.405-1.5m	Very organic silty soil, becoming more silty with depth (possible truncated surface) 10YR 2/2

*Table 4: Summary of observations for soil horizon **301***

8.6.2 ***Discussion and Recommendations:*** from the close examination of the deposit it is possible to suggest that the origin of the horizon may not have been as homogenous as previously thought. The degree of post-depositional disturbance in the upper *c* 0.58m of the deposit appears substantial, whilst the lower 0.35m has been less-disturbed and, at its base, includes *c* 0.1m of very organic silt, which is likely to represent the underlying alluvial deposit. The junction between the alluvium and the overlying soil horizon is of some interest in tracing the physical geography and hydrology of the area, but also in establishing the re-expansion of human activity into this area. Establishing the relationship between the movement of the river, land reclamation and of actual urban expansion into this area are important aspects in the understanding of the historical development of this part of Lancaster. Any interpretation of the depositional sequence in this area would be influenced by whether the development of soil horizon ***301*** immediately followed the cessation of conditions that allowed the deposition of the alluvium, or whether soil ***301*** relates only to the earliest surviving terrestrial deposit, earlier examples of which were truncated. The identification of any such truncation is not possible on the basis of the present cursory examination, and any further recommendations on the deposit, including the viability of absolute dating of the lower deposits, can only be made following the advice of a soil micromorphologist.

9. CONCLUSIONS

9.1 DISCUSSION

9.1.1 ***Introduction:*** the desk-based assessment, the monitoring of the preliminary site investigation works, and the archaeological trial trenches, have collectively established that there is potential for the preservation within the proposed development site of significant remains dating to the Roman, medieval, post-medieval and industrial periods. There is also a small possibility that remains of prehistoric activity may be found, although these may not be found *in situ*. The most significant remains identified by the desk-based assessment are those relating to the previous evaluation at 15 Damside Street (Site **08**; LUAU 1991), undertaken in 1990 within the eastern or central part of the proposed development area. That evaluation confirmed that almost 4m of undisturbed archaeological stratigraphy survived within the trench from the early Roman period up to the present day. Also of recognised importance are several generations of industrial period structures that have been identified as occupying the site from the late Georgian period.

9.1.2 ***Natural/basal deposits:*** the collective schemes of work, including that undertaken in 1990, would suggest that within the flat area of the current carpark, sterile natural deposits (varying between mudstone or sandstone bedrock, and boulder clay) would appear to lie 4.5m-5m below the modern ground level (between 1.25m OD and 2.5m OD). An accurate assessment of the position of sterile, natural deposits on the embanked area behind the Church Street properties is harder to assess, given that they were not contacted during the programme of works. However, it would perhaps be erroneous to assume that the steepness of the embankment might indicate more shallow deposits in this area, as evaluation Trench 2 identified around 3m of made ground overlying silt.

9.1.3 ***Roman and early medieval:*** within the limitations afforded by the small 1990 evaluation trench, it would appear that well-preserved Roman stratigraphy was present at depths between approximately 2.5m OD and 3.5m OD. The earliest level of Roman activity was represented by a stone structure, with subsequent layers of *in situ* deposition of Roman materials, some of which contained organic material preserved by waterlogging. No *in situ* Roman remains were identified within the present programme of works, although the, albeit small, pottery assemblage complements that form the 1990 investigation, suggesting evidence of access to military supplies (the material from Wilderspool, for example). Only the boreholes were sunk to a depth commensurate with the strata recognised in 1990 and, although a piece of Roman pottery was recovered during these works, close attribution of finds from loose-sediment samples is not possible. However, there was sufficient evidence of redeposited Roman artefacts from the evaluation to indicate that the investigated deposits derived from the reworking of Roman strata, either within, or around, the site, and there can be little doubt that horizons of Roman date lie preserved beneath the extent of subsequent disturbance across much of the proposed development site.

9.1.4 This preservation is aided by the sealing of the Roman deposits beneath 1.2m-1.5m of interleaved water-lain sterile silts and colluvial deposits containing Roman artefacts originating from the Church Street bluff. Although the primary evidence for the presence and complexity of these deposits derives from the deep investigations undertaken in 1990, similar deposits were observed both during the site investigation works and during the present evaluation. Deposits ***302*** and ***303*** identified within the base of Trench 3 are the clearest examples, and contained exclusively Roman finds (although of a range of dates) which, even if redeposited from Church Street, do not appear from their limited state of abrasion to have been frequently disturbed or reworked. Deposit ***108***, the lowest layer investigated within Trench 1, may also be analogous. The apparently barren nature of the majority of the sequence identified in 1990 belies a greater significance. The very sterility of most of the silt layers suggests that they were deposited by a natural event, post-dating major Roman activity on the site, and prior to the recorded medieval activity. The agent of their deposition at present remains uncertain but they may have been by a marine transgression rather than simple fluvial activity (LUAU 1991). It is unclear whether the silt deposit identified at the base of the sequence of made ground deposits within Trench 2 is of similar origin. If so, then one might also expect the preservation of sealed Roman stratigraphy, and Roman features have been encountered closer to Church Street itself (P Iles pers comm).

9.1.5 M***edieval and post-medieval:*** the 1990 evaluation identified considerable evidence of medieval activity on the site, including several sub-phases of pits, but also a ditch that had been reinstated on a number of occasions. The latest incarnation of this feature, likely to have been a boundary well into the post-medieval period, lay almost immediately below the modern ground surface. Such remains may possibly be associated with activity in Church Street burgage plots. In 1990, the lower medieval deposits were found to be waterlogged, and to thus have excellent potential for the preservation of palaeoenvironmental remains. The results of the present phase of evaluation differ slightly, but nonetheless, can be seen as complimentary. Certainly, intrusive activity was less intense within the area of Trench 3; this could in part relate to the presence of possible structure ***308***, but perhaps more importantly, the likelihood that the position of Trench 3 falls deeper within the burgage plot defined by those ditches identified in 1990. Any structure represented by feature ***308*** is likely to be quite early in date, if buried soil horizon ***301***, which, on the basis of the medieval pottery, is likely to originate in the twelfth to fourteenth centuries, is to be seen as analogous to that identified within the 1990 evaluation and which was cut by medieval pits and ditches. Moreover, the presence of stratified medieval and post-medieval artefacts within soil ***301*** clearly demonstrates the longevity and continuity of use of this area. Overall, there is potential for the preservation of 0.8m-1m of deposits laid down within the medieval period, together with *c* 0.8m of medieval deposits intruding into the underlying silt horizons.

9.1.6 ***Industrial period:*** the most clearly documented use of the site dates to the industrial period, with several generations of structures occupying the site from around the mid-eighteenth century onwards. Paradoxically, no such

remains were identified in 1990, although the more widespread recent investigations have been more fruitful. Remains of two Georgian buildings were identified, that represented by wall ***103***, located at the northern end of Trench 1, and that comprising walls ***300*** and ***316*** within Trench 3. Wall ***103*** clearly belongs to a building occupying the Damside Street frontage and identifiable on the Binn's map of 1821, and the OS 1849 map. The building may have survived until the early twentieth-century realignment of Damside Street, but if so, the building had been extended to the south. Although the presence of groundwater prevented deep investigation of potentially sensitive deposits, it seems likely that the area to the north of wall ***103*** is occupied by a backfilled, but potentially intact, cellar. The building identified within Trench 3 can be quite closely dated on the basis of map regression analysis, and is likely to have had a life span just short of 100 years. Absent from Mackreth's map of 1778 (Fig 5), the building first appears on Binn's map of 1821 (Fig 6), but was demolished by the time Harrison's map of 1877 was surveyed (Fig 8).

9.1.7 Elsewhere within the central and western part of the site, Trench 1 encountered clear evidence that industrial period structures, cellars and all, had been torn out, leaving a void that had been backfilled with modern chippings. It is uncertain whether this wholesale destruction relates to a single phase of localised activity, although the presence of layers of permeable membrane would suggest a later twentieth-century date. Such a premise is supported by the fact that had this activity accompanied the early twentieth-century realignment of the street, damage is likely to have been even more widespread.

9.2 ACADEMIC POTENTIAL

9.2.1 The site has excellent potential for the preservation of archaeological remains associated with the riverside development of Lancaster in the Roman and medieval periods, and the consolidation and expansion of the townscape in the post-medieval and industrial periods. The *in situ* Roman remains identified in 1990 are extremely significant: stratified and, in particular, structural, evidence of Roman activity, together with the opportunity for scientific investigation, is rare in Lancaster where, in many cases, such remains have been truncated by later activity and documented poorly, if at all. Thus these remains have enormous potential to illuminate the nature of activity at the Roman water front, a little-known aspect of Lancaster's history. Similarly, a better understanding of the nature and depositional sequence of the alluvial and colluvial deposits sealing the Roman layers has the potential to shed light on the changing course of the Lune, which, combined with Castle Hill, is perhaps the most important geographical determinant on the history of the town. Research initiatives within the *Archaeological Research Framework for North West England* (Brennand 2007) that are presently pertinent to the Damside Street site include:

> 3.33 Contexts with high potential for waterlogged assemblages provide the opportunity for high returns in terms of understanding the totality of material culture on sites that in this region generally produce low levels of more durable material. These should be a priority for investigation

and proper resourcing of such projects (including conservation) should not be underestimated (Philpott and Brennand 2007, 67).

9.2.2 The medieval and pre-industrial exploitation of this part of Lancaster is again little-known, and there is a need to understand the development of the area in terms of the varying influences of the major settlement focus of Church Street and the probable commercial focus that the River Lune could have provided. The 1990 evaluation identified what could have been the rear boundary of burgage plots fronting Church Street: further fieldwork within the present development site has the potential to identify perpendicular boundaries defining individual properties. Such remains, which would go some way to addressing Andrew White's assertion that "we have not defined a single burgage plot or a medieval house site in any Lancashire town" (White 1996, 125 in Newman and Newman 2007, 102), would be highly significant, particularly if there are well-preserved internal features within each distinct property. Research initiatives within the *Archaeological Research Framework for North West England* (Brennand 2007) that are presently pertinent to the Damside Street site include:

5.16 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. This is particularly relevant for Chester, Lancaster and Carlisle (Newman and Newman 2007, 104);

5.20 Adequate palaeoenvironmental and bulk sampling strategies should be formulated for all medeival urban archaeological projects… (*ibid*).

9.2.3 The townscape of Lancaster's urban centre is very much a product of the town's Georgian renaissance and yet, knowledge of the urban development is relatively sparse, with much of the surviving physical record relating to high-status structures and commercial properties within the town's conservation areas. The majority of the town's Georgian developments have been lost without any form of recording, and thus the investigation and recording of such remains, particularly within and around the reclaimed land of the Green Ayre, is as valid as those of any other period within Lancaster's history. *Archaeological Research Framework for North West England* (Brennand 2007) that are presently pertinent to the Damside Street site include:

6.35 A high priority must be the excavation of well documented house sites and their environs with artefact recovery and plotting a priority within the excavation design. Subsequently, an intra-regional study of selected households should be undertaken based on the documentary and excavated evidence (Newman and McNeil 2007a, 130)

7.24 (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 (Newman and McNeil 2007b, 147)

7.25 Where threatened with possible development excavations are required of now undeveloped and cleared former working class areas regarded as slums (*ibid*)

9.3 IMPACT

9.3.1 An accurate assessment of the impact of the development is dependent upon an appraisal of the foundation and service plans. Moreover, it is necessary to consider the method of site preparation, construction, but also of demolition, al of which can affect subsurface archaeological deposits. Whilst these designs have yet to be finalised, it is possible to make a number of general points about the extent and depth of archaeological deposits likely to be preserved on the site. Figures 21 and 22 are horizontal and vertical deposit models and are based on the available evidence gathered during the project. As such, they represent a guide to the possible nature of subsurface deposits; they cannot be considered definitive.

9.3.2 By virtue of their depth, it is likely that Roman deposits and post-Roman silting horizons are preserved across the entire development area, even in areas that have been subsequently cellared or disturbed. Such deposits are vulnerable to piling, dewatering (particularly where waterlogged) caused by piling, the installation of deep services, but also deep groundworks associated with the removal of the piles when the structure is to be demolished. The greatest potential for undisturbed medieval stratigraphy lies within the south-eastern corner of the site. Away from the central and western parts of the site that have been heavily disturbed, there is also reasonable potential for the survival of pockets of medieval and post-medieval archaeology along the street frontage and outside of industrial period cellars (as is likely to have been the case with the archaeology identified in 1990). That stratified medieval and post-medieval deposits can survive within the confines of industrial period buildings is clearly demonstrated within Trench 3. Medieval and post-medieval remains would be impacted upon by each of the groundwork methodologies outlined above and, in addition, would be adversely affected by shallower groundworks associated with levelling and landscaping for raft or strip foundations. The potential for the survival of industrial period buildings is likely to closely follow that of medieval and post-medieval deposits and to share the same vulnerabilities.

9.3.3 The impact of any development on the embanked area to the rear of the site is perhaps hardest to ascertain given the difficulties of accessing this area and the complex building history of this location. It is possible that the encountered deposits of made ground are localised, and it should not be assumed that they are representative of deposits across this area, nor that preservation of Roman, medieval and post-medieval stratigraphy is absent from this area.

9.4 RECOMMENDATIONS

9.4.1 The programme of works has identified the presence of significant archaeological remains on the site that are extremely vulnerable to development. It is recommended that, following assimilation of the details of this report, a meeting should be held between the developer, Lancashire County Archaeology Service, and OA North, to establish a programme of mitigation that is appropriate to the development itself.

10. BIBLIOGRAPHY

10.1 CARTOGRAPHIC SOURCES

Binns, J, 1821, *A Map of the Town and Castle of Lancaster*

British Geological Survey, 1992, Nottingham.

Docton, K, 1957 *Map of Lancaster in 1684*

Harrison and Hall 1877 *Plan of the Town and Castle of Lancaster (iv*)

Mackreth, S, 1778, *A Plan of the Town of Lancaster*

Ordnance Survey 1849 First edition 1:10560 Lancaster

Ordnance Survey, 1893 First Edition 25": 1 Mile, Lancashire Sheet **30.11**

Ordnance Survey 1913 25" to 1 Mile

Ordnance Survey 1931 25" to 1 Mile

Ordnance Survey, 1970 soil surv Lancs 1:250,000

Ordnance Survey, 1980 geol surv Lake District 1:250,000

Speed, J, 1610 *Plan of Lancaster*

10.2 SECONDARY SOURCES

Bellis, R, and Penney, SH, 1979 'The Lancaster Vicus: excavation in Church Street 1979,' *Contrebis* **7**, 3-31

Bollands, FJ, 1981 *John O' Gaunt Country* Lancaster Guardian

Brennand, M (ed), 2007 The Archaeology of North West England; An Archaeological Research Framework for North West England: Volume 2, Research Agenda and Strategy, *Archaeology North West* **9**

Dalziel, N, 2001 Trade and transition, 1690-1815, in A White (ed) *A History of Lancaster*, Edinburgh

Darling, MJ, 2004 Guidelines for the archiving of Roman pottery, *Journal of Roman Pottery Studies*, **11**, 67-75.

Department of the Environment (DoE), 1990 *Planning Policy Guidance Note 16,* London

DoNH, 1995 *List of Buildings of Special Architectural or Historic Interest*

Drury, D, forthcoming Excavations during the development of Lancaster Market Hall, *Trans Lancashire Cheshire Hist Soc*

Drury, D, Hair, N, Newman, R M, 1990 *Excavations in Lancaster City Centre*

Ekwall, E, 1922 *The Place-names of Lancashire*, Manchester University Press

English Heritage 1989 'Lancaster, Mitchell's Brewery Site.' *Archaeology Review 1988-1989*, 33-34

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

Farrer, W, Brownbill, J, 1914 *Victoria County History of Lancashire*. Vol8

GMAU, 2002 *North Road, Lancaster: An Archaeological Watching Brief* Unpubl Rep

Horsefield, K, 1999 'The Lancaster Mill Race,' *Centre for North-west Regional Studies, Archaeology Conference 6 March 1999* http://www.lancs.ac.uk/depts/cnwrs/papers%20on%20the%20web/arch%20conf%20synopses%201999.rtf

Kelly 1901 Directory of Lancaster, Volume 1

Lancaster City Museum, Lancaster Museum Catalogue.

Lancaster City Museum 1957 *Museum Annual Report 1957*, LM 694/2

Lancaster City Museum Records. LM.628

Lancaster Guardian 22 August 1868

Lawson-Price, 1992 *Archaeological Assessment of land bounded by Church Street, Cheapside*, Unpubl Rep

LDAS, 1980 *North Lancashire Vernacular Architecture Survey*

Leather, GM, 1973 *Roman Lancaster*

LUAU 1991 *Lancaster City: an Archaeological Assessment of Redevelopment Area, Phase I – East of Damside Street*, Unpubl Rep

LUAU 1992 *Lancaster City: an Archaeological Assessment of Redevelopment Area, Phase II – West of Damside Street* Unpubl Rep

LUAU 1993 *Lancaster Mitchell's Brewery Excavations 1988-1992: Post-excavation Assessment,* Unpubl Rep

LUAU 1999 *44 and 52 Church Street, Lancaster: Watching Brief,* Unpubl Rep

LUAU 1999b *Mitchell's Brewery site, Lancaster: Building Survey Report*, Unpubl Rep

LUAU 2000a *Mitchell's Brewery: Assessment of 1999 excavation results,* Unpubl Rep

LUAU 2000b *Lancaster Bus Station: an Archaeological Evaluation*, Unpubl Rep

Newman, RM, 1996 'The Dark Ages' in Newman R (ed) *The Archaeology of Lancashire*, Lancaster, 93-107

Newman, C, and Newman, R, 2007 The medieval period research agenda, in Brennand (ed): 95-114

Newman, R, and McNeil, R, 2007a The post-medieval period research agenda, in Brennand (ed): 115-132

Newman, R, and McNeil, R, 2007b The industrial and modern period research agenda, in Brennand (ed): 133-158

OA North, 2003a *1 Cable Street, Lancaster: Archaeological Building Recording*, Unpubl Rep

OA North, 2003b *3-5 Damside Street, Lancaster Archaeological Building Investigation*, Unpubl Rep

OA North, 2003c *Former Pyes Warehouse, Lancaster, Archaeological Evaluation and Watching Brief*, Unpubl Rep

OA North, 2003d *Judges Lodgings, Lancaster, Archaeological Excavation* Unpubl Rep

Orton, C, Tyers, P, Vince, A, 1993 *Pottery in Archaeology*, London

Penney, SH, 1980 Excavation in Church Street Lancaster. *Contrebis*, **8**

Penney, SH, 1981 *Lancaster: The Evolution of its Townscape to 1880,* Lancaster

Penney, SH, 1981-2 *Excavation at 41 Church Street, Lancaster*

Penney SH 1983 *Lancaster in Old Picture Postcards*

Philpott, R, and Brennand, M, 2007 The Romano-British period research agenda, in Brennand (ed): 55-72

RCHM Select List, 1963 *Monuments threatened or Destroyed,* 46

Shotter, DCA, 1996 *The Roman Frontier in Britain*, Preston

Watkin, WT, 1883 *Roman Lancashire*

Webster, P, 1996 *Roman Samian Pottery In Britain* Practical Handbook in Archaeology no 13, CBA, York

West, T, 1779 Antiquities discovered in Lancaster, 1778, *Archaeologia*, **5**, 16-20

White, AJ, 1974 Excavations in the Vicus, *Contrebis* **2**, 16

White, A, 1993 A Medieval Pottery Kiln at Ellel, Lancashire, *Contrebis* **18**, 5-18.

White, A, 1993 Setting the Scene, 1193-1500, in White A (ed) *A History of Lancaster 1193-1993*, Keele, 9-48

White, A, 2000 Continuity, Charter, Castle and County Town, 400-1500, in White, A (ed), *A History of Lancaster*, 2nd edn, Edinburgh

Williams, J, Newman, R, 1989 Excavations on the Mitchell's Brewery Site; Lancaster. *Contrebis* **5**, 65-67

11. ILLUSTRATIONS

11.1 FIGURES

11.2 PLATES

Plate 1: The embanked area to the rear of Church Street

Plate 2: Rear of Church Street showing car park area and flat area adjoining Damside Street

Plate 3: Church Street looking towards St Mary's Church in the background

Plate 4: Test Pit 1 showing wall, ***101***

Plate 5: Test Pit 2

Plate 6: Test pit 3 showing concrete surface, ***302***

Plate 7: Trench 1, south-west facing Section 4, looking north-east

Plate 8: Trench 1, foundation 103, looking east

Plate 9: South-east facing section of Trench 2, looking north west

Plate 10: Trench 3, looking south-east

Plate 11: Trench 3, north-east facing Section 2 through fluvial deposits ***102*** and ***103***, looking south-west

Plate 12: South-west facing Section 1 of Trench 3, looking north-east

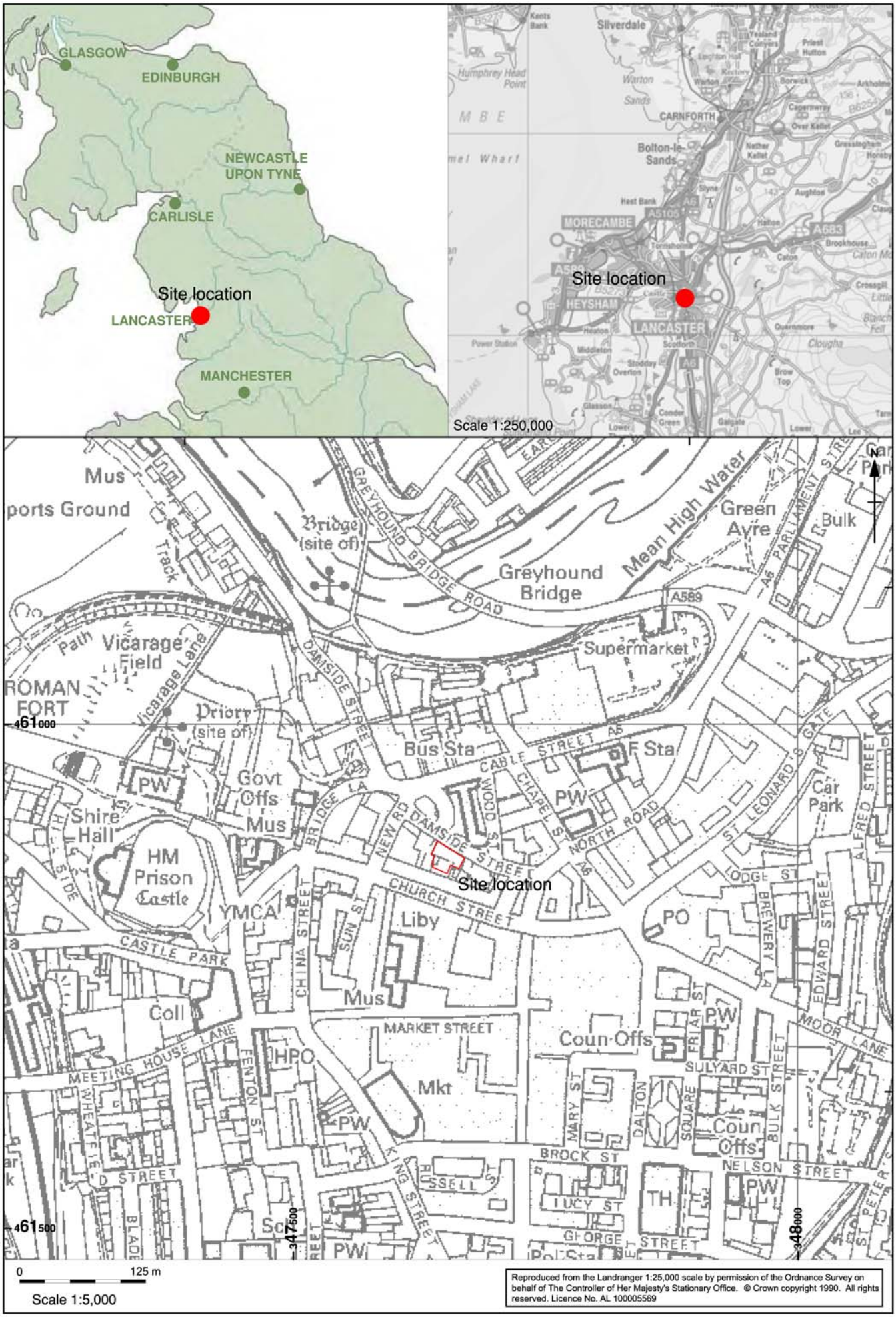


Figure 1: Site Location

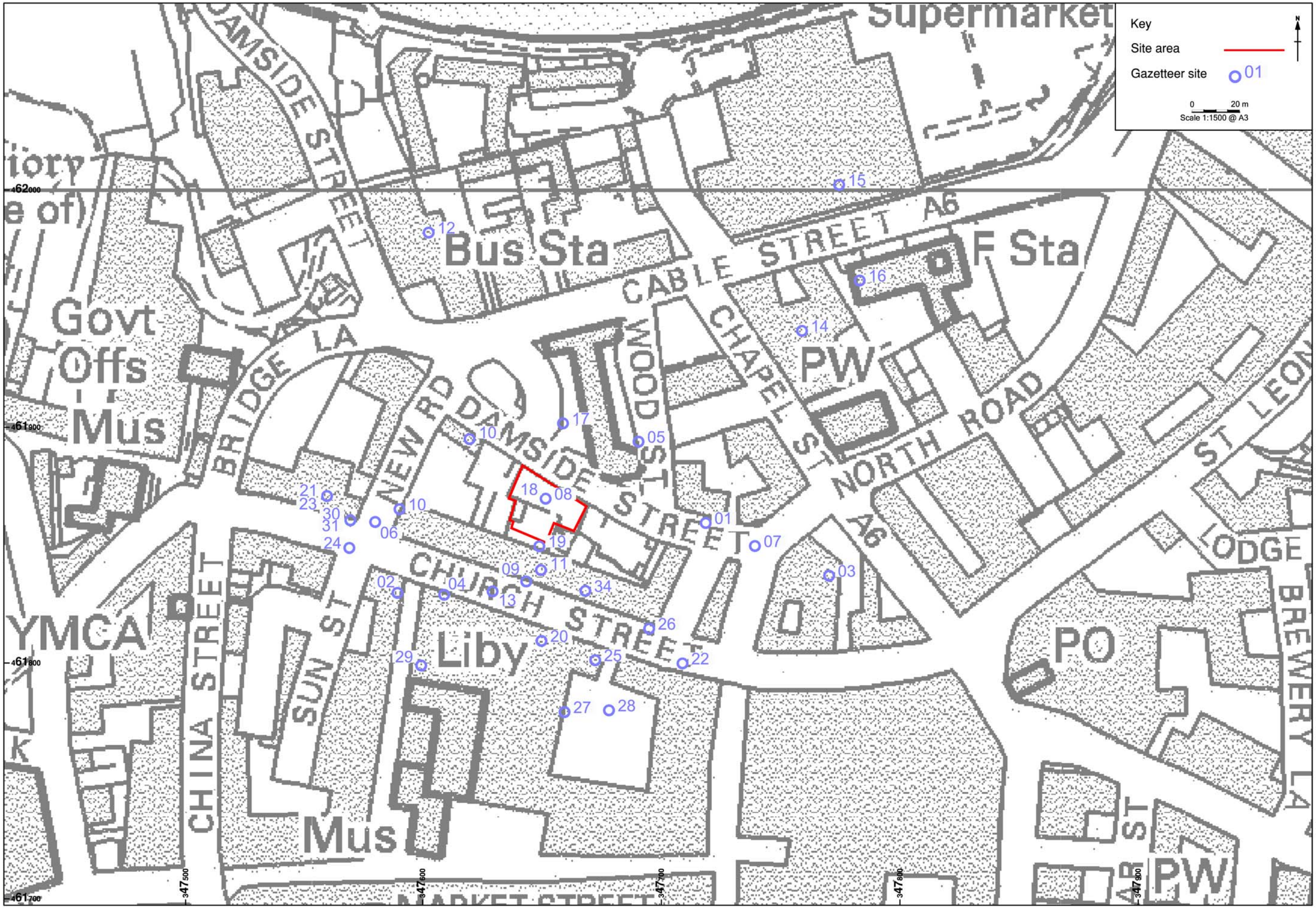


Figure 2: Gazetteer of sites

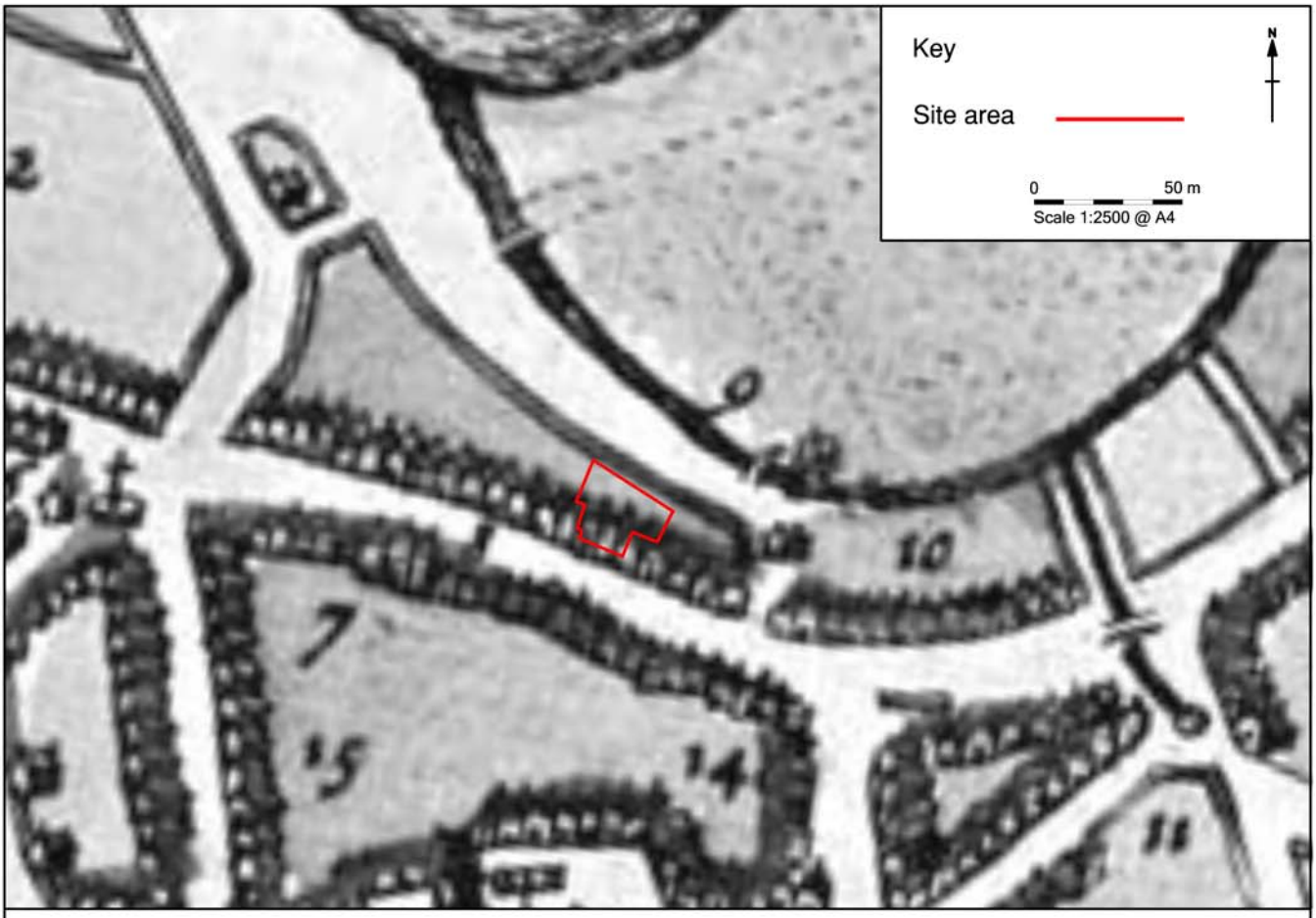


Figure 3: Speed's map of 1610

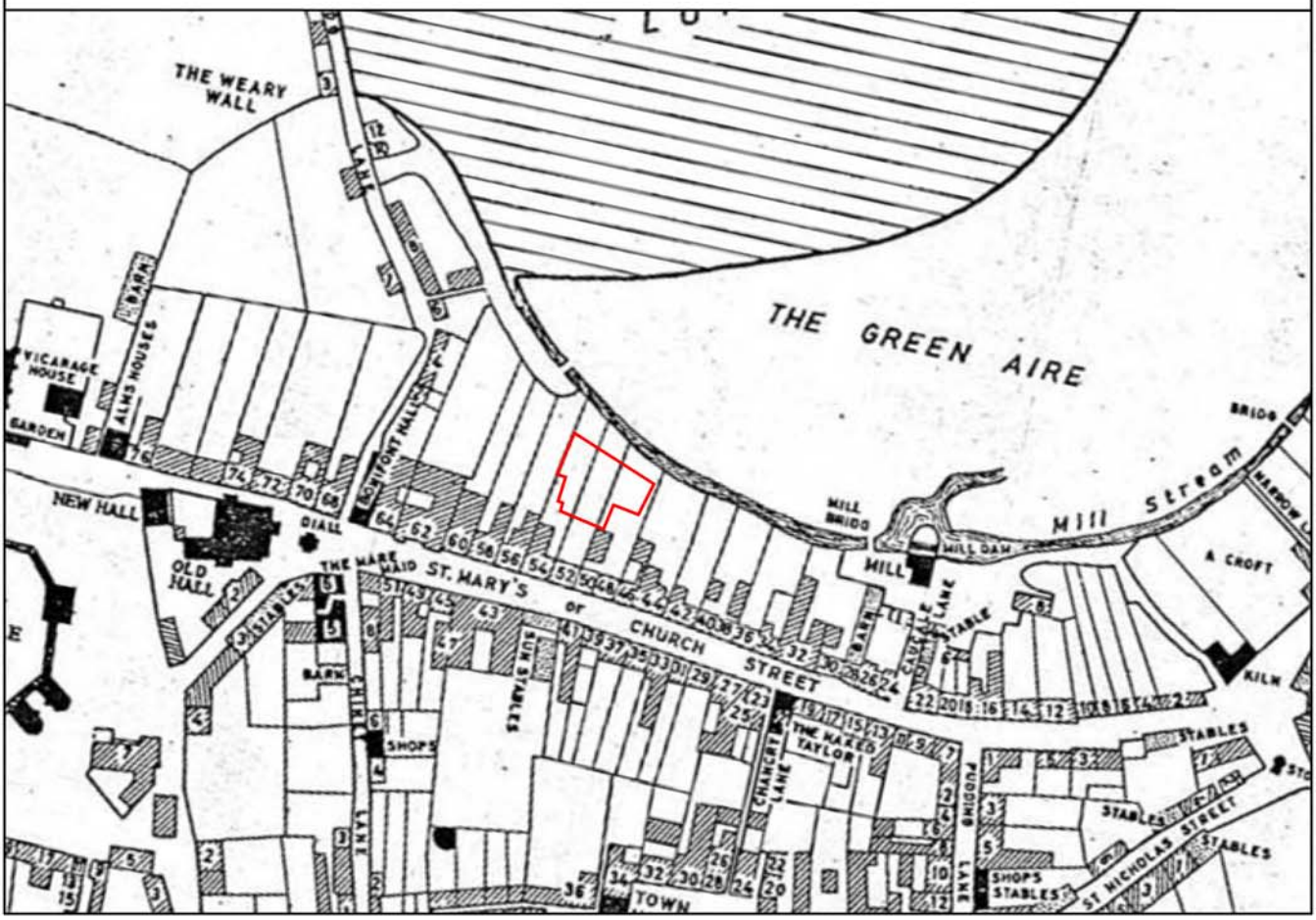


Figure 4: Docton's map of 1684

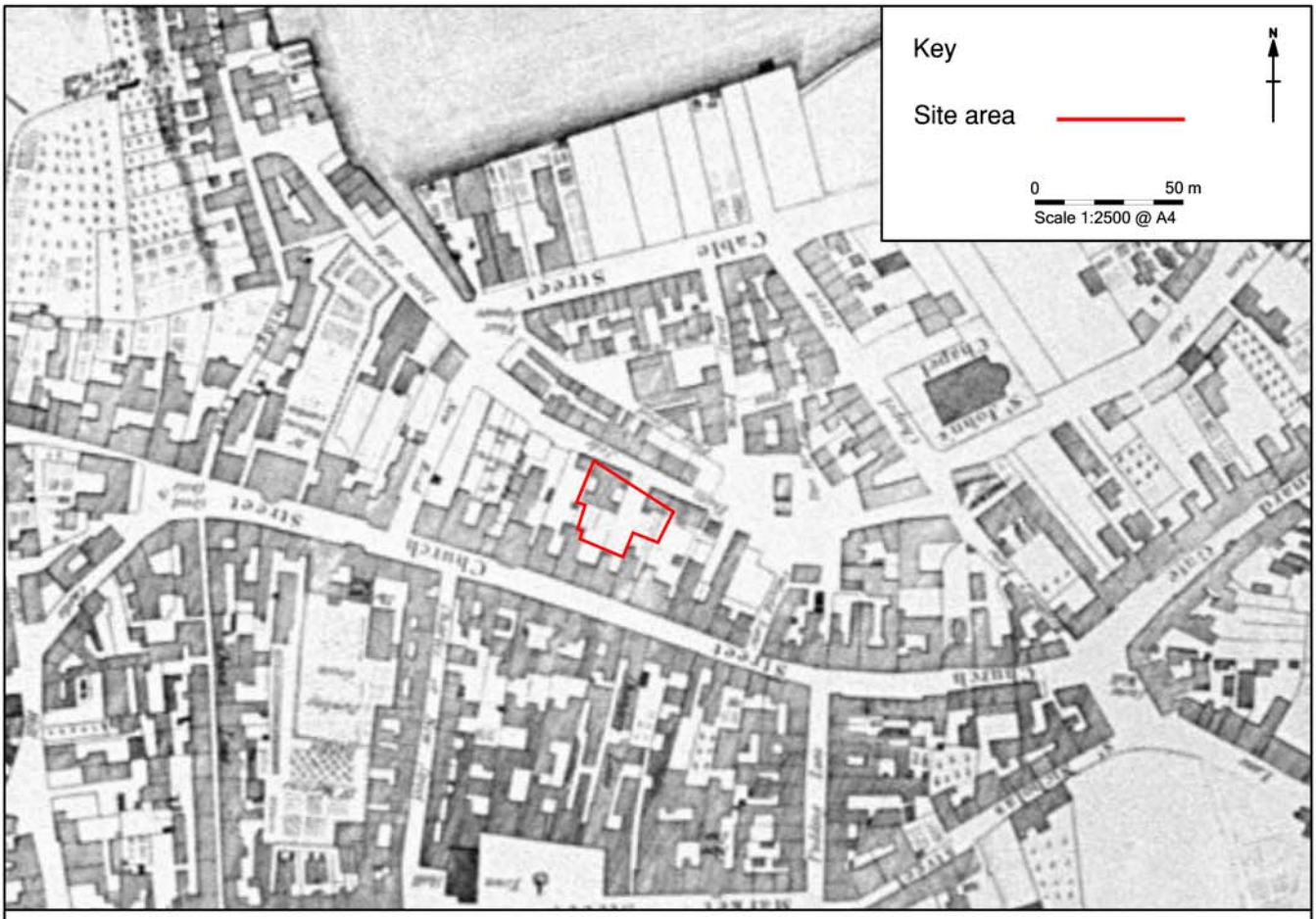


Figure 5: Mackreth's map of 1778

Figure 6: Binns' map of 1821

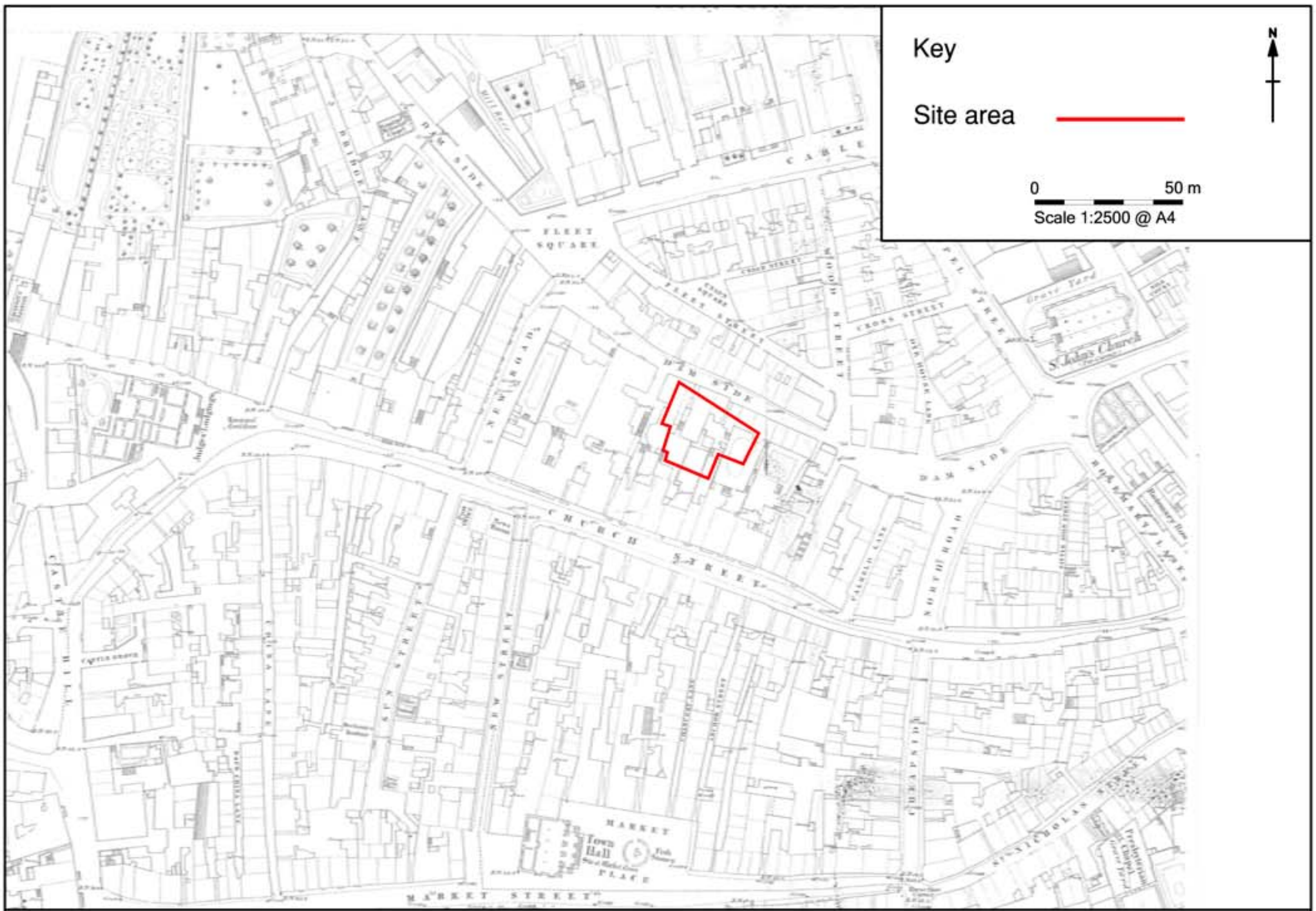


Figure 7: Ordnance Survey map of 1849

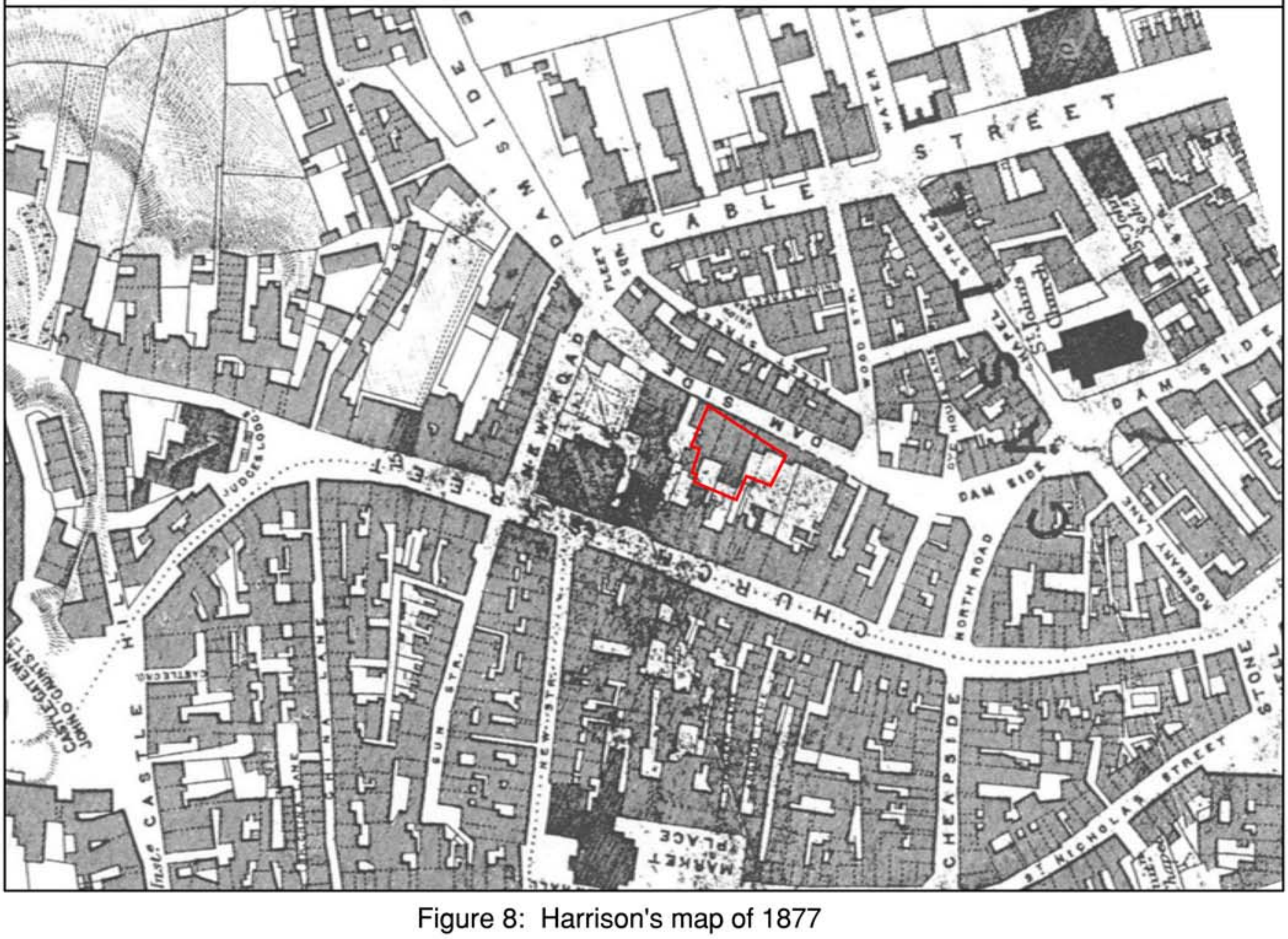


Figure 8: Harrison's map of 1877

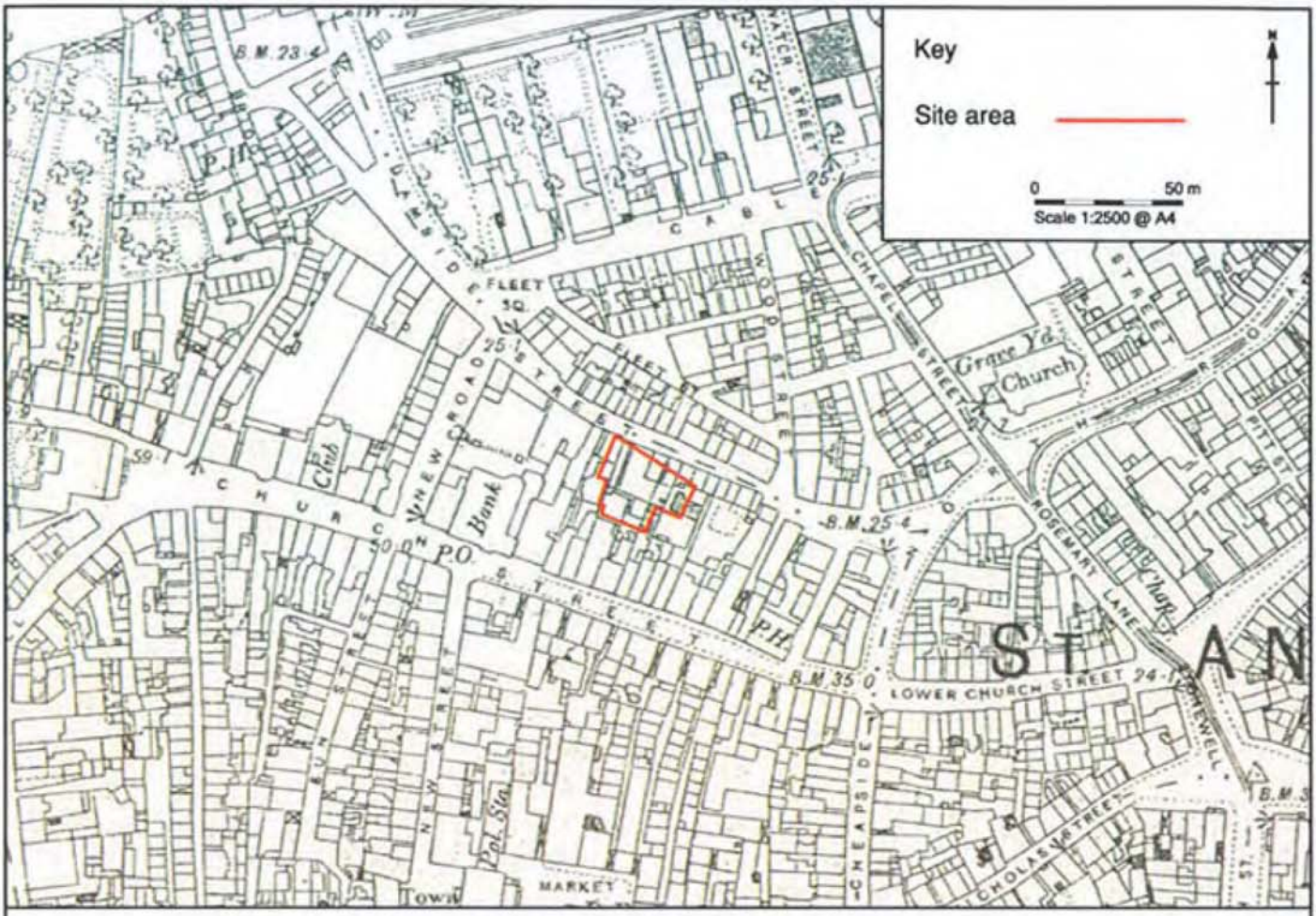


Figure 9: Ordnance Survey map of 1893

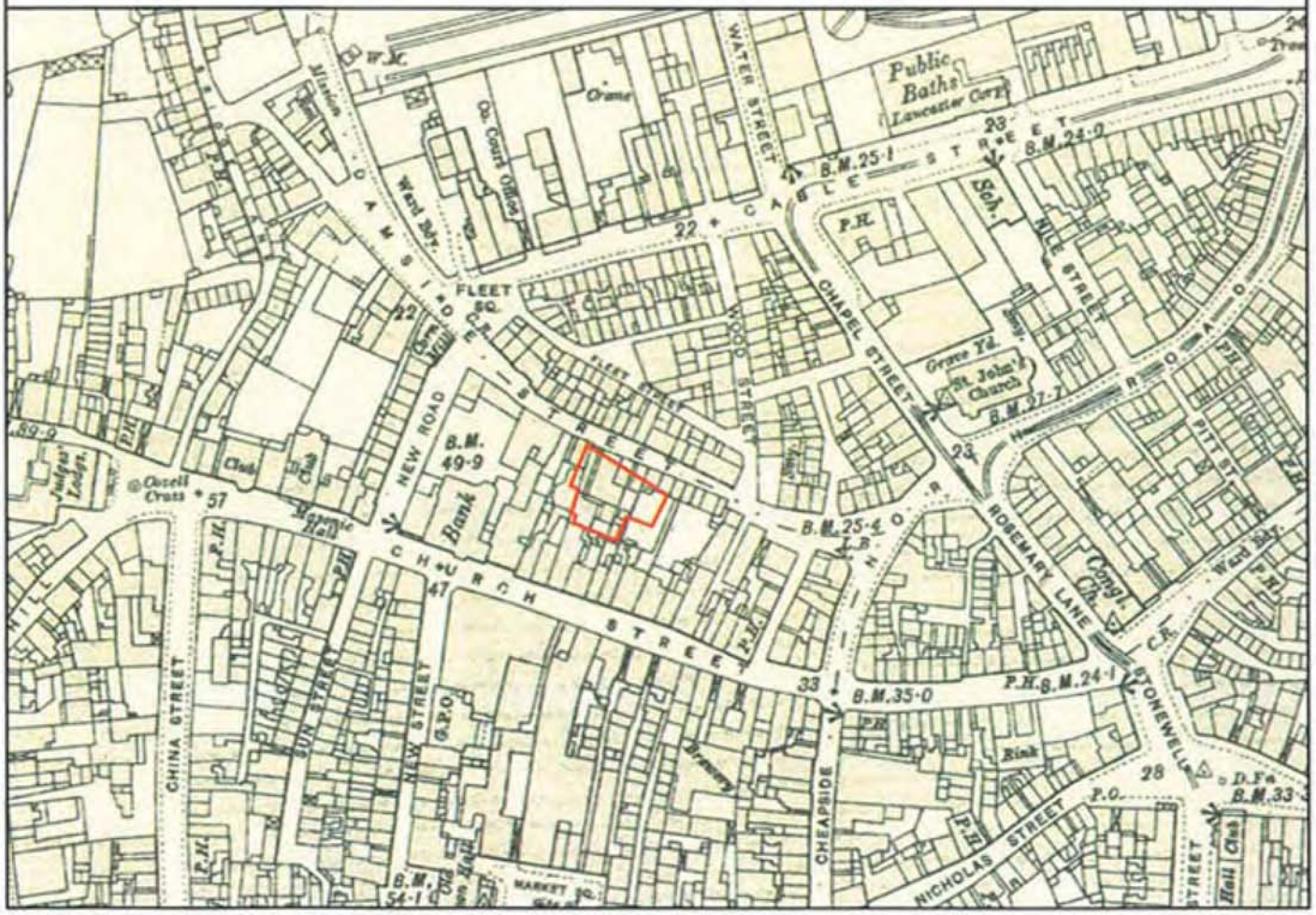


Figure 10: Ordnance Survey map of 1913

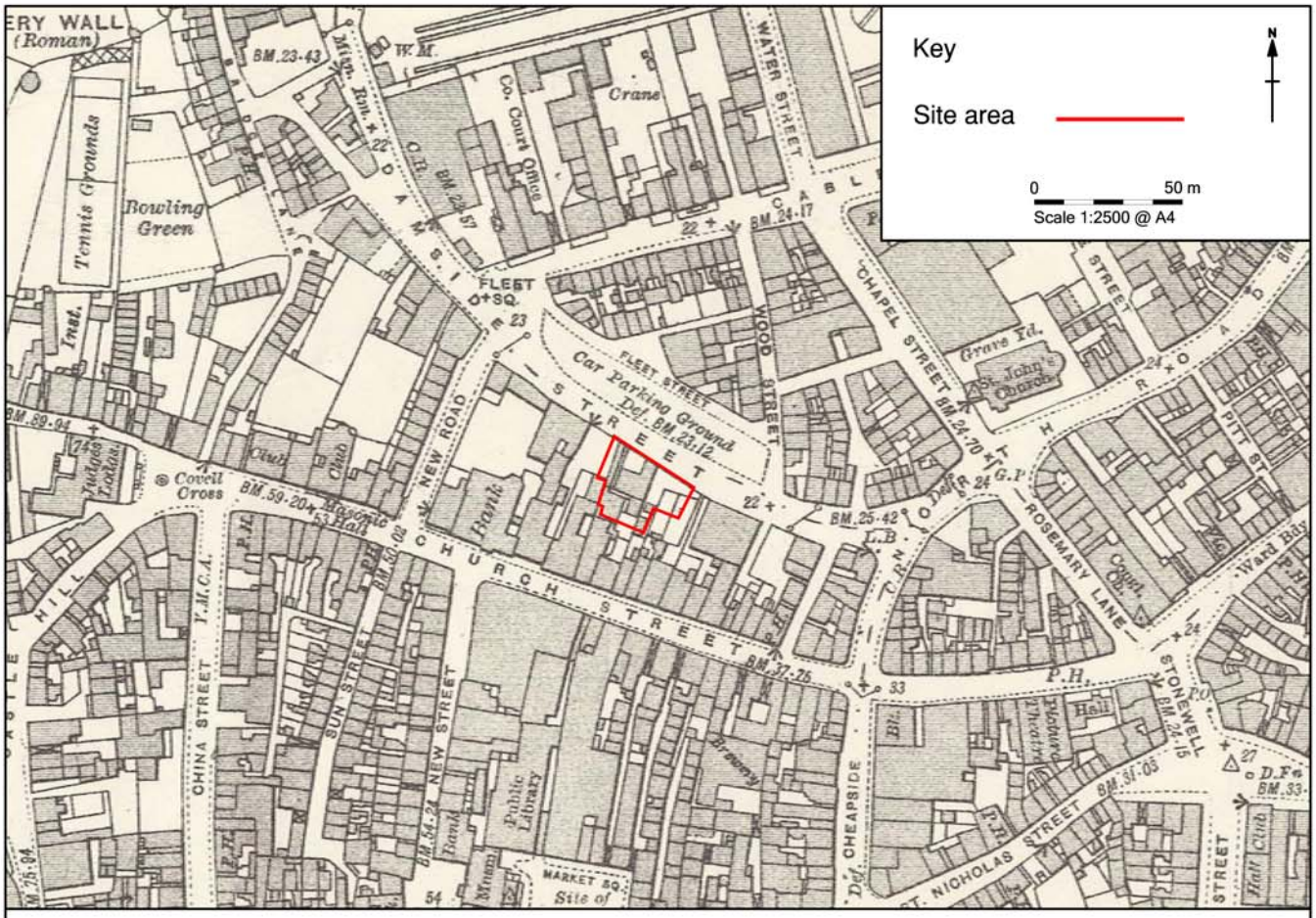


Figure 11: Ordnance Survey map of 1931

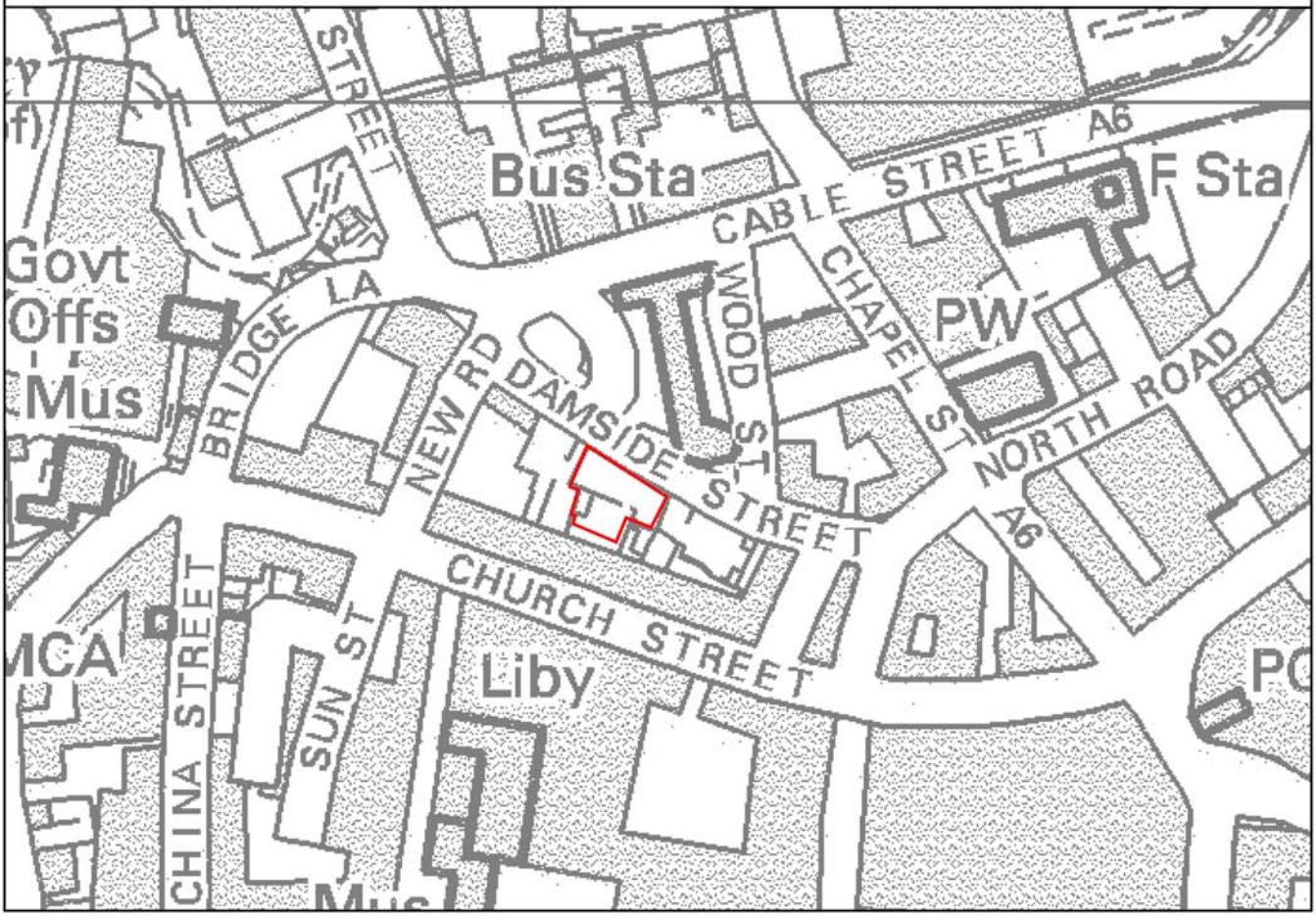


Figure 12: Modern Ordnance Survey map of 2006

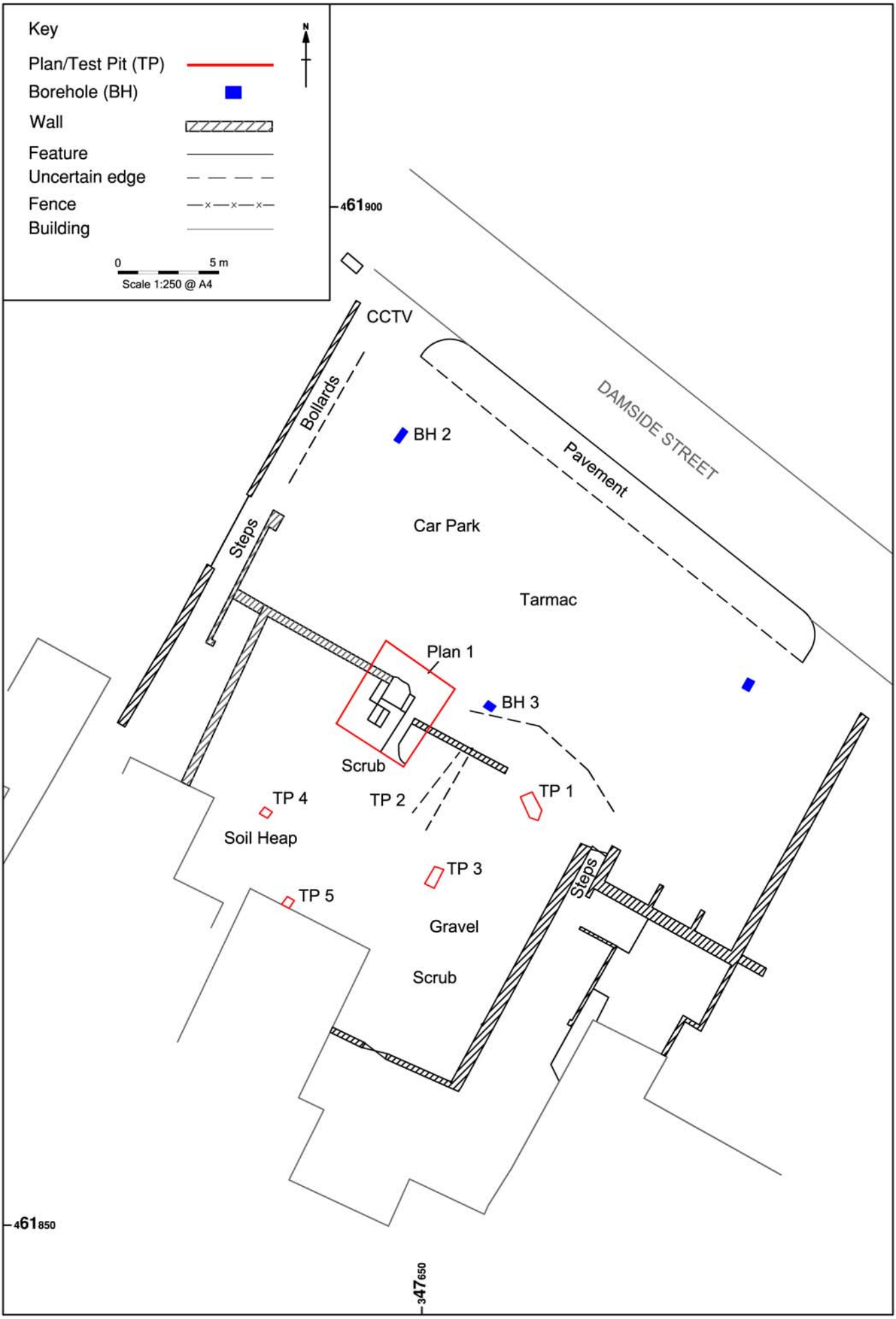


Figure 13: Site Plan of Geotechnical investigation works

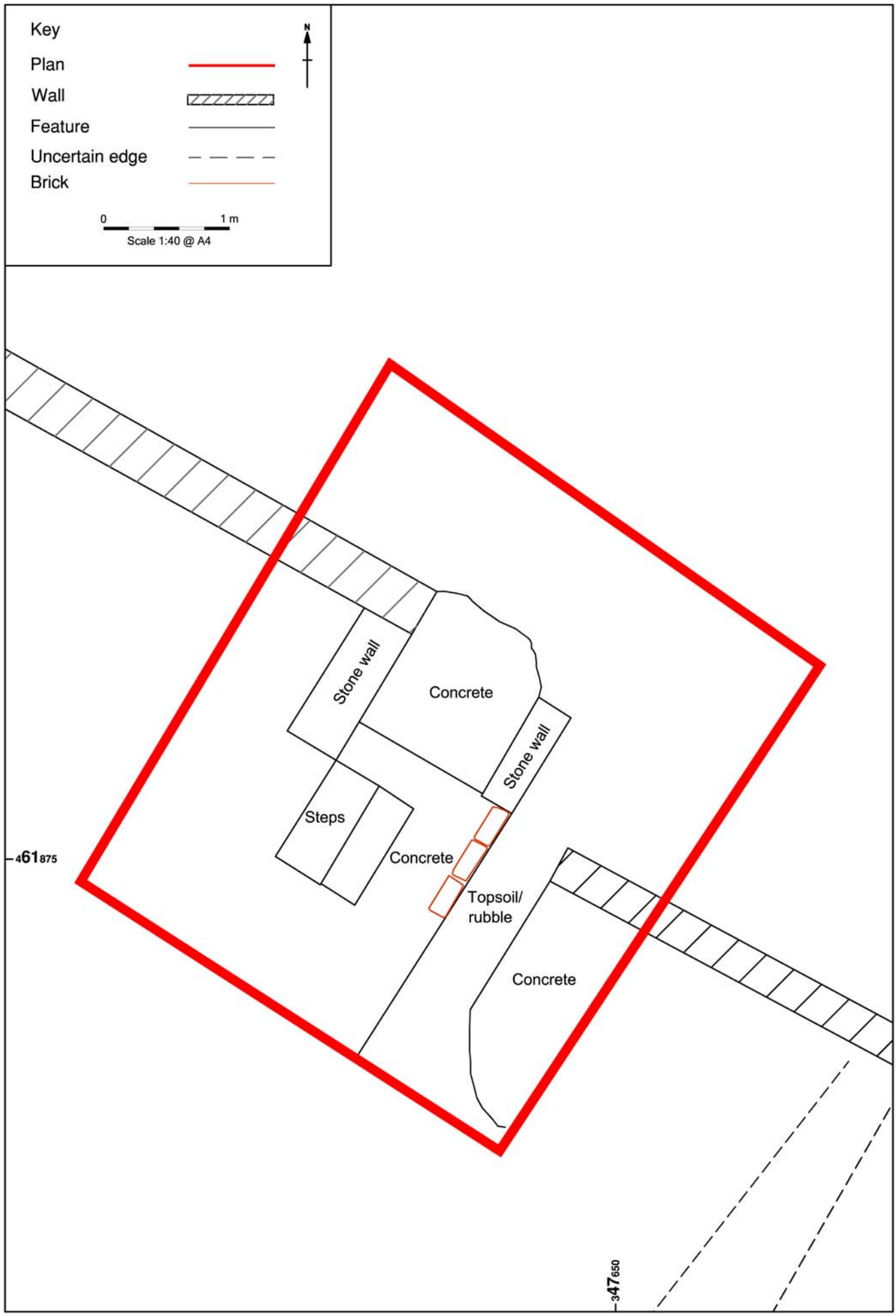


Figure 14: Detail of surface remains

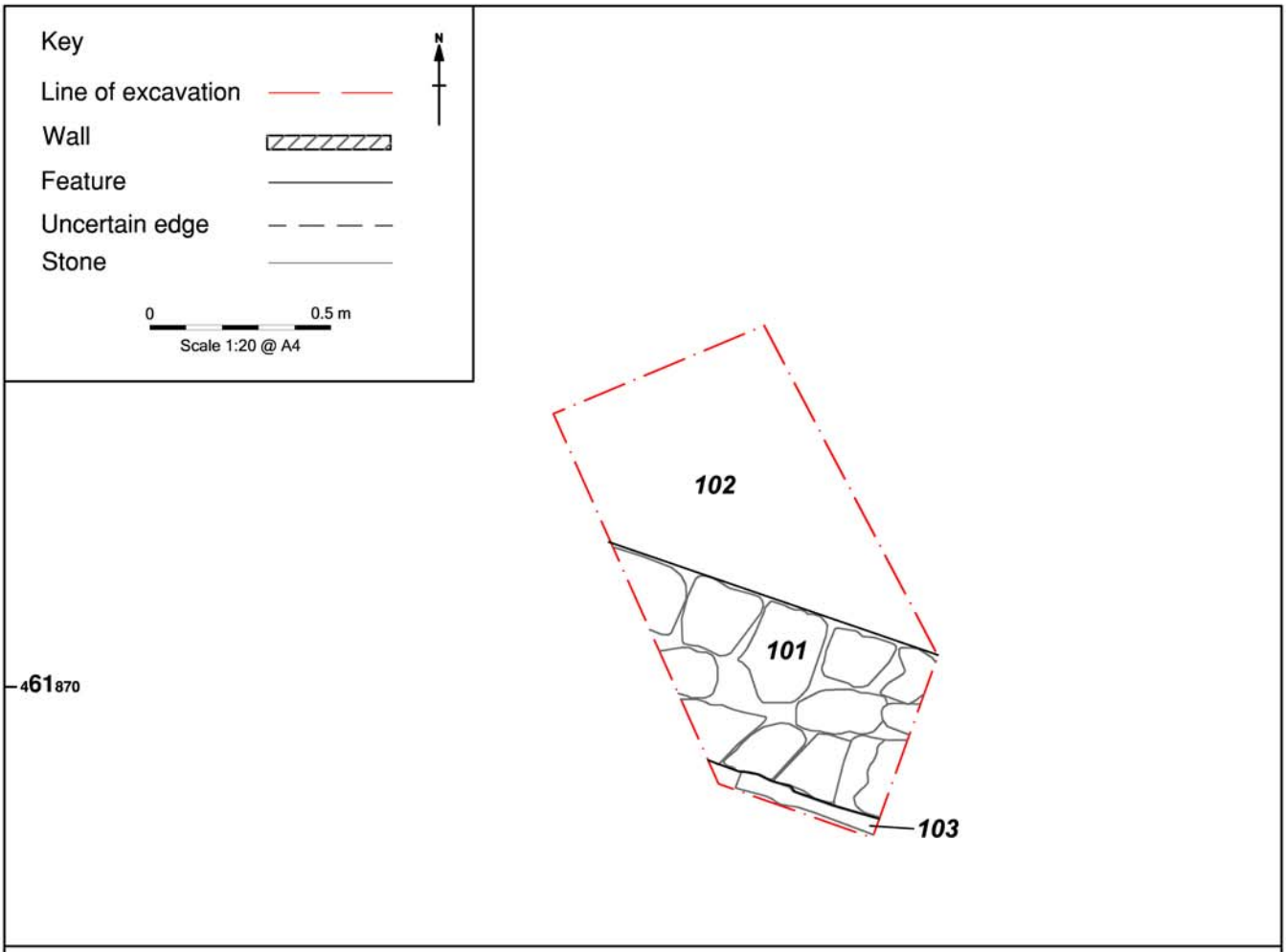


Figure 15: Detail of Test Pit 1

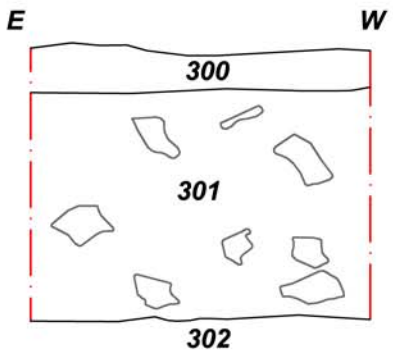


Figure 16: South-facing section of Test Pit 3

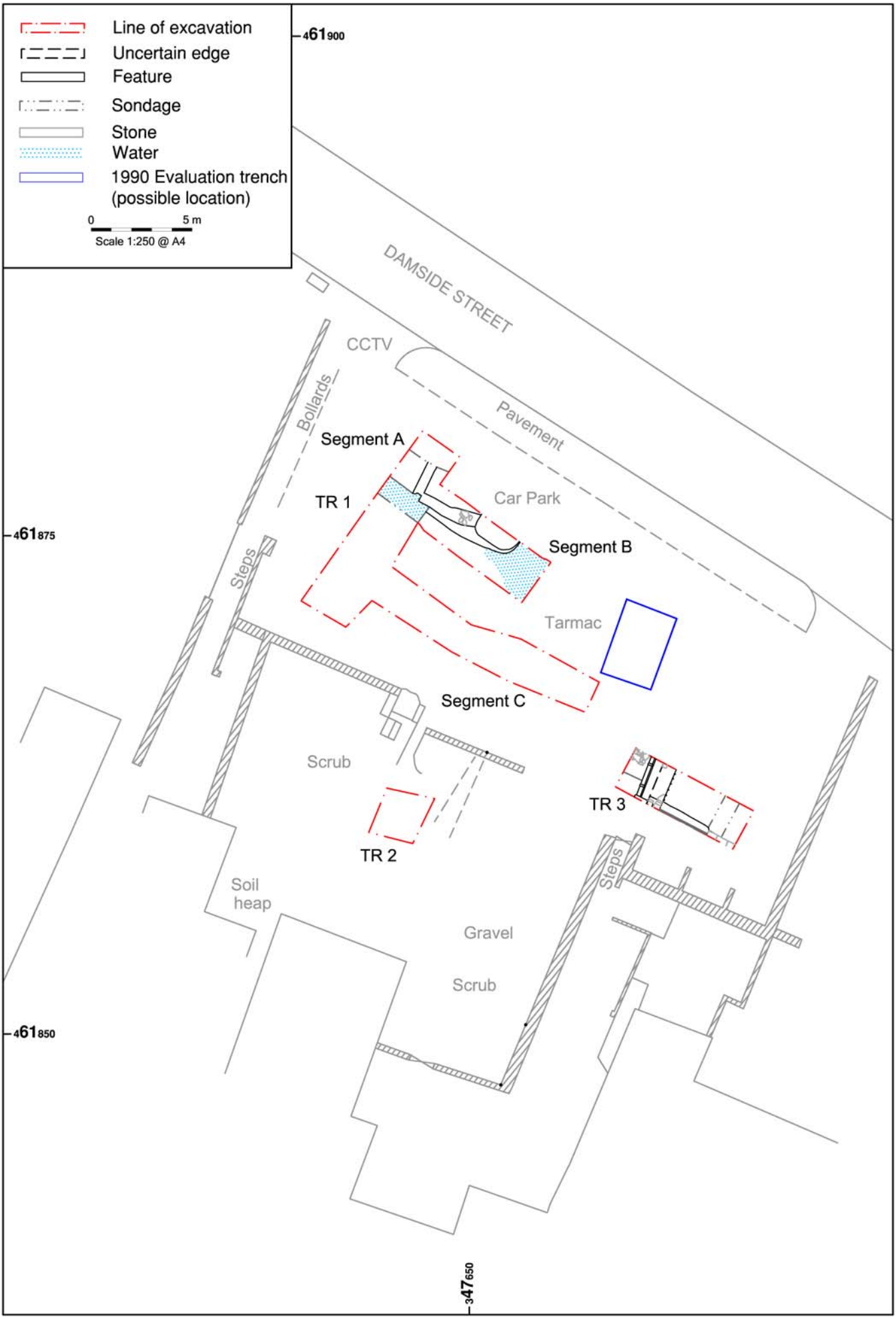


Figure 17: Trench location plan

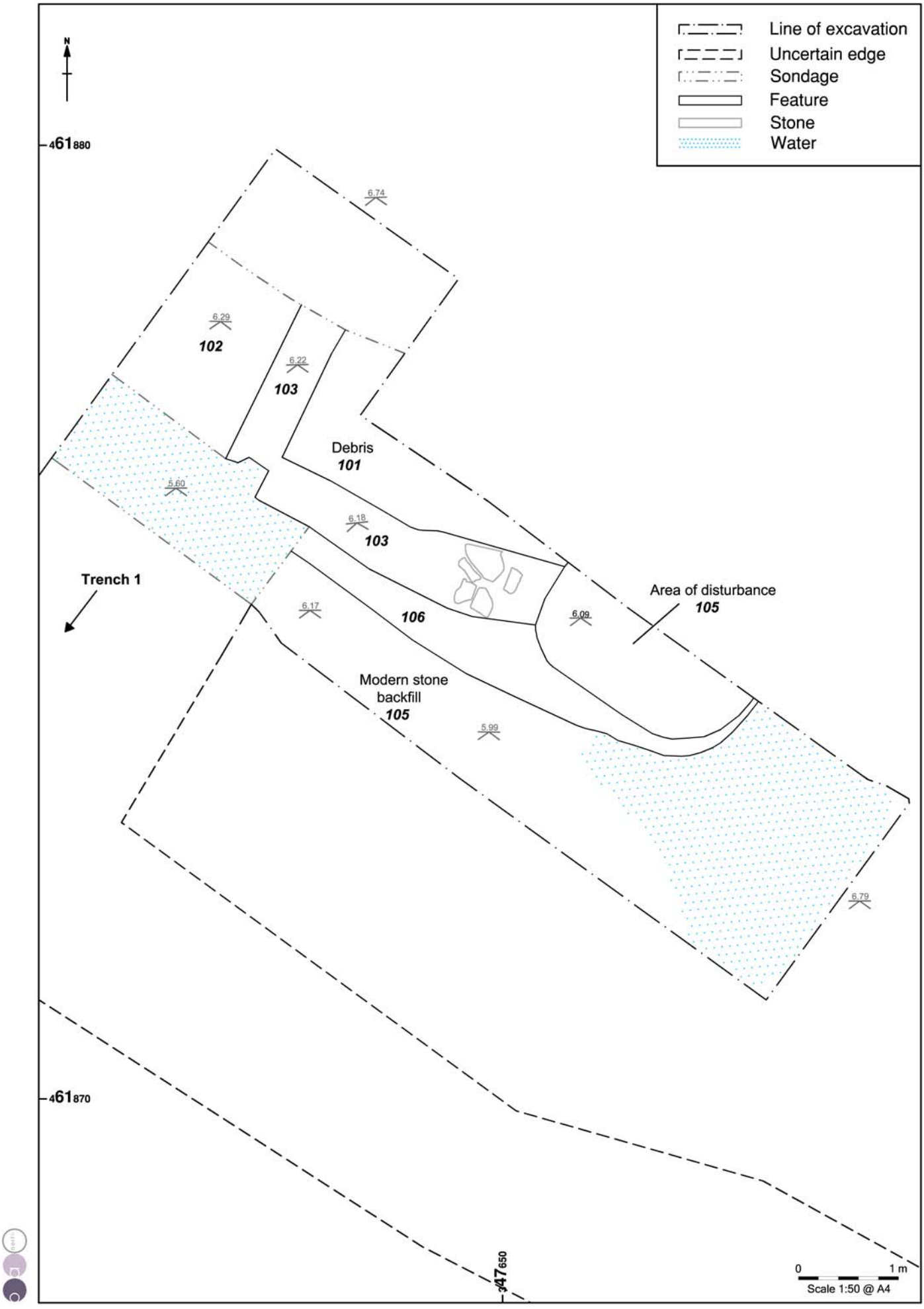


Figure 18: Plan of Trench 1, segment B

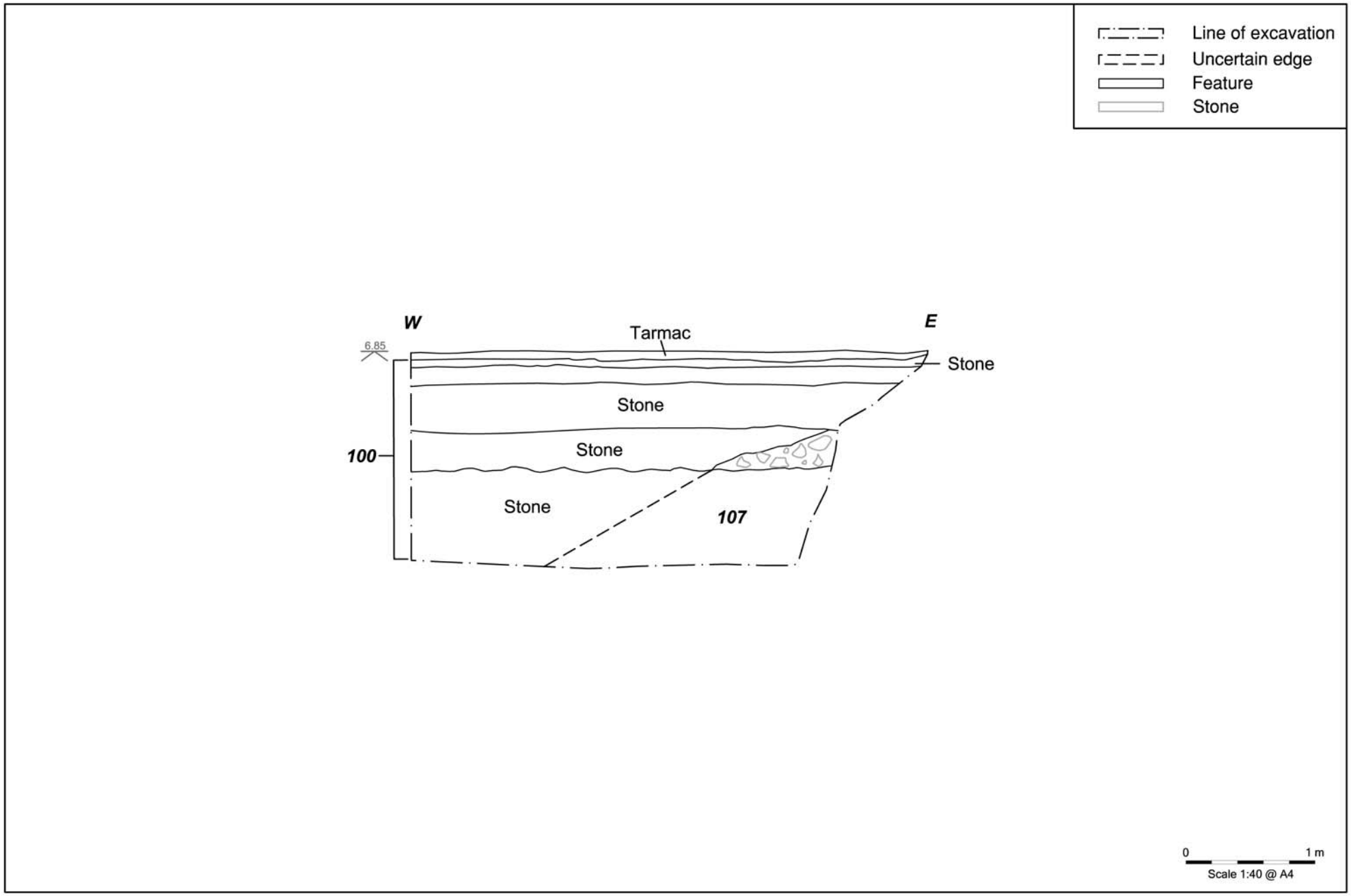


Figure 19: South-west-facing section 4 of Trench 1

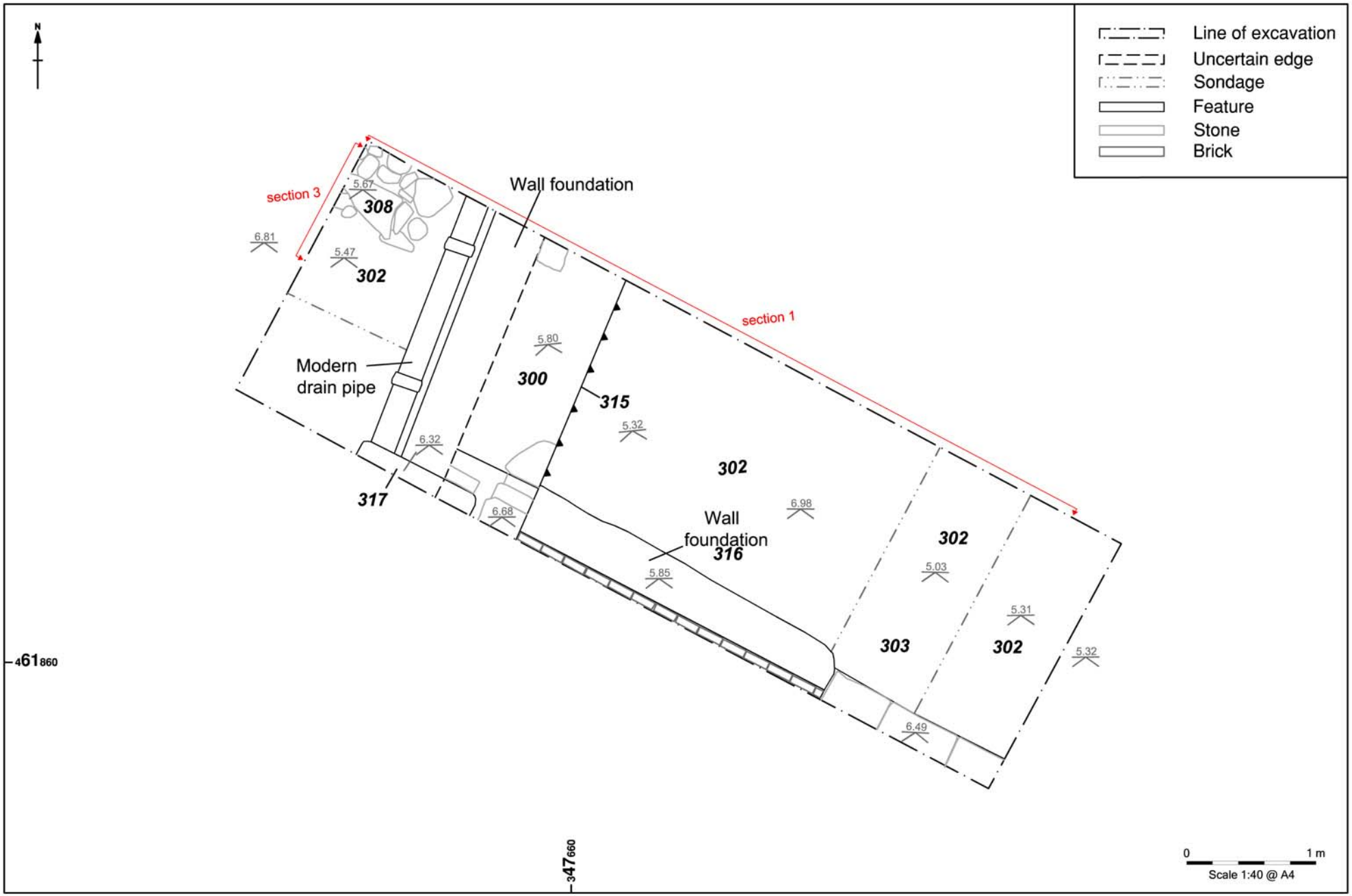
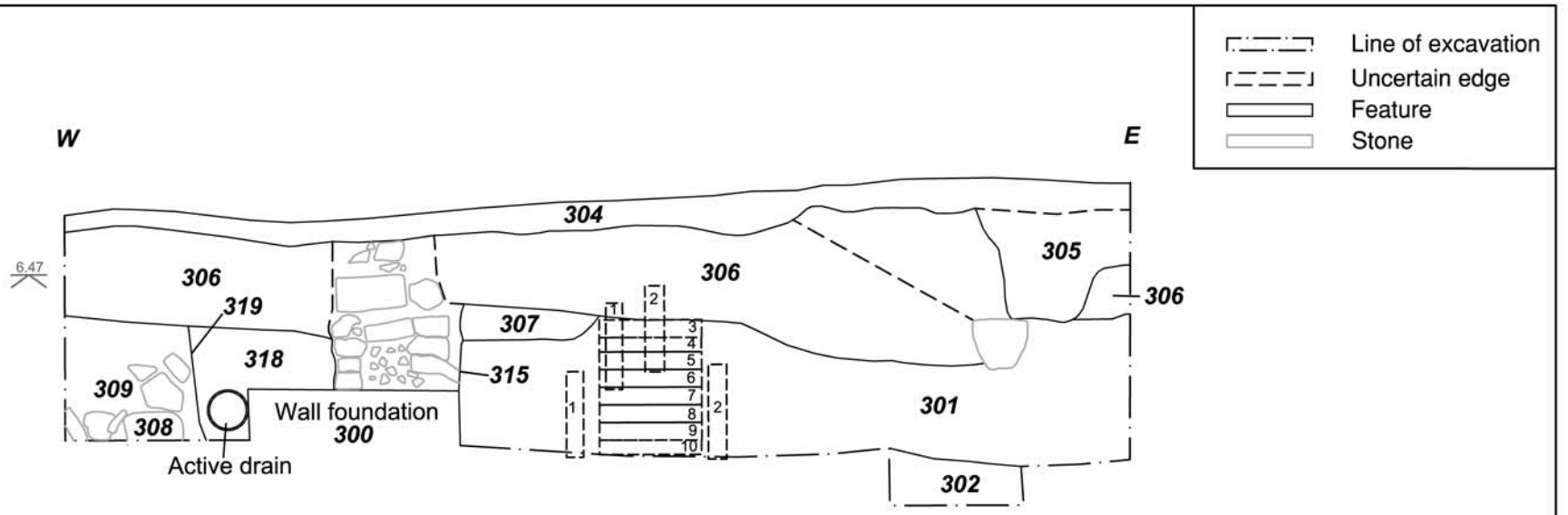


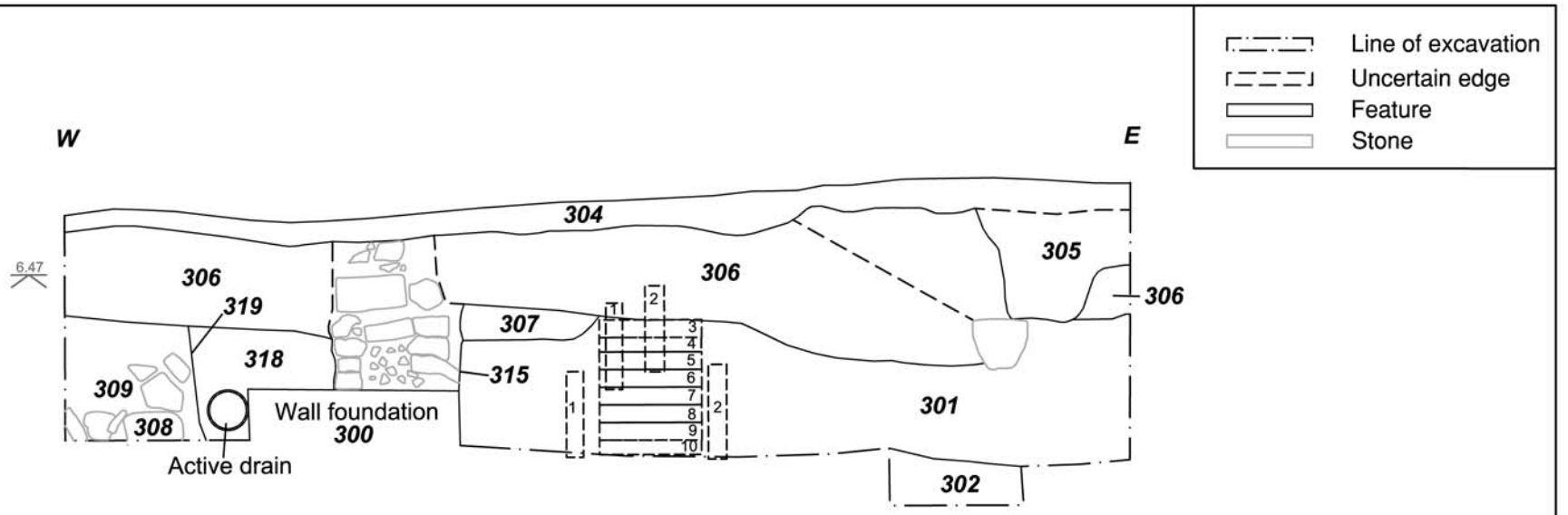
Figure 20: Plan of Trench 3



North-west-facing section 3 through fluvial deposits ***102*** and ***103***, Trench 3

South-west-facing section1 of Trench 3

Figure 21: Sections of Trench 3



North-west-facing section 3 through fluvial deposits ***102*** and ***103***, Trench 3

South-west-facing section1 of Trench 3

Figure 21: Sections of Trench 3

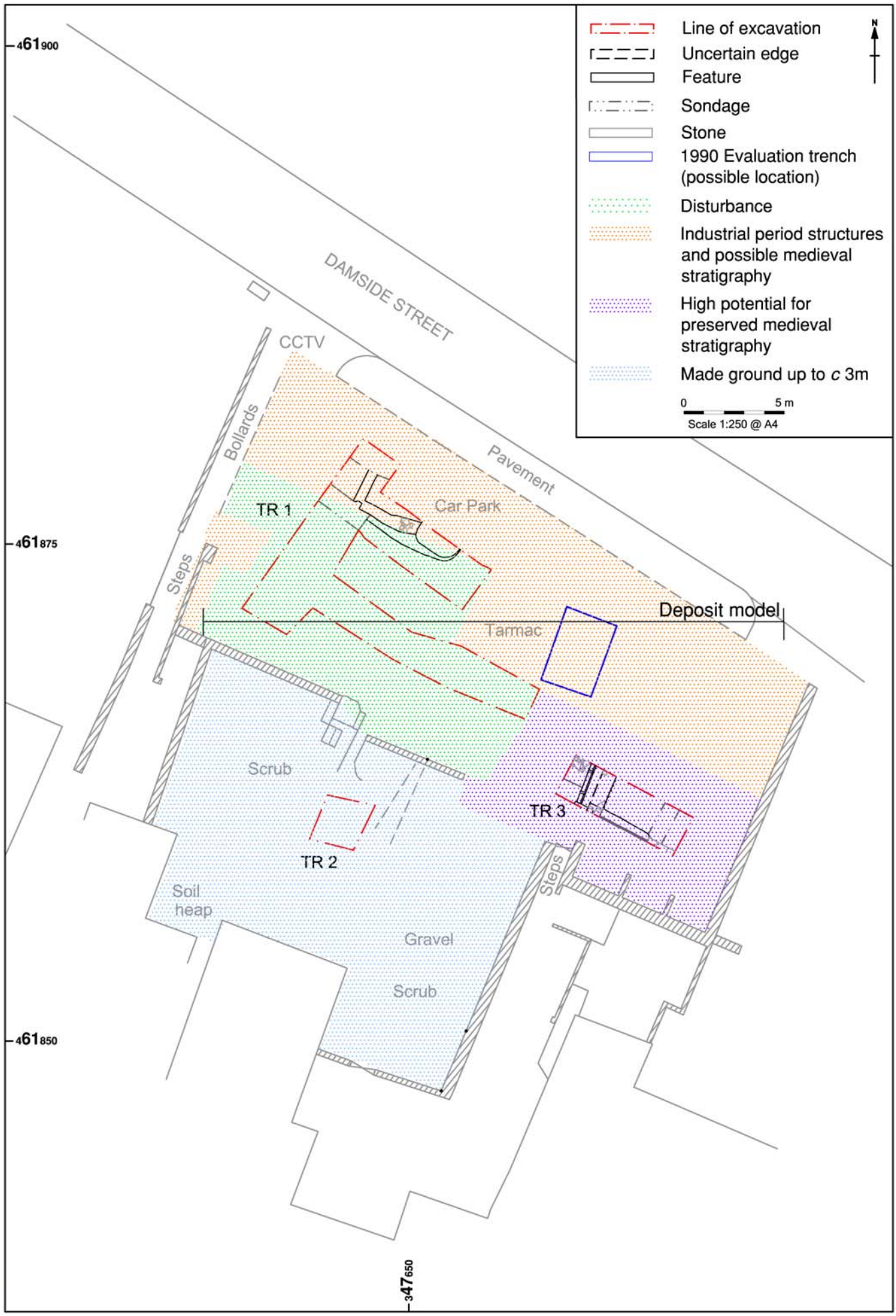


Figure 22: Horizontal deposit model

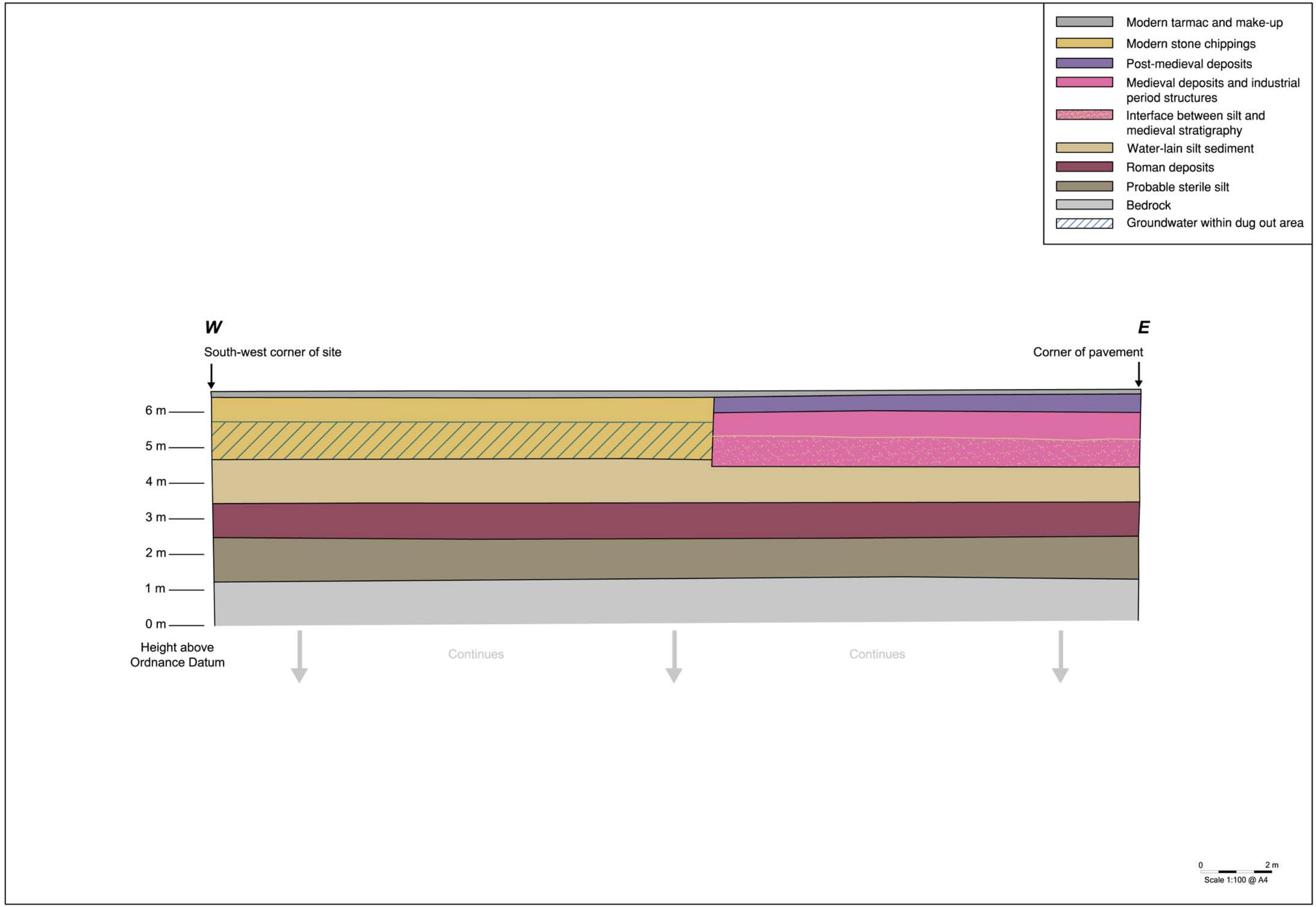


Figure 23: Vertical deposit model

PLATES

Plate 1: The embanked area to the rear of Church Street

Plate 2: Rear of Church Street showing car park area and flat area adjoining Damside Street

Plate 3: Church Street looking towards St Mary's Church in the background

Plate 4: Test Pit 1 showing wall, ***101***

Plate 5: Test Pit 2

Plate 6: Test Pit 3 showing concrete surface ***302*** (0.3m scale)

Plate 7: Trench 1, south-west-facing Section 4, looking north-east

Plate 8: Trench 1, foundation ***103***, looking east

Plate 9: South-east-facing section of Trench 2, looking north-west

Plate 10: Trench 3, looking south-east

Plate 11: Trench 3, north-east-facing Section 2 through alluvial deposits ***102*** and ***103***, looking south-west

Plate 12: South-west-facing Section 1 of Trench 3, looking north-east

APPENDIX 1: PROJECT DESIGN

PROPOSED DEVELOPMENT AT DAMSIDE STREET, LANCASTER, LANCASHIRE

ARCHAEOLOGICAL DESK-BASED ASSESSMENT, EVALUATION AND WATCHING BRIEF: PROJECT DESIGN (V3)

Oxford Archaeology North

February 2008

Northern Developments Ltd

Planning Reference: 04/01248/FUL
Grid Reference: SD 47668 61870
OA North Reference: L9941

1. INTRODUCTION

1.2 PROJECT BACKGROUND

1.2.1 In 2004, Northern Developments (hereafter the 'client') submitted a planning application (reference 04/01248/FUL) for the development of a plot of land on Dye House Lane, to the rear of 54-56 Church Street, Lancaster, Lancashire (NGR SD 47668 61870). Although the foundation plan has yet to be established, the development will be multi-storied and will consist of four retail units and 17 habitable apartments. The site lies within an area of archaeological potential and, accordingly, Lancashire County Archaeological Service (LCAS) requested that a programme of provisional archaeological investigation, comprising a desk-based assessment and a trial trench evaluation, should be undertaken of the site prior to development taking place. Furthermore, the client intends to undertake a programme of geotechnical investigation on the site, including boreholing and excavation of test pits. Through consultation with LCAS, it was established that these intrusive works should be archaeologically monitored in order to better understand the archaeological potential of the site and to inform any strategy of archaeological mitigation in the future.

1.2.2 Following submission of costs, Oxford Archaeology North (OA North) were commissioned by Northern Developments to undertake the programme of archaeological works. The following document represents a project design for a desk-based assessment, trial trench evaluation, and for a watching brief of the geotechnical boreholing and test-pitting. The desk-based assessment will commence immediately, but the schedule for the intrusive works will be established in consultation with the client. submit a design for a programme of archaeological investigation to be undertaken in association with geotechnical works. The site lies opposite Lancaster bus station and is divided into a flat area adjoining Damside Street and currently used as a carpark, and a smaller, embanked area to the rear of the Church Street properties, which is presently covered by scrub. The present document represents an amended project design for the programme of evaluation in the light of the completed geotechnical boreholing and desk-based assessment, although for the sake of completeness, the methodology for these elements is retained.

1.2 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

1.2.1 The development site lies towards the centre of Lancaster, just south of the River Lune. The eastern part of the site has been previously investigated in 1990 by OA North under their former guise of Lancaster University Archaeology Unit (LUAU). This identified a deep sequence of deposits, many containing waterlogged organic material, surviving within the proposed development site. Although the uppermost deposit had clearly been disturbed, and yielded modern finds, it was cut by a ditch which contained medieval pottery. It is, therefore, possible that medieval remains lay at the level of the street frontage, whilst any post-medieval remains had been largely truncated. Indisputable medieval deposits lay between 0.3m and *c* 1.2m below ground level and comprised two distinct horizons (the lower containing preserved plant remains), each with associated negative features, perhaps indicative of two phases of activity. Such features included a series of boundary ditches, which had been re-cut over the history of the site, and a succession of pits. As such, these features are typical of medieval backyards, and are likely to relate to burgages running off of the Church street frontage.

1.2.2 At a depth of 1.2m below ground level, there was a marked change in the stratigraphy, which comprised a succession of naturally-deposited layers devoid of archaeological features or finds. At several points within the stratigraphic sequence, these sterile layers were interleaved with more pebbly deposits containing sherds of Roman pottery. The base of this largely natural sequence, at 2.6-3.1m below ground level, was marked by the presence of part of an apparent structure, formed of courses of roughly-worked and natural stones approximately 0.3m across and built on a shallow layer of silty sand. The backfill for the associated construction cut contained fragments of animal bone, burnt bone, Roman glass, and early second-century Roman pottery. A number of irregularly-spaced, small, sub-rectangular organic stains were identified around the external edge of this cut and may

represent the remains of stakes around the structure. Removal of the structure revealed a further deposit, 0.2m thick and containing animal bone, before the natural boulder clay (0.6m thick) and then the red sandstone bedrock were reached at respective depths of 4.25m and 4.75m below ground level.

1.2.3 The monitored boreholes and the results of the desk-based assessment suggested that the north-western part of the development site is likely to be occupied by cellars, relating to several generations of post-medieval buildings that occupied the site from the eighteenth century onwards. The realignment of Damside Street in the early twentieth century has meant that the eastern part of the site, even at the street frontage, coincides with the backyards of these houses, whilst the proportion of cellared land would increase in a westerly direction. Outside of the cellars there is potential for well preserved stratigraphy relating to Roman and medieval activity, together with possible remains of post-medieval outbuildings. Post-Roman remains are likely to have been highly truncated within the area of the cellars, but it seems likely that the Roman archaeology is sufficiently deep to remain *in situ*, undisturbed.

1.3 OXFORD ARCHAEOLOGY NORTH

1.3.1 Oxford Archaeology North has considerable experience of sites of all periods, having undertaken a great number of small and large scale projects throughout Northern England during the past 25 years. Evaluations, assessments, watching briefs and excavations have taken place within the planning process, to fulfil the requirements of clients and planning authorities, to very rigorous timetables.

1.3.2 OA North has the professional expertise and resources to undertake the project detailed below to a high level of quality and efficiency. OA North is an Institute of Field Archaeologists (IFA) registered organisation, registration number 17, and all its members of staff operate subject to the IFA Code of Conduct.

2. OBJECTIVES

2.1 The following programme has been designed as an appropriate means of furthering an understanding of the archaeological resource on the site prior to the submission of a request for planning permission. It will allow the identification of the potential for surviving archaeological deposits in and immediately around the development area, to characterise the nature, state of preservation, date and, within the scope of vertical development impact, the depth of archaeological deposits; furthermore, it will allow the investigation and recording of any exposed deposits encountered during groundworks on site at a depth that may not necessarily be accessible through conventional trial trenching. The required stages to achieve these ends are as follows:

2.2 ***Desk-based assessment and site visit:*** to provide a desk-based assessment of the site to identify the archaeological potential prior to any development (in accordance with the IFA standards (1999)), and to visit the site to establish the presence of any areas of surface detail of archaeological interest, or any immediately visible constraints to the undertaking of intrusive works.

2.3 ***Watching brief of geotechnical works:*** to carry out a watching brief during the proposed scheme of geotechnical test-pitting and boreholing, in order to determine and record the location, quality, extent and importance of any archaeological remains on the site; to add to an understanding of the history and development of the site and its surroundings; to provide information to further inform planning decisions within the area. During the watching brief, observations will be made regarding the presence of any features that may either form the focus of, or hinder, further archaeological investigation.

2.4 ***Archaeological evaluation:*** to undertake a programme of archaeological evaluation investigating a minimum 5% area of the site, concentrating on areas identified by the desk-based assessment as having high potential for the preservation of archaeological remains and which lie within the area of development impact.

2.5 ***Report and Archive:*** a written report will assess the significance of the data generated by this programme within a local and regional context. It will present the results of the desk-based assessment and, where appropriate, those of the watching brief. It would make an assessment of the archaeological potential of the area, and any recommendations for further work.

3. METHOD STATEMENT

3.1 DESK-BASED ASSESSMENT

3.1.1 ***Introduction:*** a desk-based assessment is usually undertaken as the first stage of a programme of archaeological investigation. Prior to development of the site, further intrusive investigation may be required. It is not intended to reduce the requirement for evaluation, excavation or preservation of known or presumed archaeological deposits, but it will provide an appraisal of archaeological constraints and a guide to any requirement for further archaeological work.

3.1.2 The following will be undertaken as appropriate, depending on the availability of source material. The level of such work will be dictated by the time scale of the project.

3.1.3 ***Documentary and Cartographic Material:*** this work will include consultation of the Lancashire Sites and Monuments Record/Historic Environment Record (SMR/HER) as well as the County Records Office (CRO), both in Preston. Data from these sources will inform a review of all known and available resources of information relating to a study area comprising a 200m radius centred on the site of the proposed development. The aim of this is to give consideration not only to the application site, but also its setting in terms of historical and archaeological contexts. These include:

- published and unpublished documentary sources
- data held in local and national archaeological databases
- printed and manuscript maps
- place and field-name evidence
- other photographic/illustrative evidence
- local museum catalogues and artefactual evidence
- engineering/borehole data where applicable
- geological/soil surveys

3.1.4 ***Lancashire SMR/HER, Preston:*** the SMR/HER is a database of known archaeological sites within the County. It also holds an extensive library of published materials and aerial photographs for consultation.

3.1.5 ***Lancashire County Record Office (CRO), Preston:*** the CRO in Preston holds the main source of primary documentation; both maps and documents for the study area and its immediate surroundings.

3.1.6 ***Map regression analysis:*** a cartographic analysis will be undertaken as it has the potential to inform the post-medieval occupation and land-use of the area and its development through to its modern-day or most recent use. This provides one method of highlighting areas of

potential archaeological interest. Particular emphasis will be on the early cartographic evidence and will include estate maps, tithe maps, and Ordnance Survey maps, through to present mapping, where possible. Also, although some inaccuracies must be allowed for, computerised superimposition of the current structures and the proposed development areas will greatly improve the understanding of the likely impact of any development, and can greatly influence the necessity for and placement of any evaluation trenches in any particular area.

3.1.7 ***Geological/Soil Surveys:*** a rapid desk-based compilation of geological (both solid and drift), pedological, topographical and palaeoenvironmental information will be undertaken. It will be based on published geological mapping and any local geological surveys in the possession of the County Council or the client.

3.1.8 ***Other Sources:*** resources permitting, public libraries and OA North's own library will also be consulted for secondary sources, as will any relevant material in readily available private collections.

3.2 SITE VISIT

3.2.1 Prior to site works commencing the site will be examined in order to relate the existing topography and land use to research findings, and assess evidence not available through documentary sources. It will also provide an understanding for areas of impact by the proposed redevelopment.

3.2.2 The survey will note present land use, the condition and visibility of features identified in the documentary research and any features of potential archaeological interest, any areas of potentially significant disturbance, and hazards and constraints to undertaking further archaeological work on site.

3.3 WATCHING BRIEF

3.3.1 A programme of field observation will monitor each of the geotechnical test pits and boreholes and will accurately record the location, extent, and character of any surviving archaeological features and/or deposits within the whole area of the proposed ground disturbance. This work will comprise observation during the excavation for these works, the systematic examination of any subsoil horizons exposed during the course of the groundworks, and the accurate recording of all archaeological features and horizons, and any artefacts, identified during observation. Where loose material is extracted during the boreholing, it will be necessary for the archaeologist to examine and handle this material and to compare notes with the geotechnicians on site, since the differing objectives of the two specialists dictate that the same material can be differently interpreted. Where closed cores are extracted for laboratory examination, it would be necessary for the monitoring archaeologist to visit the laboratory so that they can examine the material and, if appropriate, take samples.

3.3.2 Putative archaeological features and/or deposits identified during groundworks, together with the immediate vicinity of any such features, will be cleaned by hand, using either hoes, shovel scraping, and/or trowels depending on the subsoil conditions and, where appropriate, sections will be studied and drawn. Any such features will be sample excavated (ie. selected pits and postholes will normally only be half-sectioned, linear features will be subject to no more than a 10% sample, and extensive layers will, where possible, be sampled by partial rather than complete removal).

3.3.3 During this phase of work, recording will comprise a full description and preliminary classification of features or materials revealed, and their accurate location (either on plan and/or section, and as grid co-ordinates where appropriate). Features will be planned

accurately at appropriate scales and annotated on to a **large-scale plan provided by the Client**. A photographic record will be undertaken simultaneously.

3.3.4 A plan will be produced of the areas of groundworks showing the location and extent of the ground disturbance and one or more dimensioned sections will be produced.

3.3.5 ***Environmental Sampling:*** environmental samples (bulk samples of 30 litres volume, to be sub-sampled at a later stage) will be collected from stratified undisturbed deposits and will particularly target negative features (gullies, pits and ditches). Any assessment of the environmental potential of the site would be undertaken through the examination of suitable deposits by the in-house palaeoecological specialist, who will examine the potential for further analysis.

3.3.6 The assessment would include soil pollen analysis and the retrieval of charred plant macrofossils and land molluscs from former dry-land palaeosols and cut features. In addition, the samples would be assessed for plant macrofossils, insect, molluscs and pollen from waterlogged deposits.

3.3.7 The costs for the palaeoecological assessment are defined as a contingency and will only be called into effect if good deposits are identified and will be subject to the agreement of LCAS and the client.

3.3.8 ***Faunal remains:*** if there is found to be the potential for discovery of bones of fish and small mammals, a sieving programme will be carried out. These will be assessed as appropriate by OA North's specialist in faunal remains, and subject to the results, there may be a requirement for more detailed analysis. A contingency has been included for the assessment of such faunal remains for analysis.

3.3.9 ***Human Remains****:* any human remains uncovered will be left *in situ*, covered and protected. No further investigation will continue beyond that required to establish the date and character of the burial. LCAS and the local Coroner will be informed immediately. If removal is essential the exhumation of any funerary remains will require the provision of a Home Office license, under section 25 of the Burial Act of 1857. An application will be made by OA North for the study area on discovery of any such remains and the removal will be carried out with due care and sensitivity under the environmental health regulations. The cost of removal or treatment will be agreed with the client and costed as a variation.

3.3.10 ***Treatment of finds:*** all finds will be exposed, lifted, cleaned, conserved, marked, bagged and boxed in accordance with the United Kingdom Institute for Conservation (UKIC) *First Aid For Finds*, 1998 (new edition) and the recipient museum's guidelines.

3.3.11 All identified finds and artefacts will be retained, although certain classes of building material can sometimes be discarded after recording if an appropriate sample is retained on advice from the recipient museum's archive curator.

3.3.12 ***Treasure:*** any gold and silver artefacts recovered during the course of the excavation will be removed to a safe place and reported to the local Coroner according to the procedures relating to the Treasure Act, 1996. Where removal cannot take place on the same working day as discovery, suitable security will be employed to protect the finds from theft.

3.4 EVALUATION

3.4.1 The programme of trial trenching will establish the presence or absence of any archaeological deposits and, if established, will then test their date, nature, depth and quality of preservation. In this way, it will adequately sample the threatened available area.

3.4.2 ***Trench configuration:*** the evaluation will investigate 5% of the 630m^2 development area through the excavation of at three trial trenches, placed at a suitable distance from existing buildings (at least 2m). The trench locations are shown on the accompanying illustrations.

Trench Number	Basal Dimensions	Location within site
1	8m NNE/SSW by 2m	North-west
2	2m NNE/SSW by 2m	Central southern
3	6m WNW/ESE by 2m	South-east

The surface dimensions of these trenches will in part be dictated by the required depth and by other constraints. Trench 1 is placed in order to investigate the extent of cellaring in this northern area; Trench 2 is placed to establish the presence of any archaeological remains preserved within or beneath the embankment deposits, which could include medieval, post-medieval, and potentially, Roman remains (which may lie at a higher elevation on the raised ground at the southern end of the site) preserved *in situ*. Trench 3 is placed within the south-eastern part of the site in an area that lies within the proposed building, but which would appear from the evidence of the desk-based assessment, less likely to have been cellared in the past. It is possible that LCAS may request limited expansion of the trenches in order to investigate the extent or character of any present archaeological and so more accurately inform decisions for appropriate mitigation; such an eventuality would be used under the direct instruction of LCAS and the subject of a costing variation in agreement with the client. The trenches will initially be dug to a maximum, safe, depth of 1.2m and any requirement for deeper excavation may require recosting. Where possible, any deeper excavation will be accommodated by stepping-out the sides of the trench.

3.4.3 ***Methodology:*** where tarmac surfaces remain on site, these will be removed by mechanical excavator, either using a toothed bucket or, where this is impractical, a pecker; as it is assumed that there is no requirement for the reinstatement of the surfaces, it is not proposed that the trench edges be cut with a Stihl saw or similar cutting device. Following removal of the surface, any modern overburden, demolition debris and cellar backfills will be removed in 0.2m thick spits by machine (fitted with a toothless ditching bucket) under archaeological supervision to the surface of the first significant archaeological deposit or to the level of the natural subsoil. Where safe to do so, this deposit will be cleaned by hand, using either hoes, shovel scraping, and/or trowels depending on the subsoil conditions, and inspected for archaeological features. Trench 1 is expected to encounter post-medieval cellars. In this case, it would be safer to expand the trench so that the entire cellar can be cleaned-out. The cellar will only be entered if there are points of access and egress, where the sides can be demonstrated to be stable, and where the width of the cellar is at least twice that of its height. If any of these criteria cannot be met, then the cellar will not be entered and will be recorded from the outside. Where possible, the mechanical excavator will be utilised to lift a small (1m by 1m) area of flooring within the cellar, and to then cut a sondage through the underlying deposits under archaeological supervision. The sondage will test the presence of alluvial/transgressive deposits beneath the cellar. Where it is not safe to enter the cellar (particularly if a pecker was required to break out a concrete floor), these deposits will be recorded on the basis of surface observation and the characteristics of the spoil. Within Trench 2, a sample of features of archaeological interest must be investigated and recorded unless otherwise agreed by LCAS, although it is not the intention at this stage to completely remove archaeological features that would be better-understood through more extensive investigation. However, it will be necessary to investigate at least a proportion of Trench 2 either to natural deposits (rather unlikely), or to the maximum safe limit of excavation, in order to provide as much information for the planners as possible. The trenches will not initially be excavated deeper than 1.2m to accommodate health and safety constraints; any requirements to excavate below this depth will involve stepping-out of the sides and may require some variation to the costing in agreement with the client. In the

3.4.4 All trenches will be excavated in a stratigraphical manner, whether by machine or by hand. Trenches will be located by use of GPS equipment, which is accurate to +/- 0.25m, or Total Station. Altitude information will be established with respect to Ordnance Survey Datum.

3.4.5 Any investigation of intact archaeological deposits will be exclusively manual. Where such features are present, selected pits and postholes will normally only be half-sectioned, linear features will be subject to no more than a 10% sample, and extensive layers will, where possible, be sampled by partial excavation rather than complete removal. It is hoped that in terms of the vertical stratigraphy, maximum information retrieval will be achieved through the examination of sections of cut features. All excavation, whether by machine or by hand, will be undertaken with a view to avoiding damage to any archaeological features, which appear worthy of preservation *in situ*.

3.4.6 Recording: all information identified in the course of the site works will be recorded stratigraphically, using a system, adapted from that used by Centre for Archaeology Service of English Heritage, with sufficient pictorial record (plans, sections, colour slides and monochrome contacts) to identify and illustrate individual features. Primary records will be available for inspection at all times.

3.4.7 Results of all field investigations will be recorded on *pro-forma* context sheets. The site archive will include both a photographic record and accurate large scale plans and sections at an appropriate scale (1:50, 1:20 and 1:10). All artefacts and ecofacts will be recorded using the same system, and will be handled and stored according to standard practice (following current Institute of Field Archaeologists guidelines) in order to minimise deterioration.

3.4.8 ***Palaeoenvironmental Sampling, Faunal Remains, Human Remains, Finds Treatment and Treasure:*** will be undertaken in line with *Sections 3.3.5 - 3.3.12, above*.

3.4.9 ***Reinstatement:*** following the completion of the excavation, the trenches will be backfilled with removed arisings and will be roughly graded with the machine to minimise any significant variations in the resultant ground surface. Should there be a requirement by the client other than that stated this will involve recosting for an agreed variation.

3.4.10 ***Fencing/hoarding requirements:*** it is assumed that the client will advise on the arrangements/requirements for the site to be protected from public access. Unless the site is completely secure from public access, whether legal or otherwise, health and safety dictates that any excavations must be fenced-off. If not provided by the client, Heras fencing or similar may be required, and has been costed as a contingency.

3.5 REPORT AND ARCHIVE

3.5.1 ***Report:*** one bound and one unbound copy of the final report will be submitted to the client within two months of completion of fieldwork. Should the client require a draft report, or a separate copy of the desk-based assessment report, bound and unbound copies of such reports can be provided on request, within three weeks of the completion of each stage of the programme of work. One copy of the report will be submitted to the Lancashire SMR/HER in pdf format . The report will include:

- a site location plan related to the national grid
- a front cover to include the planning application number and the NGR
- the dates on which each phase of the programme of work was undertaken
- a concise, non-technical summary of the results
- an explanation to any agreed variations to the brief, including any justification for any analyses not undertaken
- a description of the methodology employed, work undertaken and results obtained

- an interpretation of the desk-based assessment results and their significance, using the 'Secretary of State's criteria for scheduling ancient monuments' included as Annex 4 of PPG 16 (DoE 1990)

- plans and sections at an appropriate scale showing the location and position of deposits and finds located during the watching brief, as well as sites identified during the desk-based assessment

- monochrome and colour photographs as appropriate

- a list, and dates, for any finds recovered along with a description and interpretation of the deposits identified

- a description of any environmental or other specialist work undertaken and the results obtained

- a summary of the impact of the development on any archaeological remains and, where possible, a model of potential archaeological deposits within as-yet unexplored areas of the development site

- a copy of this project design, and indications of any agreed departure from that design

- the report will also include a complete bibliography of sources from which data has been derived and a summary of the achive.

3.5.2 This report will be in the same basic format as this project design; a copy of the report can be provided in .pdf format on CD, if required. Recommendations concerning any subsequent mitigation strategies and/or further archaeological work following the results of the field evaluation will be provided in a separate communication.

3.5.3 ***Confidentiality:*** all internal reports to the client are designed as documents for the specific use of the client, for the particular purpose as defined in the project brief and project design, and should be treated as such. They are not suitable for publication as academic documents or otherwise without amendment or revision.

3.5.4 ***Archive:*** the results of all archaeological work carried out will form the basis for a full archive to professional standards, in accordance with current English Heritage guidelines (*Management of Archaeological Projects*, 2nd edition, 1991). The project archive will include summary processing and analysis of all features, finds, or palaeoenvironmental data recovered during fieldwork, which will be catalogued by context.

3.5.5 The deposition of a properly ordered and indexed project archive in an appropriate repository is essential and archive will be provided in the English Heritage Centre for Archaeology format and a synthesis will be submitted to the Lancashire SMR (the index to the archive and a copy of the report). OA North practice is to deposit the original record archive of projects with the appropriate Record Office.

3.5.6 All artefacts will be processed to MAP2 standards and will be assessed by our in-house finds specialists. The deposition and disposal of any artefacts recovered in the evaluation will be agreed with the legal owner and an appropriate recipient museum. Discussion regarding the museum's requirement for the transfer and storage of finds will be conducted prior to the commencement of the project, and LCAS will be notified of the arrangements made.

4. HEALTH AND SAFETY

4.1 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). A written risk assessment will be undertaken in advance of project commencement and copies will be made available on request to all interested parties.

4.2 Full regard will, of course, be given to all constraints (services etc) during the fieldwork as well as to all Health and Safety considerations. **Information regarding services within the study area have been received and will be used during the course of the evaluation.**

5. PROJECT MONITORING

5.1 Whilst the work is undertaken for the client, LCAS will be kept fully informed of the work and its results, and will be notified a week in advance of the commencement of the fieldwork. After its submission to LCAS any proposed changes to the project design will be agreed with LCAS in consultation with the client. Fieldwork will be monitored by the LCAS Assistant Archaeologist on behalf of the developer.

6. WORK TIMETABLE

6.1 DESK-BASED ASSESSMENT AND WALKOVER SURVEY

6.1.1 Approximately five days will be required for this stage of the programme.

6.2 WATCHING BRIEF

6.2.1 The duration of the watching brief will be dependent upon that of any geotechnical ground disturbing activities carried out on site.

6.3 ARCHAEOLOGICAL EVALUATION

6.3.1 Provisionally it estimated that the trial trench evaluation down to a depth of 1.2m will take about five days to complete.

6.4 REPORT

6.4.1 Copies of the report, as outlined in *Section 3.4.1*, will be issued to the client and other relevant parties within two months of the completion of fieldwork, unless otherwise agreed prior to the commencement of fieldwork.

6.5 ARCHIVE

6.5.1 The archive will be deposited within six months following submission of the report, unless otherwise instructed.

7. STAFFING

7.1 The project will be under the direct management of **Stephen Rowland** (OA North Project Manager) to whom all correspondence should be addressed. The finds will be processed, studied and reported upon, either by, or under the guidance, of **Chris Howard-Davies** (OA North Finds Manager) who has extensive experience of finds from all periods, but particularly prehistoric and Roman material. All environmental sampling and assessment will be undertaken under the auspices of **Elizabeth Huckerby** (OA North Environmental Manager) who has unparalleled experience of palaeoenvironmental work in the North West and who heads an excellent team of environmental archaeologists. Any faunal remains will be studied by **Andrew Bates** (OA North Project Officer), who has a large amount of experience in

undertaking the assessment and analysis of faunal assemblages of all sizes from a wide range of periods and locations. The desk-based assessment will be undertaken by Vicky Bullock (OA North Supervisor), the palaeonevironmental watching brief by Dr Denise Druce (OA North Project Officer) and the archaeological watching brief by Steve Clarke (OA North Assistant Supervisor). Present scheduling precludes the identification at this juncture of the team for the evaluation, but it will be undertaken by an OA North Supervisor or Project Officer experienced in urban archaeology accompanied by a suitable team of archaeologists.

8. INSURANCE

8.1 OA North has a professional indemnity cover to a value of £2,000,000; proof of which can be supplied as required.

9. REFERENCES

English Heritage, 1991 *Management of Archaeological Projects*, second edition, London

SCAUM (Standing Conference of Archaeological Unit Managers), 1997 *Health and Safety Manual*, Poole

UKIC, 1990 *Guidelines for the Preparation of Archives for Long-Term Storage*, London

UKIC, 1998 *First Aid for Finds*, London

APPENDIX 2: CORE LOGS

Core No	Sample Type	Depth 1 m	Depth 2 m	Description
BH1	Bulk	0.50		Sand & gravel with rubble and brick (Made Ground)
	Bulk	1.20		Clay & gravel with rubble (Made Ground)
	Bulk	2.00		Very dark grey silty clay with gravel (Made Ground & Natural?)
	Core	3.50	4.00	Dark grey clay silt (Natural)
	Bulk	4.00	4.25	Clay sand silt
	Bulk	4.80		Dark grey slightly sandy clay
	Bulk	5.00		Red mudstone with sandstone inclusions
BH2	Bulk	0.50		Sand & gravel with rubble and brick (Made Ground)
	Bulk	1.70	2.00	Hit obstruction-possible timber. Matrix surround consisted of very dark clay with gravel and angular course stones (Made Ground & Natural?)
	Bulk	2.00	2.25	Very dark grey silt clay with organic material. Contained gravel and smll brick fragments (Made Ground & Natural?)
	Bulk	2.50		Very dark grey clay silt with small angular course stones (Natural)
	Bulk	3.00	3.50	Very dark grey clay silt with occ small rounded pebbles
	Bulk	3.50	3.95	Very dark grey sandy silt with lenses of degraded yellow sandstone
	Bulk	4.00	4.50	Very dark grey clay silt with occ small rounded pebbles
	Bulk	5.00		Course sand and gravel with rounded pebbles onto course sand & gravel of reddish sandstone (Millstone Grit?)
BH3	Bulk	0.50		Sand silt & gravel with rubble (Made Ground)
	Bulk	1.20		Clay sand silt & gravel with rubble and pieces of white tile (Made Ground)
	Bulk	2.00	2.25	Dark brown sandy clay silt with gravel of course stones (Made Ground & Natural?)
	Bulk	3.00		Dark grey/brown sandy silt clay with gravel of course stones and occ rounded pebbles (Natural & Made Ground?)
	Bulk	3.50		Very dark grey slightly sandy clay silt with gravel of course stones (Natural?)
	Core	4.00	4.50	Very dark grey sandy silt clay with gravel of course stones & pockets of degraded yellow sandstone & red mudstone
	Bulk	4.70		Red sandy silt clay with course angular gravel & large stones
	Bulk	5.00		Stiff red sand with inclusions of degraded sandstone

APPENDIX 3: CONTEXT INDEX

Context No	Test Pit/Trial Trench No	Depth (m)	Category	Description
10	TP1	0.05m	Layer	Deposit. Blackish-brown friable sandy clay
11	TP1	0.75	Masonry	Sandstone and cement wall
12	TP1	-	Layer	Sandstone Flags
13	TP1	0.75m	Layer	Redeposited topsoil and building rubble
20	TP2	0.1m	Layer	Topsoil. Blackish-brown friable sandy clay
21	TP2	0.05m	Layer	Orange/brown sandy gravel
22	TP2	0.9m+	Layer	Redeposited topsoil and building rubble
30	TP3	0.05m	Layer	Topsoil. Blackish-brown friable sandy clay
31	TP3		Layer	Redeposited topsoil and building rubble
32	TP3	-	Layer	Concrete surface
40	TP4	0.05m	Layer	Topsoil. Blackish-brown friable sandy clay
41		1.1m	Layer	Redeposited topsoil and building rubble
50	TP3	0.05m	Layer	Topsoil. Blackish-brown friable sandy clay
51	TP5	1.2m	Layer	Redeposited topsoil and building rubble, large pieces of masonry
100	Trench 1	0.9m+	Layer	Overburden. Comprised 60mm of tarmac, 60mm of stone chippings used for levelling, 0.16m of very dark grey coarse sand clay, 1.34m+ of stone chippings containing a layer of terram. Twentieth-century deposits used to in-fill cellar and create level area upon which tarmac of surface has been laid.
101	Trench 1	Unknown	Layer	Mid-orange/brown sandy clay, with small sub-rounded stone inclusions. Located to the west and south of wall ***103***. Potentially *in-situ* post-medieval levelling put down during the construction of the post-medieval buildings on this plot of land.
102	Trench 1	Unknown	Fill	Mid brown grey sandy clay. Located to west of a north-east/south-west oriented section of wall ***103***, containing plastic. Twentieth-century backfill of cellar.
103	Trench 1	Unknown	Masonry	Cellar wall. Orientated north-east/south-west for 2.05m and north-west/south-east for 3.8m within the excavated trench. It measures 0.54m wide. Its fabric comprised roughly squared, coursed, sandstone blocks, a maximum of 0.32m by 0.18m by 0.17m, with a rubble core of sub-angular stone a maximum of 0.13m by 0.08m by 0.05m in size. It was bonded with a consolidated light grey mortar.
104	Trench 1	Unknown	Cut	Construction cut for wall ***103***.
105	Trench 1	Unknown	Layer	Modern/post-medieval disturbance. A very dark grey coarse sand silty clay. Unclear if this part of the post-medieval levelling of the area, or twentieth-century disturbance. Activity clearly disturbs or truncates wall ***103***. Not excavated due to proximity of water table.
106	Trench 1	Unknown	Fill	Post-medieval demolition debris used to backfill cellar. Comprised a very dark grey coarse sandy silty clay, with *c* 50% sub-rectangular stone inclusions a maximum of 0.28m by 0.23m by 0.17m in size.

Context No	Test Pit/Trial Trench No	Depth (m)	Category	Description
107	Trench 1	1.08m	Fill	Post-medieval demolition debris used to backfill cellar. Comprised a dark grey coarse sand, with *c* 90% roughly squared stone inclusions a maximum of 0.48m by 0.35m by 0.22m in size. Potentially same deposit as ***106***.
108	Trench 2	Unknown	Layer/Fill	A dark grey silty clay. Excavated from below the water table, at a depth of 1.79m. Possibly represents alluvial deposits, but quite possibly sediment backfilled into the cellar.
200	Trench 2	0.6m	Layer	Modern soil horizon. A very dark grey coarse sand silty clay, containing less than 10% sub-angular stone inclusions a maximum of 0.3m by 0.28m by 0.13m in size.
201	Trench 2	0.5m	Layer	Levelling deposit. A mid-orange/brown medium sandy clay.
202	Trench 2	0.25m	Layer	Levelling deposit. A very dark grey coarse sand silty clay, containing *c* 50% sub-angular stone inclusions a maximum of 0.23m by 0.18m by 0.16m in size.
203	Trench 2	0.85m	Layer	Levelling deposit. A mid-orange/brown medium sand silty clay.
204	Trench 2	0.8m	Layer	Levelling deposit. A very dark grey coarse sandy silty clay, containing 10-20% sub-angular stone inclusions a maximum of 0.15m by 0.10m by 0.08m in size.
205	Trench 2	Unknown	Layer	Alluvial deposit. A mid-orange/brown fine sand silt. Not excavated.
300	Trench 3	0.45m	Masonry	Sandstone foundation. Oriented in a north-east/south-west direction across the western half of the trench. Its fabric comprised roughly-squared sandstone blocks a maximum of 0.5m by 0.25m by 0.15m, with a core of sub-angular stone a maximum of 0.2m by 0.2m by 0.11m in size. In total, it measured 0.7m wide, and was laid upon a bed of consolidated dark grey concrete or mortar
301	Trench 3	0.83m	Layer	Buried soil horizon. Comprised a dark brown grey fine sand silty clay, containing less than 1% sub-rounded and sub-angular stone inclusions a maximum of 80mm by 70mm by 40mm in size. A very slight difference was noted whilst taking soil samples between the upper and lower part of the horizon, marked in Section 2 (Fig 19) as a dashed line. This colour difference is very marginal, best described as the upper part being a dark grey/brown, and the lower part a dark brown/grey, in colour.
302	Trench 3	0.3m+	Layer	Alluvial deposit. A mid orange/grey friable silt.
303	Trench 3	0.22m+	Layer	Alluvial deposit. A dark grey friable silt. Less than 1% sub-rounded stone inclusions a maximum of 0.15m by 0.1m by 0.08m in size.
304	Trench 3	0.18m	Layer	Tarmac.
305	Trench 3	0.78m	Concrete	Reinforced concrete located in the north-east corner of the trench, a minimum of 0.65m wide. Potentially a small stanchion.

Context No	Test Pit/Trial Trench No	Depth (m)	Category	Description
306	Trench 3	0.48m	Layer	Levelling deposit. A mid-orange/brown sandy clay. It contained over 70% sub-angular stone and fragmented red brick inclusions.
307	Trench 3	0.22m	Layer	Levelling deposit. A light grey, firm, clay.
308	Trench 3	0.16	Fill/ masonry	Sub-angular stone a maximum of 0.3m by 0.2m by 0.16m in size. In total, these stone formed a deposit measuring a minimum 0.75m in length and 0.5m wide, continuing beyond the limit of excavation. The context comprised a deposit of stone located at the base of buried soil horizon ***301***, overlying fluvial deposit ***302***. Due to the nature of soil-horizons to destroy archaeological stratigraphy, making deposits homogenous, it could not be resolved whether these stones lay within a cut or not. No cut however was visible within the trench sections.
309	Trench 3	0.9m	Layer	Same as ***301***. Context number allocated to locate finds from soil horizon ***301*** that were recovered above stone ***308***.
310	Trench 3	-	-	Not used
311	Trench 3	-	-	Not used
312	Trench 3	-	-	Not used
313	Trench 3	-	-	Not used
314	Trench 3	0.8m	Cut	Construction cut for wall ***300***. A linear cut with straight sides, measuring 0.74m wide.
315	Trench 3	0.5m	Fill	Backfill between construction cut ***314*** and foundation ***300***. Comprised dark grey/brown silty sand.
316	Trench 3	1.04m	Masonry	A north-east/south-west orientated wall, its fabric comprised roughly-squared, coursed, sandstone a maximum of 0.31m by 0.2m by 0.12m in size. The stone was bonded by a consolidated dark grey, consolidated, mortar. It measured 4.18m in length and 0.64m in height, located along the southern edge of the trench.
317	Trench 3	0.5m	Masonry	Sandstone structure, comprised of roughly-squared sandstone blocks a maximum of 0.4m by 0.2m by 0.2m in size. The stone was bonded by a dark grey consolidated mortar. Although the masonry of ***317*** butts walls ***300***, it is thought to be a later addition as it overlies fill of drain ***318***.
318	Trench 3	0.68m+	Fill	Fill of ***319***. Comprised a dark grey coarse sand silty clay, within which an 8 inch ceramic pipe was lain, currently in use.
319	Trench 3	0.68m+	Cut	Linear feature containing ceramic drain. It measured 0.84m wide and 0.68m deep, located across the north-western end of the trench.

APPENDIX 4: FINDS CATALOGUE

Key: Tr = Trench; ORN = Object Record Number; C = Context; N = Count

Tr	ORN	C	Material	N	Description	Period
2	1000	***203***	Ceramic	2	Mottled ware bowl, dark-glazed coarse red earthenware with a purplish fabric, possible Midland Purple Ware-type derivative	Eighteenth century
3	1001	***300***	Ceramic	1	Blackware; purple-red fabric with frequent lime and quartz inclusions	Seventeenth/Eighteenth century
3	1001	***300***	Ceramic	1	Brown-glazed lime-rich red earthenware bowl	Eighteenth century
3	1001	***300***	Ceramic	1	Westerwald-type blue stoneware bowl rim, possible English copy	Eighteenth/Nineteenth century
3	1001	***300***	Ceramic	1	Dark red coarse red earthenware pancheon	Eighteenth/Nineteenth century
3	1001	***300***	Ceramic	2	Transfer-printed plate with faint blue Chinese print	Nineteenth century
3	1002	***301***	Ceramic	1	Hard red oxidised bowl fragment with frequent mica, possible local product such as Quenrmore	Second century
3	1002	***301***	Ceramic	1	Unglazed red earthenware bowl with banded decoration.	Eighteenth/Nineteenth century?
3	1002	***301***	Ceramic	2	Dark red coarse red earthenware bowls. Sherds have frequent lime rich inclusion	Eighteenth/Nineteenth century
3	1003	***301***	Ceramic	2	Samian: Cup rim (Form 80), and bowl fragment. Both probable Central Gaul, (Lezoux) products	Mid to late second century
3	1004	***301***	Ceramic	1	Nene Valley colour coat beaker	Late second/third century
3	1004	***301***	Ceramic	1	Hard Pink/buff bowl fragment bearing traces of a red and white slip. Quernmore product?	Second century
3	1004	***301***	Ceramic	1	Olive green-glazed fully reduced jug sherd	Thirteenth/fourteenth century
3	1005	***302***	Ceramic	1	North Gaul grey ware bowl	Second/third century
3	1006	***303***	Ceramic	1	Highly micaceous hard red oxidised bowl, Wilderspool-type product	Second century
3	1007	***309***	Ceramic	1	Green-glazed jug handle, similar to the type of product deriving from the kilns of Ellel	Late twelfth-fourteenth century
BH1	1008	U/S	Ceramic	1	Thin-walled hard red oxidised ware with iron particles, probable local product	Second century
3	1009	***301***	CBM	1	Fragment of *imbrex* roof tile	Roman
3	1009	***301***	CBM	1	Daub	Roman?
3	1010	***302***	CBM	1	Tile fragment	Roman?
3	1011	***300***	Glass	2	Wine bottle base and body	Eighteenth/nineteenth century
3	1012	***301***	Glass	1	Thick walled wine bottle base	Eighteenth/nineteenth century

Tr	ORN	C	Material	N	Description	Period
3	1013	***302***	Wood	4	Thin unworked dried strips	Unknown
3	1014	***302***	Industrial residue	1	Fuel waste; small lump	Unknown
3	1015	***300***	Animal Bone	2	Large mammal rib fragment, sawn-through.	Unknown
3	1016	***301***	Animal Bone	6	Pig, 1 metapodial; cattle, scapula (chop marks), 3rd mandibular molar and metatarsal; large mammal rib fragment; and two cattle or red deer jaw fragments.	Unknown
3	1016	***302***	Animal Bone	4	Four unidentifiable fragments	Unknown

APPENDIX 5: ARCHIVE INDEX

Record group	Contents	Comments	Box/File Number
	Introduction Project Design		1
A	**Report** Final Report		1
B	**Primary Fieldwork Records** Trench Records Context Records & Indices Watching Brief Records		1
C	**Primary Drawings** Developers Plans Annotated Plans Drawing Indices Plans/Sections		1
D	**Finds Box and Bag Lists**		1
E	**Environmental Records**		1
F	**Photographic Record** Photographic Indices Monochrome Colour Slides Digital		1
G	**Electronic Media**		1

