Clitheroe Castle, Clitheroe, Lancashire

Archaeological Investigation

Oxford Archaeology North

February 2008

Ribble Valley Borough Council and English Heritage

Issue No: 2007-08/793
OA North Job No: L9789
NGR: SD 7424 4169

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Document Type: Archaeological Investigation

Client Name: **Ribble Valley Borough Council and English Heritage**

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National Grid Reference: **NGR SD 7424 4169**

Prepared by:	Jeremy Bradley	
Position:	Project Officer	
Date:	January 2008	
Checked by:	Ian Miller	Signed……..
Position:	Senior Project Manager	
Date:	February 2008	
Approved by:	Alan Lupton	Signed……..
Position:	Operations Manager	
Date:	February 2008	

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

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SUMMARY

In December 2006, Oxford Archaeology North was commissioned by Ribble Valley Borough Council to undertake an archaeological evaluation at Clitheroe Castle, Lancashire (centred at SD 7424 4169). The site is a designated Scheduled Monument, which incorporates several structures, including Grade I and Grade II Listed Buildings. The archaeological evaluation was carried out in January 2007, and was required to inform and support the Listed Building and Scheduled Monument Consent applications for a proposed redevelopment of Clitheroe Castle Museum, and associated enhancement of the site. In particular, the proposed redevelopment of the museum allows for the erection of a new link building that will provide level access between the existing museum and adjacent outbuildings, but necessitating the localised excavation of foundations through archaeological deposits to the level of the solid geology. As part of a wider programme of enhancement of the site, it was proposed to erect floodlighting around the castle keep, install audio equipment, and remove sections of tarmac footpath.

The archaeological evaluation comprised the excavation of nine small trenches, which were placed around the castle keep and to the rear of the museum. The trenches were intended to establish the presence, depth, character, date and significance of any surviving archaeological deposits across the Scheduled Monument, and assess the impact of the proposed schemes of redevelopment and enhancement of the site.

The four trenches placed around the castle keep revealed significant archaeological features cut into the solid geology and overlying layers, all of which yielded medieval artefacts with a date range that spanned the thirteenth and fourteenth centuries. A concentration of structural features revealed on the north-western side of the keep, and lying immediately beneath the existing topsoil, suggested that this area had been occupied intensely during the medieval period. The five trenches located to the rear of the museum revealed a variety of features, including a substantial stone footing thought to form part of a building preceding the present museum, and layers associated with its use and subsequent demolition. The conclusions drawn from the evaluation were that the buried archaeological remains in the vicinity of the castle keep merited preservation *in-situ* and, whilst significant archaeological remains were also revealed to survive within the footprint of the proposed museum extension, it was considered that a programme of archaeological mitigation that allowed for their preservation by record would be an appropriate response.

Following consultation with English Heritage, Lancashire County Archaeology Service (LCAS), and Ribble Valley Borough Council, OA North was requested to devise a strategy for archaeological mitigation associated with the proposed extension to the museum. The mitigation strategy allowed for the complete archaeological excavation of 12 targeted areas, including the exact locations of the mass concrete pad foundations for the museum extension, the associated shear base, a section across the grassed bank to the north of the existing museum, and the widened entrance located on the bank between the existing museum and the former North West Sound Archive Building. Nine trenches were excavated within the positions of the pad foundations, which in four cases re-examined trenches excavated as part of the initial evaluation in

January 2007. The mitigation strategy, however, necessitated all trenches to be excavated through any sensitive archaeological deposits to the surface of the solid bedrock. Following the formal approval of the mitigation strategy by English Heritage and LCAS, and after gaining Scheduled Monument Consent, OA North was commissioned to undertake the work.

The excavations were carried out in September 2007, and were coupled with an archaeological watching brief, which monitored the installation of a new drainage system and the localized replacement of cobble and flagstone surfaces. The results obtained from the excavations have confirmed that significant archaeological deposits and artefacts dating from the twelfth to eighteenth centuries survive *in-situ* across the site. The trenches placed around the castle keep demonstrated not only the presence of important buried medieval remains within that area, but also that in some cases the remains were located immediately below the modern ground surface. Those trenches located to the rear of the museum revealed the fragmentary remains of a building of medieval date, associated with well-stratified deposits providing evidence for the occupation and later demolition of the structure. Elsewhere within the area to the rear of the museum were various features hewn out of the solid bedrock, some of which have been dated provisionally to the medieval period. The excavations have also produced a significant finds assemblage. In particular, the collection of pottery has enhanced the current understanding of medieval ceramic traditions in the area, and the assessment of the palaeo-environmental samples has added to the archaeo-botanical record for the area.

ACKNOWLEDGEMENTS

Oxford Archaeology North (OA North) would like to thank Chris Hughes of Ribble Valley Borough Council for commissioning OA North to undertake the work and for his assistance during the project. Thanks are also expressed to Lucy Dean, formerly of Turner Townsend LLP, Neal Charlton of Buttress Fuller Alsop Williams, and Charles Anelay of William Anelay Ltd, for logistical support. OA North would also like to thank Jennie Stopford, the Inspector of Ancient Monuments for English Heritage, and Peter Iles and Doug Moir of Lancashire County Archaeology Service, for their support and advice. Thanks are also expressed to Paul Adams of English Heritage for making the results of his study of Clitheroe Castle freely available, and to Ben Edwards, the former County Archaeologist for Lancashire, for his support.

The archaeological trenches were all excavated under the direction of Jeremy Bradley, who was assisted by Alex Beben, Ged Callaghan, Vicky Bullock and Rebekah Pressler, and the watching brief was carried out by Andrew Bates and Vicky Bullock. Aerial photographs of the site were taken by Jamie Quartermaine. The report was written by Jeremy Bradley, and Christina Robinson and Marie Rowland prepared the illustrations. The finds report was written by Jeremy Bradley, with information on the post-medieval pottery provided by Rebekah Pressler, and animal bones by Andrew Bates. The palaeo-environmental samples were assessed by Sandra Bonsall and Elizabeth Huckerby, and the metalwork was conserved and assessed by Jennifer Jones, of Durham University. The project was managed by Ian Miller, who also edited the report.

1. INTRODUCTION

1.1 CIRCUMSTANCES OF THE PROJECT

1.1.1 In December 2006, Oxford Archaeology North (OA North) was commissioned by Ribble Valley Borough Council to undertake an archaeological evaluation at Clitheroe Castle, Lancashire (centred at SD 7424 4169). The castle is a designated Scheduled Monument (SM 27747), which incorporates several structures, including Grade I and Grade II Listed Buildings, and is situated in both a Registered Park and Garden and Clitheroe Town Conservation Area. The evaluation was required to inform and support the Listed Building and Scheduled Monument Consent applications for the proposed redevelopment of Clitheroe Castle Museum, and associated enhancement of the site. In particular, the proposals allowed for the erection of a new link building to provide level access between the existing museum and adjacent outbuildings, and it was recognised that this would have an archaeological impact. Other aspects of the scheme that were considered to potentially have archaeological implications, albeit to a lesser extent, included the installation of a new drainage system, and localised replacement of cobble and flagstone surfaces.

1.1.2 In January 2007, nine trenches were excavated as part of the archaeological evaluation; four trenches were placed around the castle keep, and five trenches were situated in the position of the proposed museum extension. The trenches around the castle keep revealed significant archaeological features cut into the solid geology and overlying layers, all of which yielded medieval artefacts with a date range that spanned the thirteenth and fourteenth centuries. A concentration of structural features revealed on the north-western side of the keep, and lying immediately beneath the existing topsoil, suggested that this area had been occupied intensely during the medieval period. It was concluded that any earth-moving works in this part of the site would have an unacceptable negative impact on the buried archaeological resource, and should be avoided (OA North 2007). The five trenches located to the rear of the museum revealed a variety of features, including a substantial stone footing thought to form part of a building preceding the present museum, and layers associated with its use and subsequent demolition.

1.1.3 Following consultation with English Heritage, Lancashire County Archaeology Service (LCAS), and Ribble Valley Borough Council, it was recommended that the buried archaeological remains in the vicinity of the castle keep merited preservation *in-situ*, and design proposals should not allow for any earth-moving works in that area. Whilst significant archaeological remains were also revealed to survive within the footprint of the proposed museum extension, it was considered that a programme of archaeological mitigation that allowed for their preservation by record would be an appropriate response.

1.1.4 In September 2007, Turner Townsend LLP, acting on behalf of Ribble Valley Borough Council, requested OA North to devise a strategy for archaeological mitigation associated with the proposed extension to the museum. The

mitigation strategy allowed for the complete archaeological excavation of 12 targeted areas, including the exact locations of the mass concrete pad foundations for the museum extension, the associated shear base, a section across the grassed bank to the north of the existing museum, and the widened entrance located on the bank between the existing museum and the former North West Sound Archive Building. Following the formal approval of the mitigation strategy by English Heritage and LCAS, and after gaining Scheduled Monument Consent, OA North was commissioned to undertake the work. All work was consistent with the relevant standards and procedures of the Institute of Field Archaeologists, and generally accepted best practice.

1.2 SITE LOCATION, TOPOGRAPHY AND GEOLOGY

1.2.1 The town of Clitheroe is situated on a triangle of land between the river Ribble and the Mearley Brook within the Ribble Valley, Lancashire (Fig 1). The historic core of the town is centred at the foot of the castle, and developed along the main road between Preston and Skipton.

Plate 1: Aerial view of Clitheroe Castle during the development work

1.2.2 Clitheroe Castle is situated at the southern end of the town (centered at SD 7424 4169). The underlying solid geology of the area, and indeed the hill upon which the castle is built, is formed from a Waulsortian limestone mudmounds or reef knolls, which are distinctive landscape features in the area (Countryside Commission 1998, 93). The geology of the town is dominated by the Clitheroe Knoll, on which the castle is sited, forming a small highpoint in an otherwise gently undulating landscape. The knoll extends north-north-west from the grounds of the castle to the north end of the town (Earp *et al* 1961, 54-5). The drift geology comprises loamy brown rankers, the typical brown earth found over limestone (Kenyon 1991, 11).

1.3 HISTORICAL BACKGROUND

1.3.1 ***Prehistoric and Roman:*** Clitheroe lies on one of the important trans-Pennine trade routes through the Ribble Valley - Aire gap. Evidence of a trade in prestige items, such as Neolithic stone axes, has been found around Clitheroe, including a find spot at Upbrook Farm (Kenyon 1991, 35). Little other direct evidence for the prehistoric period in general exists for Clitheroe. There are two known prehistoric findspots known from the urban area defined for Clitheroe, including a Late Bronze Age socketed axe head and a stone mace head discovered in the environs of Salt Hill (Lancashire County Council 2006, 14). It has been postulated that the medieval de Lacy honour centred on Clitheroe was located to exploit the same strategic territory as the hillforts of Castercliffe and Portfield (Kenyon 1991, 52).

1.3.2 The Roman period is similarly under-represented, with the main Roman occupation centred on nearby Ribchester. The only known Roman remains in the area comprises a section of the road between the Roman forts at Ribchester and Ilkley, which passes within 1km of Clitheroe Castle (Codrington 1919, 100).

1.3.3 ***Medieval:*** evidence for an occupation of the wider area during the early medieval period may be drawn from nearby Whalley, where there are groupings of pre-Conquest sculpture within the churchyard (Newman 1996, 99). However, Clitheroe does not appear to have constituted a settlement at the time of Domesday, despite place-name evidence suggesting Anglo-Saxon origins (Lancashire County Council 2006, 14).

1.3.4 Much more is certain about the later medieval development of Clitheroe. It was a large landholding acquired by the de Lacy family in 1102, who created the borough of Clitheroe between 1146 and 1177 as a successor to the eleventh-century hundredal estate of Blackburn (Farrer and Brownbill 1911, 367). It has been suggested, however, that the borough charter was only a confirmation of status for an existing settlement (White 1996, 127). Clitheroe certainly developed during the eleventh century, with the erection of the stone castle and, by 1122, the parish church of St Mary Magdalene.

1.3.5 The castle was sited on top of a natural vantage point at the south end of the present town, and the parish church lay to the north. The castle has been described as 'the strongest, the oldest, and from its position one of the most remarkable of the fortresses of Lancashire' (Clarke 1877, 397-8). In addition to the strategic value of the castle, it was also the seat of local government during the medieval period, as the seat of the honour of Clitheroe, with courts being held there and also acting as a gaol (Adams 2006, 180). The town developed around the lower ground between the castle and the church, providing an indication of the size of the medieval settlement; documentary evidence identifies 66 burgesses resident in the town by 1258 (Farrer and Brownbill 1911, 367). A market in Clitheroe was not actually documented until 1292, although it was claimed at that date that there had been a market in existence since the Conquest (*op cit*, 368). Evidence to corroborate this claim, however, is lacking (Lancashire County Council 2006, 16). Virtually nothing is known about individual houses that occupied the borough during the

medieval period. It may be anticipated, however, that most would have been built of timber with thatched roofs (Weeks 1926, 47).

1.3.6 The castle itself is first referred to in 1102, when an area of land below 'le baille' is mentioned. It has been argued, although without any corroborating evidence, that there was a Saxon predecessor to the castle, perhaps comprising a wooden palisaded enclosure (Langshaw 1940, 10). Similarly, it has been argued by Whitaker, in 1872, that there was castle in the time of Domesday. He suggested that a castle mentioned under the Domesday entry for Barnoldswick was that of Clitheroe, but this castle has never been accurately placed (Adams 2006, 180; Best 1990, 2). Nevertheless, the Norman castle does appear to have been an early foundation. The extant keep is of a square plan with three storeys, and is the second smallest surviving keep in England. It was originally surrounded by a curtain wall with a gatehouse built into the south-east, although this has since been demolished. The castle yard contained the chapel of St Michael in Castro, which is likely to have been contemporary with the keep (Farrer and Brownbill 1911, 363). Other buildings within the castle courtyard included a large stable block, a court house, and a dwelling house, which incorporated a dairy, a buttery, and a cellar: these buildings are depicted on a plan of the castle, dated 1723, but since lost (Plate 2).

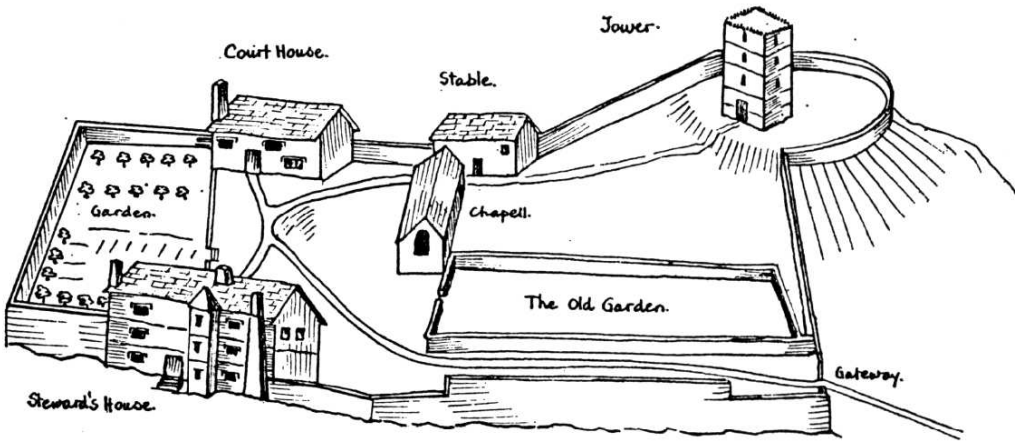

Plate 2: A drawing by Langshaw (1940) of a sketch of the castle, dated 1723, but since lost

1.3.7 ***Post-medieval:*** whilst Clitheroe experienced a period of economic growth in the sixteenth century, returning two members to the House of Commons in 1558, the castle began to decline in importance and was in need of repair. Surveys in the early 1600s described the castle as ruinous, with the cost of repairs spiralling to £177 in 1608 (Best 1990, 11).

1.3.8 The castle was occupied briefly during the Civil War in 1644, and again in 1649, after which it was ordered to be slighted, although there is some debate whether this was ever carried out. The chapel was certainly ruinous by 1660, and the keep and the curtain walls were in a similar parlous condition by the early eighteenth century, although roofed buildings continued to occupy the castle yard. An indication of the condition of the buildings at this time is provided by the detail of an engraving produced by Samuel and Nathaniel Buck in 1727 (Plate 3).

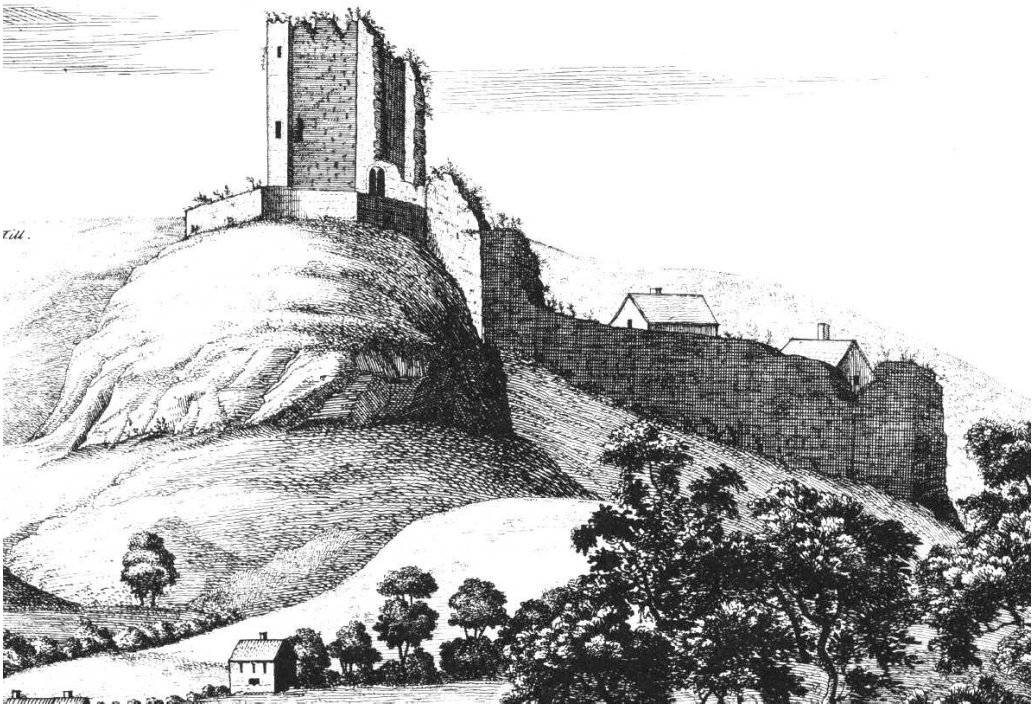

Plate 3: An engraving of the castle from the west by S and N Buck, 1727

1.3.9 As the castle retained its function as the administrative centre for the Blackburn Hundred until 1822, when a new town hall was begun in Church Street, considerable rebuilding was carried out in an attempt to bring the castle up to date (*op cit*, 13-5). However, it seems that the repair work to the keep was insufficient, as it was considered to be in danger of collapse by the mid-nineteenth century (Plate 4). In 1848, it was decided to partially restore the keep, and buttresses were built against three corners (Farrer and Brownbill 1911, 363).

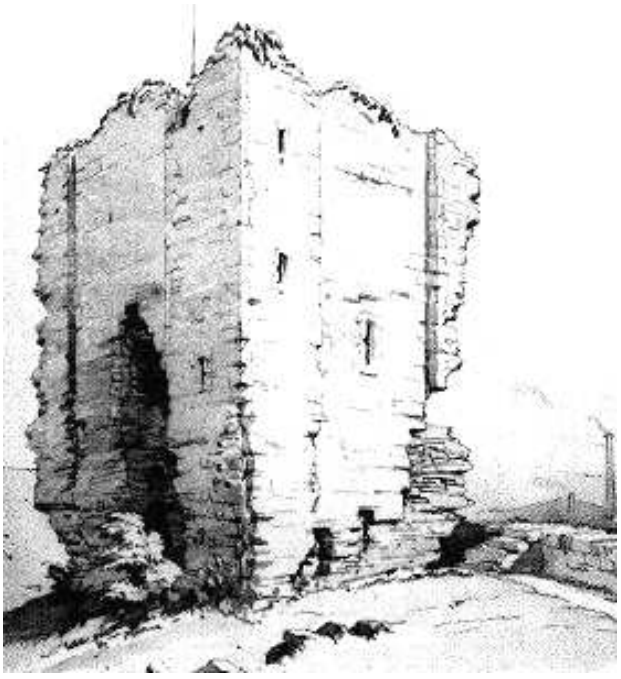

Plate 4: The keep prior to restoration in 1848

1.3.10 In 1919, the then owner of the castle, Lord Montague of Beaulieu, offered to sell the site to the people of Clitheroe. The funds were raised by public subscription, and the castle and its 17-acre grounds were converted into a war memorial to those who lost their lives in the Great War (Adams 2006, 180-3). The present chapter in the history of the castle dates to 1981, when a museum opened in the castle house. More recently, the North-West Sound Archive occupied the outbuildings in the castle yard.

1.4 ARCHAEOLOGICAL BACKGROUND

1.4.1 Whilst Clitheroe is a well-documented medieval borough, the town has been the subject of surprisingly few formal archaeological investigations. As a result, Clitheroe is poorly represented in the archaeological record. In 1996, the Lancaster University Archaeological Unit (now OA North) carried out an evaluation of a medieval moated site in Radeclyffe Street, revealing part of the moat (LUAU 1996). Other archaeological investigations in Clitheroe have comprised the monitoring of earth-moving works associated with development, and have all tended to be small scale. Such archaeological watching briefs have been carried out at St Denys Croft, initially by Lancashire County Archaeology Service in 1996 and, subsequently, by Matrix Archaeology in 2002 (Matrix Archaeology 2002). Another watching brief, also carried out by Matrix Archaeology, monitored a development off New Market Street, and identified a large ditch that may have marked the rear boundary of a medieval burgage plot (Matrix Archaeology 2001).

1.4.2 Formal archaeological work carried out at Clitheroe Castle has similarly been limited, comprising a survey in advance of repairs to part of the keep and driveway retaining walls (LUAU 1992), and a watching brief within the castle grounds during the laying of closed-circuit television cables (UMAU 2003). A rubble stone revetment was revealed during the watching brief, and a small assemblage of medieval and post-medieval finds was recovered. More recently, a study of the surviving fabric has provided a useful description of the actual remains of the medieval castle (Adams 2006).

2. METHODOLOGY

2.1 EVALUATION AND EXCAVATION TRENCHING

2.1.1 The initial phase of archaeological evaluation allowed for the excavation of nine small trenches, which were placed in two areas of the Scheduled Monument (Fig 2). A group of four trenches was placed in appropriate positions around the castle keep, and a group of five trenches was located in the area of the proposed museum extension.

2.1.2 Following on from the initial evaluation, a further nine trenches were examined as part of the approved mitigation strategy (*Appendix 1*). Nine trenches were excavated within the shallow pad foundation potions, which in four cases re-examined trenches excavated as part of the initial evaluation in January 2007, although the mitigation trenches were excavated to the level of the natural bedrock. Three other areas were also investigated adjacent to the existing museum building, and between the former Sound Archive building and the adjoining range of out-buildings to the north. All trenches were excavated using exclusively manual techniques.

2.1.3 The turf was removed carefully from each trench, and stacked neatly on a plastic membrane, awaiting replacement on completion of the initial evaluation. All other material from the initial evaluation was stockpiled separately, and backfilled stratigraphically into the trenches on completion of the archaeological investigation.

2.1.4 All information identified in the course of the site works was recorded stratigraphically, using a system adapted from that used by the Centre for Archaeology Service of English Heritage, with sufficient pictorial record (plans, sections and both black and white and colour photographs) to identify and illustrate individual features. All contexts were recorded using *pro-forma* sheets, which comprise a written detailed description and interpretation of each structure and deposit encountered, and details incorporated into a Harris matrix. Similar object record and photographic record *pro-formas* were used. All written recording of survey data, contexts, photographs, artefacts and ecofacts were cross-referenced from *pro-forma* record sheets using sequential numbering.

2.1.5 A full and detailed photographic record of individual contexts was maintained and similarly general views from standard view points of the overall site at all stages of the evaluation were generated. Photography was undertaken using 35mm cameras on archivable black and white print film, as well as colour transparency, and all frames included a visible, graduated metric scale. Extensive use of digital photography was also be undertaken throughout the course of the fieldwork for interpretative and presentation purposes.

2.2 WATCHING BRIEF

2.2.1 The final element of archaeological fieldwork carried out as part of the project comprised a watching brief during groundworks associated with the development and, specifically, the excavation of trenches for renewed drainage. This work comprised the systematic examination of any subsoil horizons exposed during the course of the groundworks, and the accurate recording of all archaeological structures and features, and any artefacts, identified during observation.

2.2.2 Archaeological structures, features and/or deposits exposed during the removal of tarmac surfacing, together with the immediate vicinity of any such features, were cleaned by hand, using either hoes, shovel scraping, and/or trowels depending on the ground conditions, and appropriate sections were studied and drawn. Recording comprised a full description and preliminary classification of features or materials revealed, and their accurate location. A photographic record was undertaken simultaneously.

2.3 FINDS POLICY

2.3.1 Finds' recovery was carried out in accordance with best practice (following current Institute of Field Archaeologists guidelines), and subject to expert advice in order to minimise deterioration. Artefacts were principally collected by hand from deposits, and all categories of material type were retrieved without exception. In order to maximise the recovery of artefacts, the arisings from all trenches was scanned with a metal detector. All finds recovered during the investigation were lifted, cleaned, conserved, marked, bagged and boxed in accordance with the United Kingdom Institute for Conservation (UKIC) First Aid For Finds (1998; new edition). Recovery programmes were in accordance with best practice (current IFA guidelines), and subject to expert advice.

2.3.2 A targeted programme of palaeo-environmental sampling was implemented in accordance with the OAU *Environmental Guidelines and Manual* (OAU 2000), and in line with the English Heritage guidance paper on Environmental Archaeology (2001). In general, bulk samples of 10-30 litres were taken where appropriate, to be sub-sampled at a later stage.

2.4 PALAEO-ENVIRONMENTAL SAMPLING

2.4.1 A targeted programme of palaeo-environmental sampling was implemented in accordance with the OAU *Environmental Guidelines and Manual* (OAU 2000), and in line with the English Heritage guidance paper on Environmental Archaeology (2001). In general, bulk samples of 10-30 litres were taken where appropriate, and were sub-sampled at a later stage.

2.5 ARCHIVE

2.5.1 The results of the fieldwork form the basis of a full archive that has been prepared to professional standards, in accordance with English Heritage guidelines (*The Management of Archaeological Projects, 2nd edition*, 1991) and the *Guidelines for the Preparation of Excavation Archives for Long Term Storage* (UKIC 1990). The project archive represents the collation and indexing of all the data and material gathered during the course of the project. The deposition of a properly ordered and indexed project archive in an appropriate repository is considered an essential and integral element of all archaeological projects by the IFA in that organisation's code of conduct.

2.5.2 The archive for the archaeological work undertaken at the site will be deposited with the nearest museum which meets Museums' and Galleries' Commission criteria for the long term storage of archaeological material (MGC 1992). This archive can be provided in the English Heritage Centre for Archaeology format, both as a printed document and on computer disks as ASCii files (as appropriate). Except for items subject to the Treasure Act, all artefacts found during the course of the project will be donated to the receiving museum.

2.5.3 A synthesis (in the form of the index to the archive and a copy of the publication report) will be deposited with the Lancashire Historic Environment Record, maintained by Lancashire County Archaeology Service in Preston. A copy of the index to the archive will also be available for deposition in the National Archaeological Record in London.

3. RESULTS

3.1 EXCAVATED TRENCHES

3.1.1 In total, 18 trenches were opened to examine targeted locations around the site (Fig 2). Nine trenches were excavated as part of the initial evaluation; Trenches 1-4 were located around the castle keep, and Trenches 5-9 were placed to the rear of the museum. Four of these trenches (5A, 6A, 7A, and 8) were re-excavated as part of the mitigation strategy, which also required five additional trenches to be opened in the area of the new museum extension.

3.1.2 The results obtained from both phases of archaeological fieldwork have been combined into a single narrative. Analysis of the stratigraphic sequence, along with the dating of the artefacts, has enabled three broad chronological periods to be identified:

- Phase 1: Medieval;
- Phase 2: Post-medieval;
- Phase 3: Nineteenth century - present day.

3.2 TRENCH 1

3.2.1 Trench 1 was located on the north-east side of the castle keep, and was aligned north-east/south-west (Fig 2). It measured 1.5m by 1.5m, and was excavated to a maximum depth of 0.70m. The modern ground level lies at a height of between 115.43m and 115.53m OD. The uppermost feature of archaeological significance was exposed at a height of 115.42m OD, and the solid geology (***114***) was encountered at a height of 115.01m OD.

Plate 5: Trench 1, looking north-east, showing the exposed features

3.2.2 ***Phase 1:*** the bedrock was sealed by a layer of brownish-yellow silty-sand (***111***) that in places was up to 0.20m thick. This layer probably represented a deliberate levelling episode, and had been cut by several features and a wall foundation (Plate 5). Two of these features, posthole ***113*** and pit ***112***, were selected for partial excavation in order to assess the date, character and nature of the archaeological resource.

3.2.3 Posthole ***113***, exposed toward the centre of the trench (Fig 3), had a diameter of 0.33m and was 0.19m deep, and was filled with greyish-brown sandy-silt (***106***). Adjacent to posthole ***113*** was posthole ***107***, which was of a similar diameter but was not excavated. The posthole appeared to be associated with a feature to the north-east (***109/110***), which was either a small pit or a large posthole with a possible post-pipe. This feature was also left unexcavated.

3.2.4 Pit ***112*** was located in the eastern corner of the trench, and extended both south-east and north-east beyond the limits of excavation (Fig 3). It was cut through layer ***111*** and into the underlying solid geology. The pit was filled with loose grey-brown sandy-silt and stone rubble, ***108***. Excavation of the pit yielded a single sherd of medieval pottery, probably of a thirteenth- or fourteenth-century date.

3.2.5 The remains of a north-west/south-east-aligned wall (***104***) were exposed in the southern corner of the trench (Fig 3). Only the bottom two courses of this wall survived *in-situ*, with several voids representing areas where stones had been removed. The wall was constructed of limestone blocks, which had been roughly hewn and squared, and bonded with yellowish-brown sandy mortar.

3.2.6 Cutting through the wall was a 0.40m wide, oval posthole (***103***), indicating that several phases of activity may have taken place. It was not clear whether this posthole had been cut through subsoil layer ***102***, a layer which certainly sealed the other postholes and pit. Although not sealing wall ***104*** entirely, layer ***102***, was clearly later than the wall. Another posthole, ***115***, was identified within the south-east-facing section of the trench (Fig 3). This feature was stratigraphically later than the other postholes identified in the trench as it had clearly been cut through layer ***102***.

3.2.7 ***Phase 2:*** no deposits that could be attributed to the post-medieval period were present within the excavated trench.

3.2.8 ***Phase 3:*** the uppermost deposit within the trench was topsoil ***101***, which had a maximum depth of 0.20m. This yielded a fragment of post-medieval pottery.

3.3 TRENCH 2

3.3.1 Trench 2 was located on the north-east side of the castle keep (Fig 2). It measured 1.5m by 1.5m, and was excavated to a maximum depth of 0.56m below the modern ground surface. The modern ground level lies at a height of between 115.28m and 115.39m OD. The first significant archaeological deposit lay at a depth of 0.40m below present ground level (114.99m OD). The solid geology, ***210***, lay at a depth of between 0.45m and 0.50m below the present ground level (114.92m OD).

Plate 6: Trench 2, looking south-west, showing features cut into the bedrock

3.3.2 ***Phase 1:*** the solid geology in the trench had been cut by a posthole and a gully (Plate 6). The gully, ***208***, was located along the north-eastern side of the trench and was irregular, sinuous and had a maximum depth of 0.20m (Fig 4). The fill (***205***) contained a few sherds of pottery of a thirteenth- to fourteenth-century date, together with a possible copper alloy brooch fragment, and fragments of animal bone. Toward the southern corner of the trench was a 0.27m deep posthole, ***209***, which was filled with an homogeneous deposit (***206***) that contained fragments of animal bone (Fig 4).

3.3.3 Later, after the above features had been backfilled, the uneven, undulating surface of the solid geology had been in-filled and levelled with a clay-silt and stone matrix (***203***), which contained a large quantity of medieval pottery, also of a thirteenth- to fourteenth-century date, and animal bone. It is likely that this layer had formed a surface in the medieval period.

3.3.4 ***Phase 2:*** deposit ***203*** was sealed by layer ***207***, which was 0.20m thick and contained fragments of probable seventeenth-century pottery and a clay tobacco pipe bowl, which would be entirely consistent with a date in the first quarter of the seventeenth century. No archaeological features cut into this layer were identified.

3.3.5 ***Phase 3:*** layer ***207*** was sealed below a levelling layer (***202***) of modern origin. The uppermost excavated deposit comprised the topsoil/turf layer ***201***.

3.4 TRENCH 3

3.4.1 Trench 3 was located on the south-east side of the castle keep, but was of reduced dimensions (1m square) due to the space available and had a maximum depth of 0.60m (Fig 2). The modern ground level lies at a height of between 115.81m and 115.69m OD. The first significant archaeological deposit was encountered 0.10m below present ground level at a depth of 115.70m OD. The solid geology, ***303***, was exposed at a depth of between 0.50m and 0.60m below the present ground level (Plate 7).

Plate 7: North-west-facing section of Trench 3

3.4.2 ***Phase 1:*** a fairly substantial deposit of silt and stone (***302***), which had a maximum depth of 0.45m and was seen to slope down to the south-east, overlaid the solid geology (Fig 5). It is likely that this deposit represented a deliberate levelling episode. The deposit produced fragments of animal bone and a single sherd of shell-tempered pottery. Such pottery was in use east of the Pennines for a considerable period, being found in Anglian York and into the thirteenth century. Here, given the date of the other pottery from the site and based on evidence from York itself, a twelfth- to thirteenth-century date would be applicable. The deposit also produced a bone disc, a stone needle sharpener/hone-stone, and a piece of antler, possibly representing working waste.

3.4.3 ***Phase 2:*** no deposits that could be attributed to the post-medieval period were present within the excavated trench.

3.4.4 ***Phase 3:*** the uppermost excavated deposit comprised Topsoil, ***301***, which sealed the underlying deposits to a depth of 0.20m (Fig 5).

3.5 TRENCH 4

3.5.1 Trench 4 was located on the north-east side of the castle keep, immediately below the southern clasping pilaster buttress and measured 1m square, due to space restrictions, and was 0.50m deep (Fig 2). The modern ground level lies at a height of between 115.86m and 115.96m OD, and the solid geology (***403***) was exposed at a depth of 0.5m. No deposits that could be firmly attributed to the medieval period were present within the excavated trench.

3.5.2 ***Phase 2:*** the first significant archaeological deposit lay at a depth of 0.20m below present ground level (115.79m OD), and comprised a layer of mid-brown sandy-silt (***402***). This layer had a maximum thickness of 0.30m, and contained fragments of mortar, animal bone, and both medieval and post-medieval pottery (Fig 6).

3.5.3 ***Phase 3:*** a modern service trench crossed the southern corner of the trench, and was cut into layer ***403*** (Fig 6). The uppermost excavated deposit comprised a 0.20-0.30m thick layer of topsoil (***401***).

3.6 TRENCH 5/5A

3.6.1 Trench 5 was the most south-easterly of the four evaluation trenches located to the rear of the museum (Fig 2). The original excavation of this trench in January 2007 revealed substantial structural remains, which were left *in-situ* and re-investigated during the mitigation phase (Trench 5A). The trench measured 2.07m by 2.1m, and was excavated to a depth of 1.13m (Plate 8). The modern ground surface was fairly level, and lay between 107.13m and 107.17m OD. Archaeologically-significant features lay at a depth of 0.15m below the present ground surface at 107.03m OD.

Plate 8: Looking south-west across Trench 5A

3.6.2 ***Phase 1:*** the earliest features within the trench were the remains of a substantial stone walls, ***510/555/556*** (Fig 7), the top of which were located at a height of 106.73m OD (0.42m below present ground level). The walls were composed of large, roughly-hewn and faced limestone blocks, some measuring 400mm by 300mm, and survived in some places to a height of four courses (Plate 8). The stones were bonded with creamy white mortar.

3.6.3 Wall ***510*** was aligned north-east/south-west and was bonded with another wall (***555***/***556***) which was aligned north-west/south-east, and lay across the approximate centre of the trench (Fig 7). Wall ***510*** was over 0.55m wide, and survived to a height of 0.6m, while ***555***/***556*** was 0.53m wide, and survived to a height of 0.55m (Fig 8).

3.6.4 Abutting wall ***555***/***556*** and ***510*** was a later fireplace (***566***) located on the north-eastern side of the wall (Plate 9). The feature survived as the hearth area only, and comprised a roughly rectangular structure extending 1.65m north-west from the edge of excavation and was 0.44m wide. Several re-used floor tiles were observed at the south-east end of the feature. These floor tiles, one of which exhibited splash glazing, were considered to be of a thirteenth-century date. A layer of charcoal-rich, slightly gritty sand (***565***) was contained within the fireplace/hearth.

*Plate 9: Trench 5a, showing the remains of fireplace **566***

3.6.5 ***Phase 2:*** abutting both wall ***555/556*** and the fireplace/hearth was a probable demolition deposit (***567***), composed of brownish-red loose sandy mortar. A similar deposit (***568***), consisting of large stones and mortar, was revealed on the south-west side of wall ***555/556***, also representing demolition rubble. A breach in wall ***555***/***556*** and an associated rough alignment of flat stones, including a re-used stone roof tile, was thought to represent a drain (***569***).

Sealing deposit ***567*** and fireplace/hearth ***566*** on the north-east side of the wall was a thick layer of mortar-rubble (***559/561/504***), which was up to 0.30m thick (Fig 8). Three fragments of medieval pottery, all representing cooking pots, were recovered from this deposit, although they were likely to be residual. This was overlain by a similar deposit (***508***).

3.6.6 A layer of mortar-rich, sandy-silt (***503***), which was seen to overlie wall ***510***, was identified in the excavated section of the trench. The deposit contained fragments of post-medieval pottery, and residual sherds of medieval gritty ware, in addition to fragments of animal bone and ceramic building material.

3.6.7 Overlying demolition deposits on either side of wall ***555*** were layers with more organic component. On the south-west side of the wall this was represented by a reddish-orange brown deposit (***554***). North-east of the wall was layer ***553***, laid over the upper sloping surface of layer ***559*** (Fig 8). These layers were 0.47m and 0.3m thick respectively, and were sealed by a deposit of garden soil (***502***), the depth of which might indicate a long period when this area of the castle was free of activity other than horticulture.

3.6.8 ***Phase 3:*** at some point during the nineteenth century (cartographic evidence would suggest some time between the middle and later part of the century), a toilet block was constructed to the north-east of the trench. The rear wall (***562***) of this structure was constructed within cut ***570***. The wall, which was aligned north-west/south-east, comprised roughly hewn stone blocks that were bonded with grey mortar. The wall was stepped in appearance, presumably to buttress it against the deposits to the south-west. Bonded to the wall and to a vertical inter-mural drain was a north-east/south west-aligned culvert (***509***). The culvert had stone and brick walls with a stone capping, and measured 0.55m wide and 0.31m high. Deposit ***560*** had been used as a foundation for the base of ***509*** at the south-west end of the trench.

3.6.9 Aligned roughly north-west/south-east was a service trench (***563***), which contained a lead water pipe (***571***). This feature had been placed across culvert ***509***, and rose toward the south-east corner of the trench, where it had been capped by several large pieces of slate (***511***). During the initial evaluation, deposit ***507*** was interpreted as a possible thin floor surface, although it was resolved in the mitigation excavation to form the basal fill within cut ***563***.

3.7 TRENCH 6/6A

3.7.1 Trench 6/6A was located to the north-west of Trench 5, and to rear of the museum (Fig 2). Originally, it measured 1.50m by 1.50m, and was excavated to a depth of 0.98m (106.13m OD). The re-excavation as part of the mitigation strategy produced a trench measuring 2.3m by 1.75m, which was excavated down to the top of the solid geology (***660***) at a depth of 1.37m (165.71m OD) below the modern ground level (Plate 10). Archaeologically significant features lay at a depth of 0.37m below the present ground surface, at a level of 106.78m OD. The upper deposits within the trench were excavated down to approximately 1m below the present ground surface. Thereafter, the lower deposits were reached via a sondage placed in the centre of the trench (Fig 9).

Plate 10: General view of Trench 6A

3.7.2 ***Phase 1:*** evidence of the developmental sequence within the medieval building identified clearly within Trench 5/5A was observed in more detail within Trench 6/6A, where it was possible to reconstruct a good sequence of events, representing occupation followed by demolition.

3.7.3 Overlying the bedrock (***660***), which sloped down gradually to the south-east, was a light orangey-brown layer, ***659***, which was 0.17m thick, and thought to be a relict medieval soil horizon (Fig 10). Although there was no direct stratigraphic evidence to link a wall (***657***) exposed in the south-west-facing section to the floor surfaces revealed within the sondage, it has been inferred that the wall was constructed first and floor surfaces followed later. Only a small portion of wall ***657*** was exposed (Fig 10), although sufficient of its course was revealed to establish with confidence that it was a continuation of wall ***555/556***.

3.7.4 Overlying deposit ***659*** was a layer of creamy-white to light orangey-brown mortar, ***658*** (Plate 11). This deposit probably formed the foundation layer for a robbed floor. Cutting into this layer, and seen within the south-west-facing section of the excavated trench, was a V-shaped feature (***661***), possibly representing a posthole (Fig 10). This feature was backfilled with a deposit similar to the overlying layer (***609***), which had a maximum depth of 0.20m, and was composed of dark orangey-brown sandy-silt. This layer contained a relatively large group of animal bone fragments, probably representing food waste. The layer also yielded 13 sherds of medieval pottery, including six cooking pot fragments; a date no closer than between the twelfth and fourteenth century can be assigned to this pottery group. These finds, in addition to the organic nature of the deposit, suggest that part of the building had been abandoned and was used as a midden during the later medieval period.

Plate 11: View north-west across Trench 6A, showing mortar deposit ***658***

3.7.5 Lying above deposit ***609***, was a layer (***608***) that contained several stone roof tile fragments, including whole examples and others with bored nail holes for attaching them to roof joists; a single example still contained a nail. This layer occupied the south-western quarter of the trench, and indicated clearly that the building represented by wall ***657*** had been stripped of its roof during this period. This event is likely to have been followed by some demolition activity, producing layers ***654*** and ***656***, which overlay wall ***657***.

3.7.6 ***Phase 2:*** it seems likely that the remains of the building stood ruinous during the post-medieval period, as an accumulation of garden soil (***607***) was observed sloping down to the south. The appearance of the garden soil layer would suggest that the building was still standing but roofless. The presence of two sherds of post-medieval pottery implied mid-seventeenth- to eighteenth-century date for this phase. The overlying deposit (***604***), which had a maximum depth of 0.5m, contained abundant mortar fragments and large stones measuring up to 250mm by 150mm, representing a further period of demolition. A large decorated sherd of Cistercian ware pottery of a probable sixteenth-century date was recovered from deposit ***604***, although this was likely to be residual.

3.7.7 ***Phase 3:*** deposit ***604*** was sealed by layer ***603*** (Fig 10), which was cut by the construction of a north-east/south-west-aligned stone culvert (***651***); this was probably contemporary with the larger culvert revealed in Trench 5A. The culvert was cut subsequently by a service trench containing a large cast-iron pipe (***602***), aligned north-west/south-east. The trench was sealed by a layer of topsoil (***601***).

3.8 TRENCH 7/7A

3.8.1 Trench 7A was located to the north-west of Trench 6, and to the rear of the museum (Fig 2). It measured 1.5m square, and was excavated to the top of the solid geology (***752***), which lay at a depth of 0.78m (106.48m OD) below the modern ground surface (Plate 12). The present ground level lay at a height of between 107.11m and 107.29m OD.

Plate 12: View across Trench 7A

3.8.2 ***Phase 1:*** lying above the solid geology was a layer reddish-brown clay-silt (***754***), lying within a possible rock-cut feature, ***757***. This was roughly L-shaped and aligned north-west/south-east by north-east/south-west and was 0.20m deep. It contained two sherds of medieval pottery.

3.8.3 ***Phase 2:*** lying above layer ***754*** was a deposit of dark brown silty-clay, ***702/753***, which was 0.43m thick (Fig 11). Sherds of post-medieval pottery, together with fragments of animal bone and roof tile, were recovered from this deposit.

3.8.4 ***Phase 3:*** cutting into layer ***702/753*** was the same north-west/south-east-aligned cast-iron pipe (***704***) as found in Trenches 5 and 6. The construction trench for this pipe cut through the foundation layer (***756***) and path (***755***). A 0.41m thick layer of garden soil, ***701/751***, formed the uppermost deposit in the trench (Fig 11), which produced fragments of post-medieval and residual sherds of medieval pottery.

3.9 TRENCH 8

3.9.1 Trench 8 was placed to the rear of the museum, and represented the north-westernmost trench excavated during the initial evaluation (Fig 2). The trench was of slightly smaller dimensions than most of the other trenches, measuring 1m square, reflecting the limited space available. The trench was excavated to the top of the solid geology (***805***), which was exposed at a depth of 0.30m below the modern ground surface, at a height of 107.14m and 107.26m OD.

Plate 13: Looking north across Trench 8

3.9.2 A single feature was recorded within the trench (Fig 12). This comprised a north-west/south-east-aligned, shallow (0.11m) rock-cut linear feature (***804***), of which only the eastern edge and part of the base was visible within the excavated trench (Plate 13). The fill was composed of brownish-grey, clay-sand, and limestone rubble, ***802/803***. This was probably either a robbed-out wall or a rock-cut gully, and whilst it was tempting to interpret ***804*** as a medieval structural feature, firm evidence was lacking.

3.9.3 ***Phase 3:*** the bedrock and feature ***804*** was sealed by a layer of garden soil (***801***). This layer yielded several sherds of pottery, to which nineteenth- and twentieth-century dates have been ascribed.

3.10 TRENCH 9

3.10.1 Trench 9, aligned north-west/south-east, was located between the museum and the former North West Sound Archive building (Fig 2); the trench was re-excavated as Trench 15 as part of the mitigation strategy. Trench 9 measured 1m square, and was excavated to a maximum depth of 0.70m (105.10m OD). The modern ground level fell steeply from the north-west to south-east, and

lay between 106.14m and 105.72m OD. The solid geology (***906***) was exposed in the base of the trench, at a depth of 0.70m below the present ground surface.

3.10.2 ***Phase 2/3:*** the bedrock was sealed by a buried soil horizon (***905***), which comprised a 0.25m thick layer of brown clay-silt. This was overlain by a 0.35m thick layer (***904***) of brick and some stone rubble, capped by a layer of mortar. The brick included both hand-made and machine-made examples, implying a nineteenth-century, or later, date. Cutting into this layer, and situated at the north-western end of the trench, was a shallow feature (***903***) of unknown function, which was filled with a dark grey silt containing small fragments of brick and mortar.

3.11 TRENCH 10

3.11.1 Trench 10, aligned north-east/south-west, was located between the museum and the retaining wall adjacent to the well/cistern (Fig 2). The trench measured 1.65m by 8m, and was excavated to a maximum depth of 0.75m (104.80m OD). The present ground level lay between 105.48m and 105.55m OD. The solid geology (***1009***) was exposed at the base of the trench, at a minimum depth of 0.14m below the modern ground surface (Plate 14). All of the features identified within the trench were cut into the bedrock. The first significant archaeological deposits were encountered at a height of 105.39m OD.

3.11.2 ***Phase 2:*** the earliest features within the trench were a mortar-filled hollow (***1010***), and a V-shaped ditch (***1006***). The hollow was located towards the south-west end of the trench. It was not clear whether this feature was formed through human agency, or whether it was natural. Lying just to the north-east was ditch ***1006***, which was aligned east/west (Fig 13). Where the ditch entered the trench from beneath the retaining wall, a lead pipe, within cut ***1006***, had been cut flush with the side of the wall. It would appear likely that the pipe was fed from the nearby cistern/well, and supplied water to the museum.

Plate 14: Trench 10 viewed from the south-west

3.11.3 ***Phase 3:*** a stone-built culvert or conduit (***1007***), 1.1m wide and 0.43m high, was exposed at the north-east end of the trench. This had been cut into the bedrock, and had stone walls with large slabs as capping (Plate 15); the culvert was still in use housing various more recent services. The trench was then sealed by a buried soil horizon, ***1002***, which had a maximum depth of 0.15m.

Plate 15: Culvert/conduit 1007 at the north-east end of the trench

3.11.4 Entering the trench at the south-west end, and following the course of the retaining wall, was a shallow gully (***1004***) cutting into layer ***1002*** (Fig 13), and containing a 2" (50mm) cast-iron water pipe. The pipe originally supplied water to the disused toilet block located to the south of the trench.

3.11.5 The latest feature exposed within the trench was a deep service trench (***1008***), which contained a modern replacement for pipe ***1004***. This feature entered the trench from the south-east side, and ran along the south-east edge, cutting through hollow ***1010*** and ditch ***1006*** (Fig 13).

3.11.6 Sealing the trench was a sand/cement layer (***1001***), which had originally been used as the bedding layer for a stone slab surface that had been removed prior to the excavation of this area.

3.12 TRENCH 11

3.12.1 Trench 11, aligned north-north-east/south-south-west, was located to the west of the well/cistern and between Trenches 16 and 12/14 (Fig 2). The trench measured 1m by 1m, and was excavated to a maximum depth of 0.23m (107.09m OD). The solid geology (***1102***) was exposed at the base of the trench lay, at a minimum depth of 0.07m below the present ground surface. No archaeological features were present within the trench.

3.13 TRENCH 12

3.13.1 Trench 12, aligned north-north-east/south-south-west, was located adjacent to Trench 14 and the well/cistern (Fig 2). The trench measured 1m by 1m, and was excavated to a maximum depth of 0.80m (106.72m OD). The modern ground level lies at a height of between 107.38m to the north and 107.11m OD to the south. The solid geology (***1206***) was exposed at a height of 106.92m OD.

*Plate 16: Trench 12, showing rock-cut feature **1207***

3.13.2 ***Phase 1:*** a shallow-rock cut feature (***1207***) was noted running north-east/south-west across the trench (Plate 16). Although quite subtle in character, it extended in the same direction across Trench 14, where it was much more pronounced.

3.13.3 ***Phase 2:*** feature ***1207*** and the bedrock were sealed below a layer of dark-brown, sandy-silt, (***1205***).

3.13.4 ***Phase 3:*** layer ***1205*** was sealed below a coarse deposit (***1202***), which was some 0.30m deep, and contained a high percentage of stone. It seems possible that this may have been deposited as a levelling horizon for the overlying footpath (***1203***/***1204***). The uppermost deposit was topsoil layer ***1201***.

3.14 TRENCH 13

3.14.1 Trench 13 was aligned north-east/south-west, and was located between the well and the retaining wall overlooking Trench 15 (Fig 2). The trench measured 1.05m by 1m, and was excavated to a maximum depth of 1.04m (106.57m OD). The modern ground level lies at a height of between 107.68m to the north-east and 107.40m OD to the south-west. The solid geology (***1307***) was exposed in the base of the trench, which lay at a minimum depth of 0.83m below the modern ground surface. The first significant archaeological deposits were encountered lay at 107.19 OD.

*Plate 17: Trench 13, showing surface **1304***

3.14.2 ***Phase 1:*** the earliest feature (***1306***) within the excavated trench was exposed in the south-west corner (Fig 14), and was cut directly into the underlying bedrock (***1307***). Feature ***1306*** was 0.27m deep and over 0.30m wide, and may have represented a posthole, although this was not established with confidence.

3.14.3 Feature ***1306*** was sealed by a crude surface (***1304***), which was composed of mortar sandy-silt (Plate 17), and contained fragments of medieval pottery. This was overlain by deposit ***1303***, which was 0.25m thick and contained fragments of medieval pottery, glass, animal bone, and metal objects.

3.14.4 ***Phase 2/3:*** deposit ***1303*** was sealed by layer ***1302***, and topsoil ***1301*** (Fig 14). Neither of these deposits yielded any artefacts, although it seems likely that they were of late post-medieval or modern origin.

3.15 TRENCH 14

3.15.1 Trench 14, aligned north-north-east/south-south-west, was located immediately south-west of the well/cistern, and adjacent to Trench 12 (Fig 2). The trench measured 1.63m by 1.3m, and was excavated to a maximum depth of 0.78m (106.72m OD). The modern ground level lies at a height of between 107.50m to the south-west and 107.56m OD to the north-east. Solid geology, ***1307***, was located in the base of the trench, at a minimum depth of 0.47m below the modern ground surface. The first significant archaeological deposits were exposed at a height of 106.99m OD.

*Plate 18: Trench 14, showing feature **1404** and mortar deposit **1406***

3.15.2 ***Phase 1:*** the earliest feature (***1404***) exposed within the trench was cut into the underlying bedrock (Plate 18). The feature had near vertical sides and a maximum depth of 0.17m. The single fill, ***1403***, was demarcated at its top by a lens of sand. This feature appeared to be the continuation of ***1207*** seen in Trench 12.

3.15.3 ***Phase 2/3:*** cutting into ***1403*** at the south-east end was another rock-cut feature (***1407***), which was aligned south-east/north-west (Fig 15). It was filled with a deposit of degraded mortar (***1406***). This was overlain by fill ***1405***, and sealed by layer ***1402*** (Fig 15). None of these deposits yielded any finds, and it has not been possible to ascribe firmly a date to their origin. The uppermost deposit comprised topsoil ***1401***.

3.16 TRENCH 15

3.16.1 Trench 15 was aligned north-east/south-west, and was intended to investigate the grassed bank between the museum and former North West Sound Archive building (Fig 2); the trench incorporated Trench 9 that was excavated as part of the initial evaluation. Trench 15 measured 7.17m by a maximum of 5m wide, and was excavated to a maximum depth of 1.26m (Plate 19). The trench was placed on a steeply pitched gradient, which sloped down to the south-east. The modern ground level on the north-western edge lay between 107.46m and 107.6m OD, rising to 107.86m OD. The south-eastern edge of the trench at the base of the bank lay between 105.48m and 105.73m OD. Solid geology ***1501*** was exposed at a height of between 106.35m OD and 105.48m OD. The first significant archaeological deposits were encountered at a height of 106.00 OD on the north-west side of the trench, some 0.62m below the modern ground level, but significantly lower towards the south-east edge of the trench.

Plate 19: View of Trench 15 from the roof of the museum, facing north.

3.16.2 ***Phase 1:*** the excavation of Trench 15 revealed the remains of a building, probably medieval in origin and likely to have resulted from several developmental phases, although the absence of significant vertical stratigraphy precluded any detailed analysis of the structure. However, it was clear that several different building techniques had been employed, including a masonry wall, timber cill beam, and wooden post construction; it was not clear whether the stone wall, which also acted as a retaining wall, was contemporary with the wood-bearing features, or whether it represented a later phase.

3.16.3 Layer ***1537*** was revealed within the north-western part of the trench (Fig 16), and seemingly represented the earliest archaeological activity. This layer yielded a single sherd of Northern Gritty ware pottery, and appeared to have

been the remnants a medieval soil horizon that was later truncated by construction of a stone wall (***1535***), which lay within foundation trench ***1539***. Stone wall ***1535*** was aligned north-east/south-west, and acted as a retaining wall, demarcating the terraced area to the south-east. The wall itself survived to a height of 0.6m and was 0.45m wide, and was constructed from large roughly hewn rocks and bonded by sandy yellowish-brown mortar. The south-east face of the wall had been treated with lime-wash/plaster facing.

3.16.4 Located toward the south-west end of the trench and partially truncated by later activity, was a group of four north-west/south-east-aligned, shallow beam slots (Plate 20). The most south-westerly (***1510***) was 1.1m long and 0.25m wide, and incorporated a circular posthole (***1512***) at the north-west end (Fig 16). Beam-slot ***1514*** was somewhat longer, and spaced equidistant from ***1510*** and the adjacent beam slot to the north-east (***1524***). Beam slot ***1524*** was just over 1m long, and was only well defined on three sides. The last beam slot of the group (***1522***) extended beyond the limits of excavation (Fig 16). It was not clear whether the slots represented several different phases of activity, or whether the slots supported timber cill beams used for bearing walls and also for supporting floors.

*Plate 20: Beam slots **1510** and **1514**, and posthole **1512***

3.16.5 The beam slots appeared to be associated with a suite of north-east/south-west-aligned features, including postholes ***1526***, ***1518***, ***1530*** and ***1532***, and rock-cut linear feature ***1538*** (Fig 16). Another posthole, ***1528***, was located partially in the south-east-facing section of the trench. None of the postholes measured in excess of 0.26m in diameter.

3.16.6 Some indication of phasing or changes in the building was hinted at in the form of a sub-circular rock-cut pit, ***1506***, which was 1.15m in diameter and 0.25m deep (Fig 16). The stony fill, ***1507***, contained two sherds of pinky-buff gritty ware pottery (Fabric 5).

3.16.7 The building appeared to have been abandoned at some stage, as the structural features were sealed below a layer of yellowish-brown sandy-silt. This process must have happened once wall ***1535*** had been reduced to its current height as ***1502*** can be seen to descend southwards from the lip of wall ***1535***.

3.16.8 ***Phase 2:*** there is some evidence to suggest that the building, if not the plateau area, remained in use for quite sometime, as indicated by a patch of dark grey mortar, ***1520***, with a single Yorkstone paving block adhering to it, partially situated above linear feature ***1538***. Similar mortar was recognised in other areas of the site as being of more recent origin, possibly nineteenth century. It is equally likely, given the scant evidence for floor and other surfaces within this trench, that feature ***1520*** represented a much later phase of activity, possibly steps down to the museum building.

3.16.9 A large gully (***1505***) was cut through layer ***1502***. This feature was 0.76m deep at the north-east end, and was filled by layer ***1503***, which was also present throughout the trench.

3.16.10 ***Phase 3:*** lying above deposit ***1503***, and located alongside the retaining wall at the south-west end of the trench, was a north-west/south-east-aligned lead water pipe, ***1515***. The pipe and layer ***1503*** was sealed by layer ***1534***, and the topsoil (***1504***).

3.17 TRENCH 16

3.17.1 Trench 16 was aligned north-east/south-west, immediately adjacent to the retaining wall to the south-west of the former Sound Archives building (Fig 2). The trench measured 1.5m square, and was excavated to a maximum depth of 0.23m (107.43m OD); the modern ground level is at 107.63m. The solid geology (***1604***) was exposed in the base of the trench. The first significant archaeological deposits were encountered at a height of 107.42m OD. No remains of a medieval date were exposed within the trench.

3.17.2 ***Phase 2/3:*** lying immediately above the solid geology were two discrete patches of mortar. Extending from the south-west section was yellowish mortar layer ***1602*** (Fig 17), while a short distance to the east was another patch of harder dark grey mortar (***1603***). No date could be firmly ascribed to the deposition of these patches of mortar, although ***1602*** was probably of post-medieval origin, whilst ***1603*** was characteristic of a nineteenth-century date. The trench was sealed by a layer of topsoil (***1601***).

3.18 TRENCH 17

3.18.1 Trench 17 was aligned north-east/south-west, and was located several metres to the south-east of Trench 16 (Fig 2). The trench measured 1.5m by a maximum of 1.6m, and was excavated to a maximum depth of 0.96m (107.43m OD). The modern ground level lay between 107.61m in the south-west, rising to 108.01m OD in the north-east. The solid geology (***1707***) was exposed at the base of the trench. The first significant archaeological deposits were encountered at a height of 107.19m OD.

3.18.2 ***Phase 1:*** the bedrock in the south-western half of the trench was sealed beneath a layer (***1705***) of dark-grey, slightly gritty silt, which contained numerous fragments of medieval pottery. Partially overlying deposit ***1705***, and extending to the north, was a dark grey, clay sandy-silt, ***1704*** (Fig 17). This layer also yielded medieval pottery, and also contained a large amount of crushed shell, the latter characteristic probably indicating that it was in use as a surface. Layer ***1704*** was overlain in the central part of the trench by a discrete patch of mortar, ***1703*** (Fig 17), which possibly represented the remains of a surface.

Plate 21: Trench 17, looking north-east

3.18.3 ***Phase 2:*** layer ***1703*** was overlain by layer ***1702*** and stone deposit ***1706***. These seemingly represented post-medieval activity.

3.18.4 ***Phase 3:*** the uppermost deposit within the trench was garden soil ***1701***. This was cut by a north-east/south-west-aligned service trench, which contained a ceramic pipe.

3.19 TRENCH 18

3.19.1 Trench 18 was aligned approximately east/west, and was placed between the former Sound Archives building and the north/south-aligned range of outbuildings (Fig 2). The trench measured 6.7m by a maximum of 4.35m, and was excavated to a maximum depth of 0.59 m (108.09 OD). The modern ground level lay at 108.79m OD. The trench was excavated down to the base of the solid geology, ***1817*** (Plate 22). The first significant archaeological deposits were at a depth of 0.11m below modern ground level (108.68m OD).

*Plate 22: Looking east across Trench 18, showing beam slot **1815** to the right*

3.19.2 ***Phase 1:*** the earliest features exposed within the trench were a beam-slot (***1815***) that was cut into the bedrock, and a surface (***1810***) composed of trampled material lying above the bedrock. Neither of these features yielded any finds, precluding the availability of any dating evidence, although they were both considered to be possibly of medieval origin.

3.19.3 Beam-slot ***1815*** measured over 2.7m long by 0.3m wide, and was aligned west-north-west/east-south-east (Fig 18). It was not clear whether surface ***1810*** was earlier or contemporary with the beam slot. Another similar surface (***1816***) was located toward the south-east corner of the trench (Fig 18). A raised area of bedrock (***1803***), aligned north/south and located along the east side of the trench, may have acted as a plinth supporting a now lost wall.

3.19.4 ***Phase 2:*** surfaces ***1810*** and ***1816*** were overlain by a series of further surfaces, or their foundation layers. The earliest of these, ***1811***, was found sporadically across the central part of the trench, and comprised compacted sandy-silt with abundant stone inclusions. This deposit appeared to have acted as the foundation layer for fragmented mortar surface ***1809***, which comprised hard, very light grey, slightly sandy mortar. A later surface, ***1812***, stony in character and with a yellowish hue, overlay ***1809*** at the west end of the trench.

3.19.5 ***Phase 3:*** evidence for the erection of the former Sound Archive building was provided by foundation trench ***1818***. Prior to the excavation of Trench 18, an arch had spanned the gap between the former Sound Archive and the northerly range of outbuildings. The arch was dismantled prior to the excavation of the trench, although part of the structure survived as a short stretch of stone wall, ***1807***, bonded with dark grey mortar. The wall had been placed within a construction trench (***1808***) cut into the bedrock. Other features likely to be associated with the erection of the arch was a north/south-aligned kerb (***1804***), fronting the east side of the trench, and an associated drain. A second kerb (***1802***) was observed curving round from bedrock ***1803*** and abutting the wall of the former Sound Archive building. The area between the kerb and plinth was filled with garden soil, ***1801***, contained within a cut (***1819***) hewn out of the bedrock; it was unclear whether this was an earlier feature that had been re-used as a flower bed.

3.19.6 The northern third of the trench was taken up with a series of earlier and more recent (twentieth-century) services, which were contained within an east/west-aligned cut (***1821***). The earliest service was a lead pipe, which had then been overlain by two episodes of ceramic drain laying and the insertion of an electricity cable (***1805***). Another service trench, ***1806***, containing a gas main, extended from the southern edge of the trench in a north-easterly direction.

3.20 WATCHING BRIEF RESULTS

3.20.1 ***Castle keep:*** several stages of archaeological watching brief were implemented during the course of the development programme (Fig 2). The first of these was carried out in March 2007, and monitored the removal of the tarmac footpath around the northern part of the castle keep (Plate 23). The tarmac had been laid on a modern levelling layer, which was left *in-situ*; no archaeological remains were exposed.

Plate 23: Removing the tarmac surfacing from around the castle keep

3.20.2 ***Museum area:*** in April 2007, a second stage of the watching brief monitored the removal of the flagstones that formed a surfaced path to the rear of the museum (Fig 2). This work was carried out in advance of the installation of a new drainage system. The flagstones were removed manually, and the underlying deposit was cleaned to allow for the identification of any archaeological deposits. The path lies at a reduced level, so it was anticipated that any archaeological remains beneath the path would have been destroyed during the construction of the present museum. However, whilst the solid geology was exposed immediately beneath the flagstones, one sub-circular feature was identified (Plate 24). This feature was very shallow, and had almost certainly been heavily truncated when the ground had been reduced, which was presumably associated with the contruction of the present museum. Partial excavation of the exposed feature yielded no finds, precluding close dating, although it is possible that the exposed feature was of medieval origin.

Plate 24: Removal of the flagstones to the rear of the museum in April 2007

3.20.3 In November 2007, another stage of the watching brief monitored the excavation of a narrow trench running along the western side of the museum (Fig 2), which was associated with the installation of the new drainage system. This trench was 6.80m long and 1m wide, and was excavated to a maximum depth of 0.5m. Bedrock was exposed at the base of the trench, and was overlain by thin deposit of seemingly modern origin, which provided a bedding layer for the overlying flagstones. No features of archaeological interest were exposed, and no finds were recovered from the trench.

3.20.4 ***Driveway works:*** the replacement of an existing drain that lay beneath the main driveway was also monitored by an archaeological watching brief. This work was carried out in November 2007, and necessitated the excavation of a trench measuring 1m wide with a maximum depth of 1.08m along the driveway between the museum and the main entrance gateposts. Initially, a 11.9m long section was excavated mechanically along the upper part of the entrance driveway (Plate 25). The solid geology was exposed at a maximum depth of 0.65m, and was overlain by a light greyish-brown layer. This was sealed beneath a layer of small and medium-sized stones, which presumably represented a make-up for the modern driveway surfacing. The excavation of this section of the trench yielded no finds and no archaeological features were identified, although a gas pipe was visible in the north-west section of the trench at a depth of 0.30m.

Plate 25: The service trench excavated along the upper part of the driveway

3.20.5 Another section of the trench was excavated subsequently along the lower part of the driveway (Fig 19). This section of the trench was 6.80 m long, 1.8m wide and was excavated to a maximum depth of 1.08m. It similarly contained a modern service pipe, demonstrating that the new service route lay within the backfill of an earlier trench. The solid geology was not exposed at the base of the excavated trench, as the depth of excavation was determined by the requirements of the drainage system.

3.20.6 The earliest archaeological deposit encountered was a layer of loose, light brown soil, which was exposed at a depth of 0.85m. This deposit had seemingly been cut by a stone-built culvert or conduit, which was 1m wide,

and was exposed at a depth of 0.65m, some 4.15m from the end of the service trench. The structure was aligned north-west/south-east, and incorporated large stone slabs as capping stones. It was filled with a light yellowish-brown deposit, and contained a single fragment of medieval pottery, to which a twelfth- or thirteenth-century date may be ascribed.

3.20.7 Further along the trench towards the museum, a small patch of compacted clay with traces of burning was exposed at a depth of 1m (Fig 19). The clay extended for a distance of 0.6m along the trench, although this clearly did not represent the full dimensions of the deposit. Some 3m to the south of the clay, and at a maximum depth of 1.08m below the modern ground surface, several large, squared stone blocks were exposed (Plate 26). These lay in the layer of loose, light brown soil, and were seemingly distributed randomly, suggesting that they represented a demolished stone wall. A single fragment of thirteenth-century pottery was recovered from between the stones, although no other artefacts were recovered.

Plate 26: Stone exposed in base of trench

3.20.8 The uppermost excavated deposits comprised a 0.30m thick layer of rubble, sealed beneath a layer of concrete, which had enveloped the service pipe. These deposits were present along the entire length of the excavated trench, and were sealed by the tarmac surface of the driveway.

4. FINDS

4.1 INTRODUCTION

4.1.1 In total, 1006 artefacts were recovered during the archaeological investigation. The material categories were dominated by pottery and animal bones, together with a small range of metalwork objects, fragments of clay tobacco pipes, ceramic building materials, and glass. Craft objects were also identified, among which was a possible hone stone or needle sharpener, and a fragment of antler-working waste. Building materials included fragments of stone roof slates, bricks and mortar fragments.

4.2 MEDIEVAL POTTERY

4.2.1 In total, 197 sherds of medieval pottery, weighing 1.334kg, were recovered. In broad terms, the pottery was in good condition, and whilst many of the individual fragments were small, they displayed little evidence of abrasion. As might be expected, the bulk of the medieval assemblage comprised vessel body sherds, although a variety of diagnostic rims, handles, and bases were also retrieved. Only a few sherds are decorated, suggesting the assemblage is dominated by utilitarian wares.

4.2.2 The medieval pottery of Lancashire is not well known, and well-stratified sequences are rare (Edwards 2000), in part reflecting the small number of medieval sites in the county that have been subject to formal archaeological excavation (Newman 2006, 138-43). Thus, although the scale of the excavations carried out at Clitheroe Castle was modest, the quantity of pottery was comparatively large, representing an assemblage of regional significance. Eight fabric types were identified within the assemblage, although some of them were only represented by a single sherd.

- *Fabric 1*: formed the largest component within the assemblage (92 sherds), and comprised a partially-reduced white-buff or grey fabric, containing sparse grits, with a pale apple green glaze, sometimes with a yellowish hue. There were few diagnostic sherds, other than a handle and several base sherds. The handle and another thumbed sherd, representing the handle/body join, indicate that jugs were part of the repertoire. A sooted sherd would indicate a cooking pot. Almost all of the Fabric 1 sherds derived from Trench 2, close to the castle keep, the three exceptions were recovered from the area to the rear of the museum. Based on well-stratified and securely dated assemblages from other sites in the North West, such as Carlisle and Lancaster, similar partially-reduced pottery has been dated broadly to between the late twelfth and fourteenth centuries, becoming dominant in the thirteenth century (McCarthy and Brooks 1992, 24, 28-9; Brooks 1999, 102). It is perhaps likely that this fabric type was manufactured locally, although currently it cannot be attributed to a specific production centre.

- *Fabric 2*: was an orange to pink gritty fabric, with the majority of the sherds being partially-reduced. This fabric represented the second largest assemblage from the site, some 50 sherds, and belongs to the widespread Northern Gritty ware tradition. Few diagnostic sherds were recovered, but the small assemblage did include six sherds with sooted exteriors, indicating their use as cooking pots. Typologically, a twelfth- to thirteenth-century date may be ascribed to this fabic (McCarthy and Brooks 1992). It is possible that some of the sherds were derived from the nearby production site at Samlesbury (Wood *et al* forthcoming).

- *Fabric 3:* was a fully reduced sandy fabric, with a distinctive white band below the olive green glaze. A single sherd was recovered from layer ***502.*** This type of pottery is broadly datable to the fourteenth century onward, and can continue into the post-medieval period. The sherd from layer ***502*** has been tentatively identified as Humberware.

- *Fabric 4*: this fabric has been split into two sub-categories (a and b), representing the two main types of material recovered from the nearby production site at Samlesbury. Fabric 4a comprises a gritty ware and was represented by six sherds, and 4b, a sandy ware, was represented by only two sherds. Given the proximity of this production centre to Clitheroe, it seems likely that there were far more Samlesbury-type sherds within the assemblage, but the lack of the distinctive rim forms precluded their positive identification. The majority of the sherds were from Trench 6, with only single sherds coming from Trenches 2 and 5. The broad dating for the Samlesbury material is from the thirteenth to fifteenth century (Wood *et al* forthcoming).

- *Fabric 5*: a pinky-buff, gritted fabric, generally unglazed, although two sherds were noted with an apple green glaze. The everted rims and the number of sooted sherds suggest that jars and cooking pots were the dominant forms. A date range between the late twelfth and fourteenth century can be ascribed to this type;

- *Fabric 6:* a sandy fabric, either oxidised or partially reduced, with, in some cases, an olive green glaze. One base sherd was observed amongst the six recovered, and possibly represented another example of Humberware.

- *Fabric 7:* was a shell-tempered, partially-reduced fabric. This type of pottery is very rare in the North West, and is almost certainly an import from the East Coast, with the most likely provenance being Lincolnshire. This imported pottery may have arrived in Clitheroe via the trans-Pennine route that connected the de Lacy estates in the West with those in Pontefract (Moorhouse 1987, 108). Such pottery east of the Pennines has a long date range from the Anglian period into the later medieval period. However, given the other material from Clitheroe, a twelfth- to thirteenth-century date would be likely.

Trench	Context	Phase	Count	Fabric	Date range
1	***108***	1	1	5	12th – 14th century
2	***203***	1	75	1	12th – 14th century
2	***203***	1	9	2	12th – 13th century
2	***203***	1	1	3	14th – 17th century
2	***203***	1	1	4	13th – 15th century
2	***205***	1	14	1	12th – 14th century
2	***205***	1	3	2	12th – 13th century
2	***207***	1	2	5	12th – 13th century
3	***302***	1	1	7	12th – 13th century
4	***402***	2	3	2	12th – 14th century
5	***502***	2	3	2	12th – 13th century
5	***502***	2	1	3	14th – 16th century
5	***503***	2	1	2	12th – 13th century
5	***551***	3	1	2	12th – 13th century
5	***553***	2	1	2	12th – 13th century
5	***554***	2	1	1	12th – 14th century
5	***554***	2	1	4b	13th – 15th century
5	***554***	2	1	5	12th – 14th century
5	***559***	2	3	2	12th – 13th century
6	***602***	2	1	2	12th – 13th century
6	***602***	2	1	6	14th – 16th century
6	***604***	2	1	2	12th – 13th century
6	***604***	2	1	4a	13th – 15th century
6	***604***	2	1	5	12th – 13th century
6	***604***	2	2	6	14th – 16th century
6	***607***	2	2	1	12th – 14th century
6	***607***	2	3	2	12th – 13th century
6	***607***	2	4	4a	13th – 15th century
6	***608***	1	1	2	12th – 13th century
6	***608***	1	10	5	12th – 14th century
6	***609***	1	2	2	12th – 13th century
6	***609***	1	1	4b	13th – 15th century
6	***609***	1	11	5	12th – 14th century
6	***654***	1	2	2	12th – 13th century
7	***701***	3	1	2	12th – 13th century
7	***702***	2	3	5	12th – 13th century
7	***702***	2	1	6	13th – 14th century
7	***702***	2	1	7	12th – 14th century
7	***754***	2	3	2	12th – 13th century
7	***754***	1	2	5	12th – 13th century
7	***754***	1	2	2	12th – 13th century
13	***1302***	2?	1	2	12th – 13th century
13	***1302***	2?	2	5	12th – 14th century
14	***1401***	3	1	2	12th – 13th century
14	***1402***	3	2	2	12th – 13th century
15	***1503***	2	2	5	12th – 14th century
15	***1537***	1	1	2	12th – 13th century
17	***1701***	3	2	2	12th – 13th century
17	***1705***	1	1	2	12th – 13th century
17	***1705***	1	1	6	14th – 16th century
WB	***U/S***	-	1	2	12th – 13th century
WB	***U/S***	-	1	2	12th – 13th century
TOTAL			197		

Table 1: Medieval pottery by context and period, with suggested date ranges

4.2.3 Analysis of the assemblage would suggest a broad date range of between the twelfth and fifteenth centuries, with a possible *floruit* beginning in the twelfth or thirteenth centuries on the keep, and perhaps during the thirteenth and fourteenth centuries for the trenches to the rear of the museum. However, it should be noted that a number of factors make precise dating difficult, amongst them the small amounts of pottery produced by individual contexts (with the exception of ***203*** (Trench 2)), the lack of well-dated comparative material from other sites, and the lack of other classes of datable find.

4.2.4 Fabrics 1 and 2 were stratigraphically the earliest fabrics found within the castle. The ubiquitous Northern Gritty ware (Fabric 2) which is found throughout the North West and Fabric 1, which was abundant in Trench 2, adjacent to the castle keep, but rarely occurred in the trenches to the rear of the museum, suggesting that this type of pottery was early in the sequence. The only well-stratified sequence of deposits to rear of the museum was within Trench 6. This showed a clear sequence of medieval deposits, probably laid down within a building, which ended with collapse or removal of the roof, represented by ***608***. Thereafter, the archaeological deposits yielding pottery contained residual medieval material alongside post-medieval wares. One of the layers within the medieval sequence, ***609***, contained several cooking pot sherds, all of Fabric 2. When considered alongside the bone assemblage, this hints at a proximity to the kitchens, although a deposit of organic silt could equally suggest that part of the building had been abandoned and was being used as a midden. The overlying layer also contained fragments of cooking pots, suggesting some contamination between the two deposits (***608*** and ***609***). Material from the other trenches to the rear of the museum tended to be in much smaller quantities. Trench 5, which produced well-preserved structural remains, including substantial walls and a later fireplace, had been disturbed by later activity and was not excavated to the same depth as Trench 6, and only produced pottery from demolition deposits.

4.2.5 There were few later medieval wares, for instance Reduced Greenwares, represented within the assemblage, although sherds of possible Humberware were identified. Imports of any sort, whether national or international, are rare in northern Lancashire, but are known from sites further to the east, within the Aire Gap. Humberware and Cistercian ware from the Wrenthorpe kilns, near Wakefield, for example, have been recovered from the Pendle area (Moorhouse and Roberts 1992, 109). The two sherds of Cistercian ware from the site (*below*) are likely to be sixteenth century or later in date, whilst the preponderance of undecorated jars and cooking pot fragments suggest an early date for the medieval assemblage. The assemblage as a whole revealed little variation in vessel form, with jars and cooking pots dominating, although jugs were present.

4.2.6 In conclusion, the Northern Gritty wares (Fabrics 2 and 5) would suggest a twelfth-century date for the start of the sequence of activity. Indeed, the large quantity of Fabric 1 pottery from Trench 2 would suggest quite intense occupation at this early date, particularly as this fabric also came from a feature sealed below layer ***203***, which yielded a large group of pottery. The presence of Northern Gritty ware (Fabric 2) amongst the Fabric 1 material

from this context, and the small amount of Fabric 2 from the rear of the museum, might suggest that Fabric 1 was also quite early, perhaps twelfth- or thirteenth-century in origin.

4.2.7 To the rear of the museum, stratified pottery was found in several trenches not directly connected with the structures in Trenches 5 and 6, for example Trenches 13 and 17, but it tended to be associated with deposits within the enigmatic rock-cut features, or within discrete layers. The largest assemblage from any stratified medieval context came from layer ***607***, suggesting a partial abandonment of the building. It comprised two sherds of Fabric 1, sherds of Northern Gritty ware (Fabric 2), and Samlesbury ware (Fabric 4a). The presence of the Samlesbury material suggests deposition at some point in the thirteenth- or fourteenth-century. This would tie in with the decline of the castle's military importance in the fourteenth century (Adams 2006, 180). Furthermore, the demolition layers, particularly layer ***604***, which contained Cistercian ware, residual medieval and a single sherd of seventeenth-century pottery, could tentatively be ascribed to the early seventeenth-century collapse of this part of the castle.

4.3 POST-MEDIEVAL POTTERY

4.3.1 In total, 102 sherds of post-medieval pottery were recovered from 17 contexts across the site. The assemblage presents a typical range of post-medieval pottery types, and includes both kitchen and table wares. The earliest material dates to the sixteenth or seventeenth centuries, and includes small amounts of Cistercian wares, Blackwares and Staffordshire Slipware. By far the most common fabric was unglazed red earthenware, which is likely to have been manufactured locally. Unsurprisingly, the bulk of the post-medieval pottery was recovered from the trenches to the rear of the museum, an area which was known to have been used as a garden in the eighteenth century (Edwards 1984). This factor may suggest that much of the pottery reached its place of depposition as a result of domestic midden clearance and spreading.

4.3.2 The earliest post-medieval pottery was represented by three sherds of Cistercian ware, which were recovered from the trenches to the rear of the museum. One of these, a small rim sherd in a white fabric from stony deposit ***553*** (Trench 5, Phase 2) was too small to be of any interpretative value, other than indicating that it was probably not made in Yorkshire. The second sherd can be identified with some certainty as deriving from the kilns at Wrenthorpe, near Wakefield. The sherd was likely to be from a Type 3 tankard (Moorhouse and Roberts 1992, 107-9), although the decoration resembles that seen on Type 1 posset pots (*op cit*, Table 9). Both forms were common in the sixteenth century. This find reinforces the suggestion that the area was importing ceramics from Yorkshire, and is one of several fragments of Cistercian ware discovered in the vicinity of Clitheroe. The others were from Sawley Abbey and the Pendle Heritage Centre (*ibid*). The third fragment, recovered from layer ***1302*** (Trench 13, Phase 2), could not be firmly identified as a Cistercian ware product, and could be a later Blackware. The fragment was a base sherd with foot ring, but appeared to be a production waster, with an over-fired glaze, suggesting that it might have been manufactured in the locale. The

closest known pottery production site is at Samlesbury, whose *floruit* was in the thirteenth and fourteenth centuries. However, a few sherds of post-medieval pottery recovered from the Samlesbury area similarly exhibited signs of being wasters, suggesting that a later production centre existed in the area (Wood *et al* forthcoming). Blackwares developed from the Cistercian tradition during the early seventeenth century and were characterised by a smooth brick-red fabric and vitreous black glaze. Fragments of Blackware vessels were recovered from various layers across the site.

4.3.3 Layers ***207*** (Trench 2, Phase 2), ***601*** and ***603*** (Trench 3, Phase 3) yielded fragments of Mottled ware; a buff-bodied earthenware covered with a streaked, mottled brown lead glaze, which is frequently found in deposits of an early to mid-eighteenth-century date. It is conceivable that the Mottled ware was manufactured at Prescot, Merseyside, where such wares were produced from the early eighteenth century (Davey 1987). Layers ***207*** and ***502*** (Trench 5, Phase 2) also yielded fragments of Staffordshire Slipware, of late seventeenth- or early eighteenth-century date. The occurrence of the Staffordshire material indicates an element of trading with the Midlands.

4.3.4 A small fragment of a tin-glazed earthenware vessel with a bluish glaze was recovered from the topsoil (***701***) in Trench 7. A late seventeenth- or early eighteenth-century date may also be ascribed to this fragment. This vessel may have been a product of the Delftware industry in Liverpool, which was well established by the early eighteenth century (Davey 1987).

4.3.5 The later tablewares (late eighteenth to twentieth century) were mainly Pearlwares (16 sherds) and white earthenware decorated with transfer-prints, with a single sherd of porcelain. The later kitchenwares were dominated by dark-glazed earthenwares, predominantly storage jars.

4.4 CLAY TOBACCO PIPE

4.4.1 In total, 13 fragments of clay tobacco pipe were recovered during the archaeological investigation. Most of the fragments were pipe stems, probably dating to the eighteenth and nineteenth centuries. However, one almost complete pipe bowl from layer ***207*** (Trench 2, Phase 2) is likely to date from the first quarter of the seventeenth century.

4.5 CERAMIC AND OTHER BUILDING MATERIALS

4.5.1 Some 40 fragments of ceramic building material, and seven pieces of mortar, were retrieved during the course of the excavation. Much of it was recovered from Trenches 6 and 9, and in the case of the latter there was substantial layer of building rubble. A lot of the material was undiagnostic, although some fragments of hand-made brick were identified, particularly from topsoil ***601*** and rubble ***904***. These fragments had been formed from mixed clay and were badly legivated, and may be ascribed a sixteenth-century date. The mortar fragments were derived Trenches 6 and 9, with several large chunks being recovered from layer ***608***.

4.6 GLASS

4.6.1 Ten fragments of glass were recovered from the excavated trenches, including three fragments of bottle glass, six fragments of window glass, and a single melted fragment. All of glass was derived from Phase 3 deposits, and are likely to date from the nineteenth and twentieth centuries.

4.7 METALWORK

4.7.1 In total, 24 metalwork objects were recovered from the excavated trenches and subject to conservation assessment. The assemblage comprised 13 fragments of copper alloy, ten of iron, and one zinc object (Table 2). The ironwork was moderately to highly corroded, but mostly found to be stable, with only a few pieces (eg 607, 609) showing signs of cracking of the corrosion layers which might suggest continuing active corrosion. The copper alloy objects were moderately to highly corroded, but stable when examined. The roll of zinc was lightly corroded and stable.

4.7.2 Lightly corroded metals are defined as having a thin, often compact corrosion surface, sometimes with good patination, which obscures little of the object's form or surface detail. There is significant metal remaining below the corrosion surface. Moderately corroded metals are defined as having the surface detail, but not usually the general form of the object, obscured by corrosion products, and has some metal remaining below the corrosion. Highly corroded metallic objects haveboth the form and the surface detail of the object obscured by corrosion, and/or having little or no metal remaining in its core.

CTX	MATERIAL	OBJECT	CONDITION	QUANT	XR NO
609	Fe	?nail	highly corr/stable	1	5690
609	Fe	?blade	moderately corr/stable	1	5690
1811	Fe	?bar	moderately corr/stable	1	5689
667	?Fe corr	frag	highly corr/stable	1	5690
607	Fe	nails?	moderately corr/stable	2	5689
604	Fe	nail	moderately corr/stable	1	5690
607	Fe	?	mod corr/cracking	1	5690
565	Fe	nail	moderately corr/stable	1	5689
1304	Fe	nails?	moderately corr/stable	2	5689
609	Fe	nails + ?	highly corr/st/cracking	4	5690
752	Fe	nail	moderately corr/stable	1	5690
650	Fe	nails	moderately corr/stable	2	5690
565	Fe	sheet frag?	highly corr/stable	1	5690
1500	Zinc	rectangular tube	lightly corr/stable	1	none
609	Fe/CuA	barrel lock	highly corr/stable	1	5691
203	CuA	brooch pin?	moderately corr/stable	1	5691
565i	CuA	frags	highly corr/stable	6	5691
565ii	CuA	vessel rim?	highly corr/stable	1	5691
565iii	CuA	vessel rim?	highly corr/stable	1	5691
565iv	CuA	frag	highly corr/stable	1	5691
565v	CuA	frag	highly corr/stable	1	5691
565vi	CuA	frag	highly corr/stable	1	5691
565vii	CuA?	frag	highly corr/stable	1	5691

Table 2: Summary of metalwork objects

4.7.3 ***X-Radiography:*** the objects were briefly visually examined to assess their condition and stability, to determine the material from which they were made, and to look for surface and technological detail. All objects, apart from the zinc roll, were sorted into groups of a similar density, which were X-rayed together.

4.7.4 Details of the artefacts examined were entered into a database, which includes the context and small finds number, an identification of the material and of the object, where possible, the condition of the object when examined, and its XR plate number (Table 1). Detailed conservation records are included as *Appendix 4*.

4.7.5 ***Results:*** many of the iron objects were revealed to be nails or parts of nails. Non-nail ironwork included part of a possible knife blade, a bolster or chisel, the top of a ?button and the iron/copper alloy barrel lock. This can be seen to have copper alloy plating or decoration covering parts of the iron lock. Little surface detail was revealed on the fragments of copper alloy ?vessel from context ***565***. These are clearly made from a high-lead copper alloy, and may also have been distorted by exposure to heat. The rectangular metal roll from context ***1500*** was surface analysed using EDXRF (energy dispersive X-ray fluorescence), and found to be made from zinc. As such, the object is highly likely to be post-medieval in date.

4.7.6 ***Storage:*** the material is packed for medium to long term storage. It should continue to be stored in an airtight container at a stable temperature and below 20% RH, to inhibit further corrosion. The RH should be controlled by active silica gel, which is regularly monitored and regenerated as necessary.

4.8 ANIMAL BONE

4.8.1 A small collection of animal bone, 570 NISP (Number of Individual Specimens) weighing a total of 5.411kg, was recovered from the initial evaluation trenches. The animal bones were derived from medieval, post-medieval, and unphased deposits (Table 3). In addition, 28 fragments were recovered from two soil samples, the remainder being hand collected. Despite the small number of actual fragments of animal bone, a diverse range of species was represented.

4.8.2 The material was rapidly assessed following English Heritage guidelines set out in Payne (1991), using reference collection held by the author. Red deer was separated from fallow deer following Lister (1996). The material from all periods was in very good condition, and although often fragmented, there was little to no erosion of the bone surface. The total sample size from the evaluation makes interpretative comment impractical, although it is noticeable that a appreciable number of deer bones were recovered even from this small sample of a high status site. In broad terms, it may be expected from a high-status site that the deer species would be represented by the hind quarters. This degree of analysis was not carried out as part of the assessment, and presents an opportunity for more detailed future analysis.

Species	Medieval	Post-medieval	Modern	Unphased	Total
Horse	2				**2**
Cattle	20	20	7	3	**50**
Pig	25	6	8		**39**
Sheep/Goat	5	7	4	1	**17**
Deer		1			**1**
Dog	3				**3**
Red Deer	7	2	1		**10**
Roe Deer	1	1			**2**
Red/Fallow Deer	1	1			**2**
Small mammal		3			**3**
Medium Mammal	75	40	6		**121**
Large Mammal	54	44	13	1	**112**
Unidentified Mammal	85	36	1		**122**
Dom. Fowl	11	5			**16**
Bantam	1		1		**2**
Goose	5	3			**8**
Swan		1			**1**
Mallard		1			**1**
Woodcock		1			**1**
Dom. Fowl/Pheasant	3	6	1		**10**
Corvus sp (crow)		3			**3**
Teal	1	1			**2**
Unidentified Bird	11	29	1	1	**42**
Microtus sp (vole)		2			**2**
Frog/Toad	1				**1**
Total	**311**	**213**	**43**	**6**	**570**
NISP Identified to a Species Level	311	210	43	6	570

Table 3: Number of Individual Specimens (NISP) by species and period recovered from the initial evaluation trenches

4.9 MOLLUSCS

4.9.1 A small assemblage of molluscs, comprising 35 fragments with a total weight of 277g, was recovered from the excavated trenches. The assemblage comprised oyster, cockles, mussels, and land snails (Table 4).

Species	Medieval	Post-medieval	Modern	Total
Oyster	3	4	6	**13**
Cockle	6	3	4	**13**
Mussel	2	3	1	**6**
Land snail	--	3	-	**3**

Table 4: Number of species by period

4.10 BONE OBJECTS

4.10.1 Two objects, a bone disc and a piece of antler working waste were recovered from levelling layer ***302***. Other fragments of antler working waste have been recovered from just below the keep during consolidation work in the 1980s (Ben Edwards, *pers comm*).

4.11 STONE OBJECTS

4.11.1 Some 14 objects of stone were recovered from the excavation. These included possible stone roof tile fragments, masonry, a rectangular stone with a polished surface, and a honestone/needle sharpener from levelling layer ***302***.

4.12 THE CHARRED AND WATERLOGGED PLANT REMAINS

4.12.1 Two samples taken during the course of the initial evaluation, and another 18 samples from the mitigation phase were selected for palaeo-environmental assessment. During the initial evaluation, one sample was taken from the fill (***108***) of a medieval pit in Trench 1, and a second derived from post-medieval layer (***607***) in Trench 6, thereby providing palaeo-environmental data for the two areas of the site. Ten litres of each was processed for the assessment of charred and waterlogged plant remains (Table 5).

Feature type	Number of samples
Pit fill	4
Linear feature	2
Post-hole	3
Layer	6
Mortar floor surface	1
Fireplace	1
Surface	1
Soil horizon	1
Surface	1

Table 5: Number of samples from each feature.

4.12.2 The samples were hand-floated, the flots were collected on a 250 micron mesh and air dried. The flots were scanned with a Leica MZ6 stereo microscope and the plant material was recorded and provisionally identified. The data are shown on Table 6. Botanical nomenclature follows Stace (1997). Plant remains were scored on a scale of abundance of 1-4, where 1 is rare (up to 5 items) and 4 is abundant (>100 items).

4.12.3 The results of an assessment of the charred and waterlogged plant remains are shown in Table 4. The sample <1> from medieval pit fill ***108*** (Trench 1) contained frequent charred cereal grains, including bread wheat, oats and indeterminate grains. Legumes including cultivated ones were also recorded. Charred weed seeds were also recorded in this sample, including the arable weeds *Chenopodium album* (Fat hen), *Anthemis cotula* (Stinking Chamomile), and *Urtica* (Nettles). Other charred seeds identified were *Plantago lanceolata* (Ribwort plantain) and large and small grass seeds. Waterlogged plant remains included a *Corylus avellana* fragment (Hazelnut) and Apiaceae (Carrot/Cow parsley family). Charcoal was common in the sample as well as coal.

4.12.4 The sample <2> from post-medieval layer ***607*** (Trench 6) contained no charred plant remains, and the only waterlogged plant remains were a few *Juncus* (Rushes) and *Conium maculatum* (Hemlock) seeds. Charcoal was common in the sample, which also contained abundant clinker and hollow spheres, from possible metalworking. Small mammal bone and mollusc shells were common in the sample.

4.12.5 In three of the samples (<11>, <12>, and <13>) taken from two contexts (***1528***, ***609***), charred cereal grains, including some wheat, oat (either wild or cultivated and undifferentiated) were recorded in low quantities but with no associated cereal chaff. The waterlogged plant remains recorded were also in low quantities and were from taxa with woody seeds. Fragments of large mammal bones were recorded in two pit fills (***1528***, ***533***), two layers (***609***), a floor surface (***1810***) and a posthole (***1506***). Marine mollusc shells were present in contexts ***704***, ***1509***, ***705***, ***1528*** and ***565***. Many of the samples contained coal, charcoal and clinker. Hollow spheres from possible metalworking were recorded in the fill of service trench ***705***.

Sample	Ctx	Feature	Flot Vol ml	Flot description	Plant remains
<1>	***108***	Pit	100	Charcoal >2mm (3), coal (2), modern roots and twigs (3), molluscs (2), mammal bone (1), earthworm egg cases (1), insect egg cases (2)	CPR (3) Cereal grains Weeds including Legumes, Poaceae, *Chenopodium album, Anthemis cotula and Plantago lanceolata* WPR (1) *Corylus avellana fragments,* Apiaceae
<2>	***607***	Midden / relict garden soil	400	Charcoal >2mm (3), coal (3), clinker (4), mammal bone (3), molluscs (4), hollow spheres (poss. Metalworking)	WPR (1) *Juncus, Conium maculatum*
<3>	***1509***	Pit-fill	160	Charcoal >2mm (2) <2mm (2), coal (4), leaf fragment (1), marine molluscs (1), small mammal bone (2)	
<4>	***1511***	Linear feature	15	Charcoal >2mm (3), small mammal bone (1), modern roots (2),	WPR (1) *Conium maculatum, Juncus*
<5>	***1506***	Post-hole	25	Charcoal >2mm (1), coal (1), clinker (2), modern roots (2), large mammal bone (1)	
<6>	***1513***	Linear feature	90	Charcoal >2mm (3), clinker (2), coal (2)	WPR (1) Bryophyte fragments
<7>	***533***	Pit fill	200	Charcoal >2mm (2), large mammal bone (1), molluscs (2), coal (2), clinker (3), small mammal bone	WPR (1) *Conium maculatum*
<8>	***1517***	Post-hole	20	Leaf (1), molluscs (2), coal (4)	WPR (1) *Sambucus nigra*
<9>	***704***	Floor surface	300	Molluscs (1), clinker (4), coal (3), marine molluscs (4), roots (1), small mammal bone	

Sample	Ctx	Feature	Flot Vol ml	Flot description	Plant remains
<10>	***705***	Layer	600	Clinker (4), coal (1), hollow spheres (poss metalworking), molluscs (2), marine molluscs (1),	WPR (1) *Sambucus nigra*
<11>	***1528***	Pit fill	300	Roots (2), clinker (4), coal (4), large mammal bone (2), small mammal bone (2), mussel shells (1), molluscs (2), fish vertebrae (1)	CPR (1) Cerealia indet
<`12>	***609***	Layer	190	Charcoal >2mm (2), large mammal bone (3), calcined bone (1), small mammal bone (2), coal (1)	CPR (2) *Avena* WPR (1) *Bromus*
<13>	***609***	Layer	150	Charcoal >2mm (2), large mammal (2), bone, small mammal bone (1), molluscs (2), calcined bone (1)	CPR (1) *Triticum* WPR (1) *Bromus*
<14>	***658***	Floor surface	15	Charcoal <2mm (3), invertebrate (1)	
<15>	***565***	Fireplac e	80	Molluscs (3), invertebrate (2), coal (4), modern roots (2), marine molluscs (1)	WPR (1) *Conium maculatum*
<16>	***1810***	Floor surface	110	Coal (2), clinker (4), large mammal bone (1)	
<17>	***1537***	Soil horizon	50	Molluscs (3), small mammal bone (1), Charcoal >2mm (3), parasite eggs.	
<18>	***659***	Layer	20	Charcoal >2mm (1), mammal bone (1), modern roots (2)	
<19>	***1304***	Surface	100	Coal (3), clinker (4)	WPR (1) *Galium aparine, Sambucus nigra, Rubus fructicosus*
<20>	***1305***	Fill	25	Charcoal <2mm (3), small mammal bone (1), clinker (4), coal (3), modern roots, seeds (3), insect remains (1)	WPR (1) *Conium maculatum*

Table 6: Assessment of charred and waterlogged plant remains

Plants scored on a scale of 1-4, where 1 is rare (up to 5 items) and 4 is abundant (>100 items).
CPR=charred plant remains, WPR=waterlogged plant remains

4.12.6 In conclusion, the samples from medieval layer ***609*** and posthole ***1528*** have a low potential to inform about the dietary regimes within the castle, with evidence for the use of wheat, possibly oats, undifferentiated cereals, large mammal bone and shellfish. They would, however, provide enough material for AMS radiocarbon dating. There is no potential for further analysis of the waterlogged plant remains, as so few were recorded, and they were mainly from taxa with woody seeds, suggesting differential preservation.

5. DISCUSSION

5.1 INTRODUCTION

5.1.1 The programme of excavation at Clitheroe Castle has provided the first opportunity to investigate the extent and character of the sub-surface archaeological resource of the site, and has produced some significant results. The work has confirmed that significant archaeological deposits dating from the twelfth to eighteenth centuries survive *in-situ* across the site, and has produced a significant finds assemblage. In particular, the collection of pottery has enhanced the current understanding of medieval ceramic traditions in the area, and the assessment of the palaeo-environmental samples has added to the archaeo-botanical record for the area, the only other dataset being that from the Roman fort at Ribchester, (Huntley 2000).

5.1.2 Excavation of the trenches placed around the castle keep demonstrated not only the presence of important buried medieval remains within that part of the site, but also the remains were located immediately below the modern ground surface. Those trenches located to the rear of the museum revealed the fragmentary remains of a building of medieval date, associated with well-stratified deposits providing evidence for the occupation and later demolition of the structure. Elsewhere within the area to the rear of the museum were various features hewn out of the solid bedrock, some of which have been dated provisionally to the medieval period. Remains of another probable medieval building, represented by the remains of a wall and rock-cut features, were identified between the museum and the former North West Sound archives, although little in the way of stratigraphy remained.

5.1.3 The main archaeological occupation sequence on the site appears to have had its origins within the twelfth century, which is entirely consistent with the documented late twelfth-century origins of the stone castle. No direct evidence for any earlier periods was identified, although some of the structural features exposed in the vicinity of the keep cannot be dated closely.

5.2 THE CASTLE KEEP

5.2.1 It was anticipated that the area of the site surrounding the castle keep was likely to contain buried archaeological remains of a medieval date, and this has been corroborated by the present scheme of work. Archaeological remains exposed within Trenches 1, 2 and 3, which were placed close to the castle keep, provided the earliest evidence for occupation of the site. The pottery recovered from these trenches, although difficult to date with precision, probably indicate twelfth- to fourteenth-century activity, which would be entirely consistent with the documented foundation of the castle keep in the late twelfth century (Adams 2006, 180). The archaeological features exposed around the keep comprised a wall, several postholes, and surfaces, indicating that there were structures of some nature around the keep, which were perhaps replaced subsequently by the buildings within the inner bailey.

5.2.2 The excavation of Trench 2 provided evidence for medieval activity directly on top of the bedrock, which included a posthole (***209***), and a gully (***208***) that contained fragments of twelfth- to fourteenth-century pottery. This phase of activity was sealed by a levelling layer (***203***), which produced 75 sherds of almost identical pottery. The medieval occupation within Trench 2 was the deepest around the keep, and also demonstrated some activity, albeit probably minor, in the first quarter of the seventeenth century. Fragments of pottery recovered from the topsoil layer in all of the excavated trenches similarly provided evidence for some post-medieval activity.

5.2.3 Trench 1 was somewhat different in character. The presence of a wall foundation (***104***), three postholes (***113, 107*** and ***109/110***), and a pit (***112***) indicated considerable structural activity within a small area. It is likely that these features were associated with buildings and occupation of the area. It was also noted that there was a lack of finds, with only a single sherd of medieval pottery being recovered from the whole trench. It was also clear from the other features within Trench 1 that there had been one or more episodes of later activity in that area. Evidence for this was provided by a posthole (***103***) that truncated wall ***104***, and a further posthole (***115***) that had been cut through the subsoil layer.

5.2.4 Trenches 3 and 4 provided evidence for deliberate levelling episodes, with bedrock being revealed below one such layer that contained fragments of medieval pottery. A levelling layer (***302***) identified in Trench 3 yielded a single fragment of shell-tempered pottery. This type of pottery is common east of the Pennines, and probably has its origins in Lincolnshire. Any date for the pottery is likely to be quite wide, particularly as such a ceramic tradition can be seen in York, for instance, to span the Anglian period to the thirteenth century. At Clitheroe, given the problems of dating the castle much before the early twelfth century, a later date is more likely, although it may be case that the pottery was residual in this layer. Two other finds from the same levelling layer, a hone stone and worked bone disk, appear to indicate craft activity around the keep.

5.3 MASS CONCRETE PAD TRENCH POSITIONS

5.3.1 It was considered likely that any medieval remains in the area to the rear of the present museum would have been largely destroyed as a direct result of the development of the site between the eighteenth and twentieth centuries. The results obtained from the excavation, however, have demonstrated that this part of the site contains numerous *in-situ* buried remains of archaeological significance that are almost certainly of medieval origin. The character of these features, moreover, implies that this part of the site was densely occupied during the medieval period, and evidence has been provided for previously unknown buildings, represented by walls and associated occupation and demolition horizons, and various rock-cut features of uncertain function.

5.3.2 The structural remains exposed in Trenches 5A and 6A, and the stratified deposits within Trench 6A, relate to a building with walls aligned north-east/south-west, and north-west/south-east (Plate 27). The remains comprised

stone walls, a floor surface and a later fireplace, which were all seemingly of a medieval date, and may correspond to the southern end of the building marked as the stewards house on the sketch plan of the castle dated to 1723 (Langshaw 1940). Well-stratified deposits and artefacts within Trench 6 demonstrated a sequence of occupation, abandonment and, based on dating provided by the excavated pottery, demolition in the early eighteenth century.

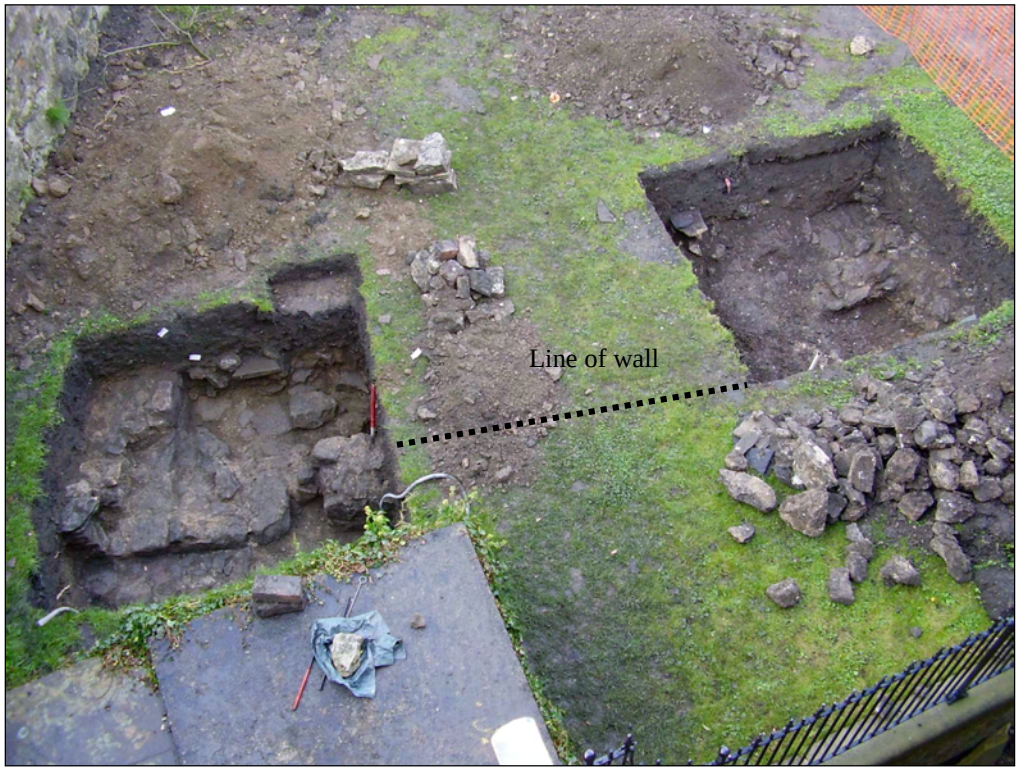

Plate 27: Trenches 5A and 6A during excavation, showing the projected line of the wall

5.3.3 The pottery recovered from Trench 6A securely dates the structure to the medieval period, and it is possible that the material from the floor layers and associated deposits (***609***) dated to a period before the fifteenth century on the ceramic evidence. The finds assemblage from stratified medieval deposits within Trenches 5A and 6A also included butchered animal bones and fragments of cooking pots, consistent with the use of this part of the site as a kitchen. It is interesting to note that the two southerly rooms of the stewards house were thought to be the buttery and the kitchen in the early eighteenth century (Best 1990 14), implying an element of continuity from the medieval period.

5.3.4 It seems that the building may have been abandoned during the fifteenth century, and no pottery was deposited in the area until at least the sixteenth or seventeenth century, by which time the roof appears to have either collapsed or had been dismantled. Medieval pottery of the same type as that recovered from deposit ***609*** was found within layer ***608***, which contained abundant fragments of roof tile, but it was not clear whether the material resulted from direct deposition or was intrusive, although the latter would appear to be the most plausible. Again, a period of abandonment was apparent with the deposition of layer ***607***, which appeared to be a relict garden soil that contained several sherds of seventeenth- or eighteenth-century and medieval

pottery. The demolition of the structure, represented by deposit ***604***, could not be dated with confidence, since the pottery was a mixture of medieval, Cistercian ware, and a single sherd of post-medieval pottery that was not closely datable.

5.3.5 Elsewhere in the area to the rear of museum, the exposed features were less spectacular, and more difficult to interpret. Trenches 7, 8, 12-14 and 17 all revealed rather enigmatic and generally shallow features cut into the bedrock. Only in Trench 13 was it possible to interpret one of the features, ***1307***, as a posthole. This was sealed below a medieval layer or mortar surface, ***1303***, which also filled a feature cut into the rock. The rock-cut feature (***757***) exposed in Trench 7 also contained medieval pottery, while Trenches 12 and 14 revealed an undated north-east/south-west-aligned feature (***1207/1404***).

5.4 TRENCH 15

5.4.1 Significant features were also revealed within Trench 15, many of them cut into the solid bedrock. Here, the remains of a building were found placed on a small north-east/south-west-aligned plateau located below the later grassed-bank between the former Sound Archive building and the museum. It would appear that it went through several phases, although the lack of any vertical stratigraphy precluded any phasing within the structures to be ascertained. The building may have been of largely wooden construction, as several north-west/south-east-aligned shallow beam slots and postholes were exposed. Other more subtle rock-cut features were also noted within the trench. Feature ***1538*** was a linear cut, orientated north-east/south-west within the central part of the trench, associated with four postholes, ***1518***, ***1526***, ***1530*** and ***1532***, while a right angle cut, ***1533***, was seen immediately to the north-west. It was not clear whether wall ***1535***, which was mortared and lime-washed on the interior elevation and was likely to have served as a retaining wall against the bank to the north-west, was part of the original structure or a later addition.

5.4.2 That medieval pottery was produced from circular feature ***1506***, which was stratigraphically later than the beam slots, would indicate a medieval date for the structure. Wall ***1535*** was more difficult to date. A single sherd of medieval pottery was recovered from the relict soil horizon that it was cut into, although this cannot be used to date the wall with any precision.

5.4.3 The available plans and drawings of Clitheroe Castle cast little light on the structural remains exposed in Trench 15, probably as the buildings were no longer extant by the eighteenth century. The sketch plan of 1723 and Bucks' engraving of 1727 clearly show that a gap existed between the former Sound Archive building and the northern range of outbuildings during the early eighteenth century. This would suggest that the putative wooden building exposed in Trench 15 had been demolished by that date.

5.5 TRENCH 18

5.2.1 Trench 18 was located between the former Sound Archive building and the outbuildings to the north. Once the paving slabs had been removed, prior to the excavation, the solid bedrock was exposed at a depth of some 0.2m. Few archaeological remains of any interpretative value were revealed, nor any dating evidence. The earliest features, which were probably contemporary, were a north-west/south-east-aligned rock-cut beam slot, ***1815***, and a thin layer of material (***1810*** and ***1816***) trampled into the surface of the bedrock. The similarity between the beam slots within the Trench 15 would suggest a medieval date for the feature exposed in Trench 18, although corroborating evidence is lacking. It might be possible that whatever structure it represented was on the same footprint that what was later followed by the Sound Archive building. Later features included floor surfaces and associated make-up layers, as well as features associated with the arch that formerly stood at the eastern end of the trench.

6. CONCLUSION

6.1 The results obtained from the archaeological investigation provide some important new evidence for the development and occupation of Clitheroe Castle during the medieval and post-medieval periods. Further detailed analysis of certain material classes may provide additional information, and should be considered. In particular, samples from medieval deposits ***609*** and ***1528*** contain sufficient material for AMS radiocarbon dating, which may furnish closer dating for the stratigraphic sequence, and further analysis of the deer bones may inform a better understanding of diet. In addition, the bolster/chisel from surface ***1811*** and the possible blade from layer ***609*** could be subject to further investigative conservation to resolve identification.

6.2 The recent Archaeological Research Framework for the North West noted that 'without the analysis and publication of existing data it will be difficult to tackle some of the more complex and non-military aspects of castles, such as their relationship with their hinterlands, dependant towns and role as consumers of both agricultural and manufactured products' (Newman and Newman 2007, 107). Similarly, the development of precise chronologies for material culture has been hampered by a lack of published finds assemblages (*op cit*, 95). This could be addressed via the publication of a short paper in an appropriate academic journal that summarises the results obtained from the archaeological investigation at Clitheroe Castle. Indeed, the results are clearly of sufficient importance to merit such a publication.

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APPENDIX 1: PROJECT DESIGN

CLITHEROE CASTLE, CLITHEROE,

Lancashire

Archaeological Mitigation Strategy (2nd Revision)

Oxford Archaeology North

September 2007

Ribble Valley Borough Council

OA North Project No: L9789

NGR: SD 7424 4169

1. INTRODUCTION

1.1 In December 2006, Oxford Archaeology North (OA North) was commissioned by Ribble Valley Borough Council to undertake an archaeological evaluation at Clitheroe Castle, Lancashire (centred at SD 7424 4169). The site is a designated Scheduled Monument, which incorporates several structures, including Grade I and Grade II Listed Buildings. The archaeological evaluation was carried out in January 2007, and was required to inform and support the Listed Building and Scheduled Monument Consent applications for the proposed redevelopment of Clitheroe Castle Museum and associated enhancement of the site. In particular, the proposed redevelopment of the museum allows for the erection of a new link building that will provide level access between the existing museum and adjacent outbuildings, which will have an archaeological impact. Other aspects of the scheme that may have archaeological implications, albeit to a lesser extent, include the installation of a new drainage system, and localised replacement of cobble and flagstone surfaces.

1.2 In total, nine trenches were excavated as part of the initial evaluation; four trenches were placed around the castle keep, and five trenches were situated in the position of the proposed museum extension. The trenches around the castle keep revealed significant archaeological features cut into the solid geology and overlying layers, all of which yielded medieval artefacts with a date range that spanned the thirteenth and fourteenth centuries. A concentration of structural features revealed on the north-western side of the keep, and lying immediately beneath the existing topsoil, suggested that this area had been occupied intensely during the medieval period. It was concluded that any earth-moving works in this part of the site would have an unacceptable negative impact on the buried archaeological resource, and should be avoided. The five trenches located to the rear of the museum revealed a variety of features, including a substantial stone footing thought to form part of a building preceding the present museum, and layers associated with its use and subsequent demolition. Excavation in two of these trenches ceased before reaching the solid bedrock, although it seems likely that stratified medieval deposits may survive *in situ*.

1.3 Following consultation with English Heritage, Lancashire County Council Archaeology Service, and Ribble Valley Borough Council, it was recommended that the buried archaeological remains in the vicinity of the castle keep merit preservation *in situ*, and design proposals should not allow for any earth-moving works in that area (OA North 2007). Significant archaeological remains also survive within the footprint of the proposed museum extension, although it is considered that a programme of archaeological mitigation that allowed for their preservation by record would be an appropriate response. This document provides the proposed archaeological mitigation strategy.

2 MITIGATION STRATEGY

2.1 INTRODUCTION

2.1.1 The archaeological mitigation strategy needs to address several aspects of the proposed development:

- the foundations for the new museum extension;
- the removal of stone slabs along a low-level corridor adjacent to the museum;
- installation of a new drainage system.

2.1.2 The primary objective of the archaeological investigation will be to provide a detailed mitigation record of all archaeological deposits and remains that will be destroyed during the course of the proposed development.

2.2 NEW MUSEUM EXTENSION

2.2.1 The archaeological evaluation has demonstrated that significant archaeological deposits survive to the rear of the museum. The design proposals for the new museum extension have considered several options, which have been formulated to minimise the negative impact on the sub-surface archaeological resource. The details of the considered options are presented in '*Link Building Foundations Options Report*' (Hughes 2007), and may be summarised as:

- ***Option 1 - Strip Footings:*** these would require a foundation area of 24.4m^2, and would necessitate some excavation through archaeological deposits down to the upper surface of the solid geology;
- ***Option 2 – Raft Foundation:*** this option would create a massive footprint and necessitate the destruction of a large area of archaeological deposits and some remodelling of the site's topography. This option is also considered unsuitable for structural considerations;
- ***Option 3: - Piled Foundations:*** this option would require an estimated foundation area of 13.3m^2, although the method of construction would preclude the compilation of any meaningful archaeological record;
- ***Option 4 – Shallow Pad Foundations:*** requires the excavation of nine foundation trenches down to the upper surface of the solid geology, and a shear footing to carry lateral loading. Each trench will receive a mass concrete pad foundation of 900mm diameter, and the shear base will comprises an area of 5.53m^2, giving a total area of 11.29 m^2 required for the new foundations.

2.2.2 Option 4 provides the most efficient footprint, and offers the least negative archaeological impact. In order to mitigate against this impact, it is proposed that most of the foundations trenches required for the new build are excavated manually in an archaeological manner, and subject to detailed recording. This will involve the re-excavation of the initial evaluation trenches, although the position of only a single foundation (Trench 3) is considered to be completely

archaeologically sterile. Wherever possible, the trenches will have maximum dimensions of 1m^2, although some will be necessarily larger to allow excavation to the top of the solid geology; it is envisaged that this would only be required within trenches previously excavated. The archaeological impact can be assessed on a trench by trench basis:

- *Trench 1:* this position was excavated during the evaluation in a trench that measured 1.5 m^2. Buried structural remains were revealed, which precluded the excavation to the solid geology. The mass concrete pad foundation will have a substantial negative impact on these remains, although the footprint of the trench will not extend beyond the edges of the initial evaluation trench, and can be stepped in to 1m^2.when the upper surface of previously unexcavated deposits is reached.
- *Trench 2:* this position was excavated during the evaluation in a trench that measured 1.5m^2. Buried structural remains were revealed, which precluded the excavation to the solid geology. The mass concrete pad foundation will have a substantial negative impact on these remains, although the footprint of the trench will not extend beyond the edges of the initial evaluation trench, and can be stepped in to 1m^2.when the upper surface of previously unexcavated deposits is reached.
- *Trench 3:* this position was excavated during the evaluation, and exposed the surface of the solid geology at a depth of 0.78m below the modern ground surface. The mass concrete pad foundation will have no archaeological impact, and the footprint of the trench will not extend beyond the edges of the initial evaluation trench. This trench could be excavated by mini-digger operating under close archaeological supervision.
- *Trench 4:* this position has not been excavated previously, although solid geology was exposed at a depth of 0.3m below the modern ground surface in an adjacent trench during the evaluation; the solid geology was seen to have been cut by a single archaeological feature. The shallow depth means that the dimensions of Trench 4 need not exceed 1.0m^2. The mass concrete pad foundation will have a moderate negative impact.
- *Trench 5:* this position has not been excavated previously. It is estimated that the solid geology lies at a depth of 0.5m below the modern gowned surface. This depth means that the dimensions of Trench 5 need not exceed 1.0m^2, although it is anticipated that some significant archaeological deposits will be destroyed. The mass concrete pad foundation will have a moderate negative impact.
- *Trench 6:* this position has not been excavated previously, although solid geology was exposed at a depth of 0.3m below the modern ground surface in an adjacent trench during the evaluation. The shallow depth means that the dimensions of Trench 5 need not exceed 1.0m^2. The mass concrete pad foundation will have a slight negative impact.
- *Trench 7:* this position has not been excavated previously, and the character of the archaeological resource is unattested. However, it is envisaged that the solid geology will lie at a depth of some 0.5m below the modern ground surface. The depth means that the dimensions of

Trench 7 need not exceed 1.0m^2. The mass concrete pad foundation will have a moderate negative impact.

- *Trench 8:* this position has not been excavated previously, although it is anticipated that the solid geology will lie at a depth of approximately 0.3m below the modern ground surface. The shallow depth means that the dimensions of Trench 8 need not exceed 1.0m^2. The mass concrete pad foundation will have a slight negative impact.
- *Trench 9:* this position has not been excavated previously, although it is anticipated that the solid geology will lie at a depth of approximately 0.3m below the modern ground surface. The shallow depth means that the dimensions of Trench 9 need not exceed 1.0m^2. The mass concrete pad foundation will have a slight negative impact.
- *Shear Base:* an indication of the significance of archaeological remains within the proposed location of the shear base was obtained during an archaeological watching brief that was maintained during the removal flagstone surfacing along the western edge of the museum. This revealed a deposit of late post-medieval/modern origin, extending to a depth of *c*0.4m, and overlying the solid geology. It is therefore considered likely that any significant deposits in the location of the shear base have been truncated, although excavation should be carried out under strict archaeological conditions until the uppermost surface of the natural geology is exposed, and sterilised of any negative-cut features. The shear base is likely to have a slight negative impact.
- *Widened Entrance:* this area was partially investigated during the evaluation, which exposed the solid geology at a depth of 0.70m. The artefact assemblage recovered from the soil horizons within the bank was dominated by later post-medieval material, although the presence of some medieval material cannot be discounted. The removal of the grassed bank is likely to have a slight negative impact, and the excavation of the trench should be carried out under strict archaeological conditions.

2.3 NEW DRAINAGE SYSTEM

2.3.1 The proposed scheme of refurbishment requires the installation of a new drainage system across the site. It is hoped that this will utilise the existing system as far as is possible, and earth-moving works will be limited to the excavation of existing service trenches. This work should also be monitored by an archaeological watching brief to ensure that a mitigation record of any surviving archaeological deposits is compiled.

2.3.2 New drains will also be installed within the castle outbuildings, and will involve the excavation through bedrock to a manhole in the courtyard. In order to obtain the required gradient for drainage, the bedrock will require reducing by 450mm. This area comprises a rock-cut platform, which is potentially of medieval origin. It is possible that the bedrock in this area retains evidence for its original construction, such as tool marks. It is proposed that this area is subject to an archaeological evaluation prior to the reduction of the bedrock. The excavation will comprise the manual cleaning and detailed examination of the bedrock surface.

3 METHOD STATEMENT

3.1 METHODOLOGY

3.1.1 The scheme of archaeological investigation required to mitigate the preferred option for the proposed new museum foundations requires the excavation of:

- nine trenches placed in the footprints for the shallow pad foundations, each excavated to the top of the solid geology;
- a linear trench for the shear base that will be excavated to a depth of 450mm;
- the excavation of a section across the grassed bank to the north of the existing museum;
- the excavation to the surface of solid geology within the castle outbuildings to a manhole in the courtyard.

3.1.2 In all cases, the excavation of foundation trenches will be carried out under strict archaeological conditions, and most excavation will be undertaken using manual techniques: archaeological structures, features and/or deposits will be cleaned by hand, using either hoes, shovel scraping, and/or trowels depending on the ground conditions. In limited areas, however, it is envisaged that an appropriately sized mechanical excavator (*c* 3 tonne tracked machine) will be employed to remove previously excavated material and deposits of overburden where these can be demonstrated to be of modern origin. The machine will be fitted with a toothless ditching bucket, and will only operate under strict archaeological supervision and in a manner that will not cause damage to surviving archaeological deposits.

3.1.3 All information identified in the course of the site works will be recorded stratigraphically, using a system adapted from that used by the Centre for Archaeology Service of English Heritage, with sufficient pictorial record (plans, sections and both black and white and colour photographs) to identify and illustrate individual features. Primary records will be available for inspection at all times. All contexts will be recorded using *pro-forma* sheets, which will comprise a written detailed description and interpretation of each structure and deposit encountered, and details will be incorporated into a Harris matrix. Similar object record and photographic record *pro-formas* will be used. All written recording of survey data, contexts, photographs, artefacts and ecofacts will be cross-referenced from *pro-forma* record sheets using sequential numbering.

3.1.4 A full and detailed photographic record of individual contexts will be maintained and similarly general views from standard view points of the overall site at all stages of the archaeological investigation will be generated. Photography will be undertaken using 35mm cameras on archivable black and white print film as well as colour transparency, and all frames will include a visible, graduated metric scale. Extensive use of digital photography will also be undertaken throughout the course of the fieldwork for interpretative and presentation purposes.

3.1.5 Each trench will be located by EDM tacheometry using a total station linked to a pen computer data logger. All information will be tied in to Ordnance Datum.

3.1.6 ***Finds' policy:*** finds' recovery and sampling programmes will be in accordance with best practice (following current Institute of Field Archaeologists guidelines) and subject to expert advice in order to minimise deterioration. OA has close contact with English Heritage Science Advisors and, in addition, employs in-house artefact and palaeo-ecology specialists, with considerable expertise in the investigation, excavation, and finds' management of sites of all periods and types, who are readily available for consultation. Storage of finds during fieldwork and any site archive preparation will follow professional guidelines (UKIC 1990). Emergency access to conservation facilities is maintained by OA North with the Department of Archaeology, the University of Durham. Any gold and silver artefacts recovered during the evaluation will be removed to a safe place and reported to the local Coroner according to the procedures relating to the Treasure Act, 1996.

3.1.7 Human remains are not expected to be present, but if they are found they will, if possible, be left *in-situ*, covered and protected. The remains will then be subject to a formal appraisal by an appropriate specialist, which will inform English Heritage and LCAS as to whether the remains merit further study. If removal is necessary, then the relevant Department of Cultural Affairs permission will be sought, and the removal of such remains will be carried out with due care and sensitivity, as required by current legislation.

3.1.8 ***Sampling Strategy:*** a programme of palaeo-environmental sampling will be undertaken at the site in accordance with the guidelines provided by English Heritage (2002). Samples will be collected for technological, pedological, palaeo-environmental and chronological analysis as appropriate, subject to palaeo-environmental survival. Samples for deposit characterisation, potential radiocarbon dating, and macrofossil analysis will be 30 litres in volume.

3.1.9 It is proposed that the flotation of suitable samples be undertaken off site following completion of the fieldwork. Any requirement for detailed analysis would be undertaken by OA North staff using the laboratory facilities provided by the Institute of Environmental and Biological Sciences at Lancaster University.

3.1.10 Bone recovered from stratified deposits will be subject to assessment by an OA North in-house specialist (Andrew Bates), and analysis will be limited to material that can provide metrical, ageing or sex information. Attention will be paid to the collection of small animal bones from stratified contexts, and to the retrieval of fish bones and molluscs from rubbish pits.

3.1.11 ***Watching Brief:*** a programme of field observation during excavations associated with renewed drainage will accurately record the location, extent, and character of any surviving archaeological structures, features and/or deposits exposed during the removal of the footpaths. 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 structures and features, and any artefacts, identified during observation.

3.1.12 Archaeological structures, features and/or deposits exposed during the removal of tarmac surfacing, 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 ground conditions, and where appropriate sections will be studied and drawn.

3.1.13 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. A photographic record will be undertaken simultaneously.

3.1.14 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.

3.1.15 It is assumed that OA North will have the authority to stop the works for a sufficient time period to enable the recording of important deposits. It may also be necessary to call in additional archaeological support if a find of particular importance is identified or a high density of archaeology is discovered. In normal circumstances, field recording will also include a continual process of analysis, evaluation, and interpretation of the data, in order to establish the necessity for any further more detailed recording that may prove essential.

3.1.16 ***Health and Safety***: 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.

3.1.17 ***Other Matters***: it is assumed that the archaeological works will be carried out under the auspices of a main contractor, who will be responsible for access and management of arisings from the trenches; it is not envisaged that there will be any requirement to backfill the trenches upon completion of the archaeological investigation.

3.1.18 It is assumed that the main contractor will take responsibility for the removal of any concrete surfacing as required in advance of the archaeological investigation. The removal of any such surfacing should be monitored by an archaeological watching brief.

3.1.19 It is recommended that the main contractor is responsible to surveying the precise locations of the mass concrete foundation pads in advance of the archaeological investigation.

3.2 REPORT AND ARCHIVE

3.2.1 The site records, finds and any samples from the archaeological investigation will form a checked and ordered site archive, as outlined in the English Heritage guideline document *Management of Archaeological Projects* (2nd edition, 1991) and the *Guidelines for the Preparation of Excavation Archives for Long Term Storage* (UKIC 1990). Following compilation of the project archive, a final archive report will be produced detailing the results of these investigations.

3.2.2 ***Archive:*** the results of all archaeological work carried out will form the basis for a full archive to professional standards. The project archive represents the collation and indexing of all the data and material gathered during the course of the project. The deposition of a properly ordered and indexed project archive in an appropriate repository is considered an essential and integral element of all archaeological projects by the IFA in that organisation's code of conduct.

3.2.3 ***Report:*** one bound and one unbound copy of a written synthetic report will be submitted to the Turner Townsend LLP, and copies submitted to English Heritage, Lancashire County Archaeology Service, and to the Lancashire HER as a paper copy and digital copy on CD within six weeks of completion of the fieldwork. The report will include a copy of this project design, and indications of any agreed departure from that design. It will also include:

- a non-technical summary;
- the site's historical and archaeological background;
- an outline methodology of the archaeological investigation;
- summary of results, including location, extent, nature and date of any archaeological features and deposits encountered, with sufficient plans, sections and photographs;
- a discussion of the significance of the remains and finds.

3.2.4 ***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.

4 TIMETABLE

4.1 The timetable for the commencement of the archaeological evaluation is dependant upon obtaining Scheduled Monument Consent, although it is envisaged that the work will begin as soon as this has been granted. The programme of work would be carried out in consultation with the appointed main contractor. A total of 35 man days should be allowed to excavate and record the foundation trenches for the mass concrete pads, the shear base, and the widened entrance. Watching brief elements would be carried out in conjunction with the main contractors schedule. The report will be submitted within six weeks of completion of the fieldwork.

5 RESOURCES AND PROGRAMMING

5.1 STAFF PROPOSALS

5.1.1 The project team will be led by a Senior Project Manager (SPM), **Ian Miller BA FSA**, who is based in Lancaster. Ian will provide strategic project management, financial and resource management, and will co-ordinate the provision of specialist input. The SPM will manage the project from design and delivery of the fieldwork component, through analysis to archive deposition.

5.1.2 The fieldwork will be managed by an OA North Project Officer (PO). Current timetabling precludes who this will be, but it is envisaged that the role will be fulfilled by **Jeremy Bradley BA**, who directed the initial phase of archaeological evaluation. His role will be to ensure that the project design is implemented within the framework of the Project Research Aims. He will be responsible for all aspects of staff and resource logistics, ensuring the smooth running of the project programme. He will liaise with Lancashire County Archaeology Service, English Heritage, and Turner Townsend LLP with regard to progress, and will maintain relationships with other contractors as necessary. Jeremy will be assisted by at least two archaeological technicians, although additional staff will be utilised if required.

5.1.4 **Christine Howard-Davis BA** (OA North Finds Manager) would undertake the necessary finds management. Christine has extensive knowledge of all finds of all periods from archaeological sites in northern England.

5.1.5 The processing and analysis of any palaeo-environmental samples will be carried out under the auspices of **Elizabeth Huckerby BA, MSc** (OA North Project Officer), who has extensive experience of the palaeo-ecology of the North West, having been one of the principal palaeo-environmentalists in the English Heritage-funded North West Wetlands Survey.

5.1.6 Any requirement for conservation work will be undertaken by **Jennifer Jones**, the AML contract conservator based at the University of Durham. Jennifer is a nationally-recognised specialist in conservation, and is readily available to provide advice on the treatment of any delicate finds recovered from the evaluation.

APPENDIX 2: FINDS SUMMARY

OR No	Context No	Count	Material	Description	Date range
1000	***101***	1	Post-medieval pottery	Blackware	C18th-19th
1001	***101***	1	Plastic	Smiths crisps packet	Late 1970s-early 1980s
1002	***102***	1	Post-medieval pottery	Blackware	C18th-19th
1003	***102***	3	Bone	Animal	Undated
1004	***102***	1	Ceramic	Clay tobacco pipe stem	C18th-19th
1005	***108***	36	Bone	Animal	Undated
1006	***108***	1	Medieval pottery	Fabric 1 cooking pot	C12th-14th
	201	3	Bone	Animal	Undated
1008	***203***	1	Fe	Nail	Medieval
1009	***203***	68	Bone	Animal	Undated
1010	***203***	2	Stone	Possible cut masonry	Medieval
1010	***203***	1	Stone	Rubbing stone?	Medieval
1011	***203***	1	Cu	Brooch fragment with incised detail	C13th-14th
1012	***205***	1	Stone	Large piece of masonry	Medieval
1013	***205***	19	Bone	Animal	Undated
1014	***205***	3	Medieval pottery	Fabric 2	C12th-13th
1014	***205***	14	Medieval pottery	Fabric 1	C12th-14th
1015	***205***	1	CBM	Unidentifiable	Medieval?
1016	***206***	1	Bone	Animal	Undated
1017	***207***	1	Shell	Cockle	Undated
1018	***207***	1	Plastic	Container	C20th
1019	***207***	1	Stone	Tile	Medieval
1019	***207***	1	Stone	Masonry encrusted with mortar	Medieval
1020	***207***	3	Ceramic	Clay tobacco pipe stems	C18th-19th
1020	***207***	1	Ceramic	Early clay pipe bowl incised at the rim	Early C17th
1021	***207***	2	Glass	Modern bottle glass	C20th
1022	***207***	4	Post-medieval pottery	Blackware	C18th-19th
1022	***207***	1	Post-medieval pottery	Yellow glazed and press moulded fragment - Staffordshire slipware?	C17th-18th
1022	***207***	1	Post-medieval pottery	Brown glazed and black burnished redware. Midlands example?	C18th-19th
1022	***207***	1	Post-medieval pottery	Mottled ware	C17th-18th

1022	***207***	1	Post-medieval pottery	Mottled ware	C18th
1022	***207***	1	Post-medieval pottery	Transfer-printed porcelain/ bone china	Mid-C19th
1023	***207***	1	Medieval pottery	Fabric 2	C12th-13th
1024	***207***	1	Cu	Victorian halfpenny	*c*1870
1025	***207***	1	CBM	Unidentifiable	Undated
1027	***302***	1	Medieval pottery	Shell tempered ware – partially reduced fabric	C12th-13th
1028	***301***	3	Bone	Animal	Undated
1029	***301***	1	CBM	Unidentifiable	Undated
1030	***301***	1	Post-medieval pottery	Unglazed red earthenware	C18th-19th
	401	7	Bone	Animal	Undated
1031	***402***	10	Bone	Animal	Undated
1032	***402***	3	Medieval pottery	Fabric 2 adjoining sherds and 1 other sherd of externally sooted cook pots	C12th-14th
1033	***402***	2	Post-medieval pottery	Brown-glazed white earthenware	C19th
1034	***502***	1	CBM	Unidentifiable	Undated
1035	***502***	2	Ceramic	Clay tobacco pipe stem and bowl fragments	C19th
1036	***502***	2	Glass	Window glass	C20th
1037	***502***	1	Post-medieval pottery	Staffordshire slipware	C18th
1037	***502***	2	Post-medieval pottery	Pearlware	C19th
1037	***502***	1	Post-medieval pottery	Transfer-printed pearlware	C19th
1037	***502***	2	Post-medieval pottery	Unglazed red earthenware	C19th
1037	***502***	1	Post-medieval pottery	Brown glazed red earthenware	C18th-19th
1037	***502***	1	Post-medieval pottery	Porcelain	c19th
1038	***502***	5	CBM	Various unidentifiable fragments	Undated
	502	3	Bone	Animal	Undated
1039	***503***	1	Post-medieval pottery	Creamware - Leeds potteries?	C19th
1039	***503***	4	Post-medieval pottery	Blackware	C18-19th
1040	***503***	1	Medieval pottery	Fabric 2	C12th-C13th?
1041	***503***	6	Bone	Animal	Undated
1042	***503***	1	Ceramic	Clay tobacco pipe stem	C19th
1043	***503***	1	Fe	Nail	Pre-C20th
1045	***503***	1	Glass	Melted glass	Undated
1046	***503***	3	Shell	Oyster and cockle	Undated
1047	***601***	5	Bone	Animal	Undated

1048	***601***	5	Shell	Oyster and cockle	Undated
1049	***601***	3	Ceramic	Clay tobacco pipe stems	C19th
1050	***601***	2	Fe	Nails	C19th-20th
1051	***601***	3	Glass	Window Glass	C20th
1052	***601***	32	Post-medieval pottery	Unglazed red earthenware	C19th-20th
1052	***601***	6	Post-medieval pottery	Blackware	C17th-19th
1052	***601***	1	Post-medieval pottery	White salt-glazed stoneware	C18th
1052	***601***	1	Post-medieval pottery	Rockingham-type ware	C19th
1052	***601***	1	Post-medieval pottery	Brown glazed red earthenware	C18th-19th
1052	***601***	5	Post-medieval pottery	Transfer-printed pearlware	C19th-early C20th
1052	***601***	3	Post-medieval pottery	Pearlware	C19th
1052	***601***	1	Post-medieval pottery	Mottled ware	C18th
1053	***601***	13	CBM	Hand-made brick, and tile	C14th – C16th
1054	***601***	1	Stone	Tile?	Undated
	602	9	Bone	Animal	Undated
1055	***603***	4	Bone	Animal	Undated
1056	***603***	3	Shell	Oyster and cockle	Undated
1057	***603***	1	Post-medieval pottery	Mottled ware	C18th
1057	***603***	1	Post-medieval pottery	Orange glazed red earthenware	C18th
	607	21	Bone	Animal	Undated
1058	***608***	6	Other building material	Mortar fragments	Undated
1059	***608***	1	Fe	Nail	Undated
1060	***608***	43	Bone	Animal	Medieval
1061	***608***	3	Stone	Tiles	Undated
1062	***701***	4	CBM	Unidentifiable	Undated
1063	***701***	4	Post-medieval pottery	Unglazed red earthenware	Undated
1063	***701***	1	Post-medieval pottery	Transfer printed pearlware - Willow pattern.	Undated
1063	***701***	1	Post-medieval pottery	Creamware	Undated
1063	***701***	1	Post-medieval pottery	Pearlware	Undated
1063	***701***	1	Post-medieval pottery	Tin-glazed earthenware	C18th
1064	***701***	1	Medieval pottery	Splash-glazed partially reduced gritty ware - local?	Undated
1065	***701***	1	Bone	Rib fragment	Undated
1066	***701***	1	Ceramic	Clay pipe stem	C19th
1066	***701***	1	Ceramic	Clay pipe stem	C17th
1067	***701***	1	Glass	Bottle	C19th

1068	***701***	1	Plastic	Smarties top	C20th
1069	***702***	1	Shell	Mussel, cockle and oyster	Undated
1070	***702***	21	Bone	Animal	Undated
1071	***702***	3	Post-medieval pottery	Blackware	C17th-19th
1072	***702***	1	Medieval pottery	Fabric 6 oxidised sandy fabric	C13th-14th
1072	***702***	3	Medieval pottery	Fabric 2	C12th-13th
1073	***702***	2	Stone	Tile/other	Undated
1074	***801***	1	Fe	Nail	Post-medieval
1075	***801***	1	Post-medieval pottery	Unglazed red earthenware	C19th
1076	***801***	1	Glass	Window Glass	C20th
1077	***901***	1	Fe	Object	
1078	***904***	13	CBM	Hand-made brick, and tile	C14th-16th
1079	***904***	1	Other building material	Mortar fragment (smoothed)	Undated
1080	***904***	1	Post-medieval pottery	Unglazed red earthenware	C19th-20th
1080	***904***	1	Post-medieval pottery	Lead-glazed earthenware	C17th-18th
1081	***904***	4	Fe	Modern nails	C20th
1082	***905***	1	Fe	Modern nails	C20th
1083	***904***	1	Post-medieval pottery	Blackware	C18th-19th
1084	***906***	4	Post-medieval pottery	Pearlware	Late C18th-early C19th
1085	***906***	2	Fe	Modern nails	C20th
1086	***906***	1	CBM	Unidentifiable	Undated
1087	***906***	1	Pb	Lead, probably window kame)	C14th-17th
1088	***302***	2	Stone	Needle sharpener	Medieval
1007	***203***	9	Medieval pottery	Fabric 2 Gritty ware oxidised and partially reduced	C12th-13th
1007	***203***	1	Medieval pottery	Fabric3 Fully Reduced sandy fabric with olive green glaze	C14th-17th
1007	***203***	1	Medieval pottery	Fabric 4 fully reduced Gritty fabric with greenish-brown glaze	C14th-17th
1007	***203***	75	Medieval pottery	Fabric 1 partially reduced fabric with pale apple green glaze, includes rim, handle and base herds	C12th-14th
1023	***207***	1	Medieval pottery	Fabric 5 buff/pink gritty ware rim sherd	C12-13th
1072	***702***	1	Medieval pottery	Fabric 7 partially reduced fabric with pink interior, sandy fabric	C12th-14th

1090	***502***	11	Bone	Animal	Post-medieval
1093	***544***	54	Bone	Animal	Post-medieval
1094	***559***	16	Bone	Animal	Post-medieval
1095	***560***	2	Bone	Animal	Modern
1096	***565***	13	Bone	Animal	Medieval
1097	***604***	23	Bone	Animal	Post-medieval
1098	***607***	41	Bone	Animal	Post-medieval
1099	***609***	119	Bone	Animal	Medieval
1100	***651***	1	Bone	Animal	Post-medieval
1101	***658***	1	Bone	Animal	Medieval
1102	***751***	11	Bone	Animal	Modern
1103	***567***	1	Bone	Animal	Post-medieval
1105	***1302***	5	Bone	Animal	Post-medieval
1107	***1401***	1	Bone	Animal	Modern
1108	***1403***	1	Bone	Animal	Medieval
1109	***1537***	5	Bone	Animal	Medieval
1110	***651***	1	Mollusc	Cockle	Post-medieval
1111	***604***	1	Mollusc	Oyster	Post-medieval
1112	***752***	1	Mollusc	Cockle	Post-medieval
1113	***752***	1	Mollusc	Oyster	Post-medieval
1114	***1202***	1	Mollusc	Cockle	Post-medieval
1115	***1302***	1	Mollusc	Cockle	Post-medieval
1116	***1402***	1	Mollusc	Cockle	Post-medieval
1117	***1704***	1	Mollusc	Oyster	Post-medieval
1118	***655***	6	Bone	Animal	Post-medieval

APPENDIX 3: CONTEXT SUMMARY

Context No	Trench	Context description	Phase
101	1	Topsoil	3
102	1	Layer	1
103	1	Fill of posthole (unexcavated)	1
104	1	Wall	1
105	1	Fill of posthole ***115***	1
106	1	Fill of posthole ***113***	1
107	1	Fill of posthole (unexcavated)	1
108	1	Fill of pit ***112***	1
109	1	Cut of posthole	1
110	1	Fill of posthole ***110*** (unexcavated)	1
111	1	Brownish-yellow silty-sand layer	1
112	1	Pit	1
113	1	Posthole	1
114	1	Bedrock	Natural
115	1	Posthole	1
201	2	Topsoil	3
202	2	Levelling layer	3
203	2	Stone layer/surface	1
205	2	Fill of gully ***208***	1
206	2	Fill of posthole ***209***	1
207	2	Layer	1
208	2	Gully	1
209	2	Posthole	1
210	2	Bedrock	Natural
301	3	Topsoil	3
302	3	Levelling layer/surface	1
303	3	Bedrock	Natural
401	4	Topsoil	3
402	4	Levelling layer/surface	2
403	4	Bedrock	Natural
501	5	Topsoil	3
502	5	Layer	2
503	5	Mortar-rich sandy-silt	2
504	5	Sandy-silt	2

505	5	Construction cut for culvert ***509***	3
506	5	Fill of construction cut for culvert ***509***	3
507	5	Fill of service trench ***563***	3
508	5	Rubble layer	2
509	5	Culvert	3
510	5	Stone wall foundation	1
511	5	Slate-covered lead pipe	3
551	5	Topsoil (same as ***501***)	3
553	5	Dark brown stony deposit	2
554	4	Mortar layer	2
555	5	North-west/south-east-aligned wall	1
556	5	North-west/south-east-aligned wall	1
557	5	Fill of culvert ***509***	3
558	5	Fill of cut ***505***	3
559	5	Mortar deposit below ***553***	2
560	5	Levelling layer below culvert ***509***	3
561	5	Mortar layer (same as ***559***)	2
562	5	Wall of disused toilet block	3
563	5	Cut containing lead pipe ***507***	3
564	5	Fill of ***563***	3
565	5	Fill within fireplace ***566***	1
566	5	Fireplace abutting wall ***510*** and ***556***	1
567	5	Mortar layer	2
568	5	Demolition rubble	2
569	5	Possible drain	2
570	5	Construction cut for wall ***562***	3
571	5	Lead water pipe	3
601	6	Topsoil	3
602	6	Cast-iron pipe	3
603	6	Sandy-clay-silt layer	3
604	6	Layer	2
607	6	Layer	2
608	6	Yellowish-brown silty-sand layer	1
609	6	Layer	1
651	6	Culvert	3
652	6	Fill of culvert	3
654	6	Layer of rubble with mortar rich clay silt containing rubble	1
655	6	Clay layer	2

656	6	Silt layer containing rubble	1
657	6	Structure - Wall	1
658	6	Mortar floor	1
659	6	Layer/floor	1
660	6	Bedrock	Natural
661	6	V-shaped cut (possible posthole)	1
701	7	Topsoil	3
702	7	Layer	2
703	7	Fill of pipe trench	3
704	7	Cast-iron pipe	3
705	7	Cut for pipe ***704***	3
706	7	Bedrock	Natural
751	7	Greyish-brown / dark brown topsoil	3
752	7	Bedrock	Natural
753	7	Layer	2
754	7	Waterlogged interface above bedrock	1
755	7	Path	3
756	7	Rubble / hardcore / foundation layer	3
757	7	Possible rock-cut feature filled by ***754***	1
801	8	Topsoil	3
802/803	8	Limestone rubble fill of ***804***	1?
804	8	Rock-cut linear feature	1?
805	8	Bedrock	Natural
901	9	Topsoil	3
902	9	Fill of ***903***	2?
903	9	Shallow cut feature	2?
904	9	Rubble layer	2?
905	9	Relict topsoil	2?
906	9	Bedrock	Natural
1001	10	Sand cement layer	3
1002	10	Soil layer	3
1003	10	Fill of ***1010***	2
1004	10	Cast-iron water pipe and cut	3
1005	10	Fill of V-shaped service trench	2
1006	10	V-shaped service trench	2
1007	10	Stone structure - culvert / conduit	3
1008	10	Modern service containing water-main	3
1009	10	Bedrock	Natural

1010	10	Hollow	2
1011	10	Cut for structure ***1007***	3
1101	11	Topsoil	3
1102	11	Bedrock	Natural
1103	1	Concrete slab edging	3
1104	11	Stone Pathway	3
1201	12	Topsoil	3
1202	12	Gravel-rubble layers	3
1203	12	Concrete edging	3
1204	12	Path	3
1205	12	Brownish gavel layer	2
1206	12	Bedrock	Natural
1207	12	Rock-cut feature	1
1301	13	Topsoil	3
1302	13	Reddish-brown layer	2?
1303	13	Layer	1
1304	13	Stone mortar surface	1
1305	13	Fill of rock-feature ***1306***	1
1306	13	Rock-cut feature	1
1307	13	Bedrock	Natural
1401	14	Topsoil	3
1402	14	Layer	3
1403	14	Fill of ***1404***	1
1404	14	Rock-cut feature	1
1405	14	Fill of ***1407***	2?
1406	14	Mortar (fill of ***1407***)	2?
1407	14	Rock-cut feature	2?
1408	14	Bedrock	Natural
1501	15	Bedrock	Natural
1502	15	Sandy layer	1
1503	15	Layer	2
1504	15	Topsoil	3
1505	15	Cut of circular feature	2
1506	15	Cut of circular feature	1
1507	15	Fill of [***1506***]	1
1508	15	Concrete	1
1509	15	Fill of [***1510***]	1
1510	15	Linear Feature	1

1511	15	Fill of [***1512***]	1
1512	15	Cut of posthole	1
1513	15	Fill of [***1514***]	1
1514	15	Cut of linear feature	1
1515	15	Lead pipe	3
1517	15	Fill of [***1518***]	1
1518	15	Rock-cut posthole	1
1519	15	Layer	
1520	15	Remains of paved floor layer	2
1521	15	Fill of [***1522***]	1
1522	15	Linear Feature	1
1523	15	Fill of [***1524***]	1
1524	15	Linear cut	1
1525	15	Fill of [***1526***]	1
1526	15	Cut of possible posthole	1
1527	15	Fill of [***1528***]	1
1528	15	Possible posthole	1
1529	15	Fill of [***1530***]	1
1530	15	Cut possible posthole	1
1531	15	Fill of [***1532***]	1
1532	15	Cut of possible posthole	1
1533	15	L-shaped linear cut	1
1534	15	Layer	3
1535	15	Mortared layer	1
1537	15	Layer	1
1538	15	Cut of linear feature	1
1539	15	Construction trench for ***1535***	1
1601	16	Topsoil	3
1602	16	Yellowish mortar	2
1603	16	Grey mortar	2
1604	16	Bedrock	Natural
1701	17	Topsoil	3
1702	17	Layer	2
1703	17	Mortar surface	1
1704	17	Layer (floor) surface above bedrock	1
1705	17	Layer	1
1706	17	Stone layer	2
1707	17	Bedrock	Natural

1708	17	Modern service	3
1801	18	Fill of ***1819***	3
1802	18	Stone curb abutting and east of ***1801***	3
1803	18	Bedrock plinth	Natural
1804	18	North/south-aligned stone	3
1805	18	Modern services within ***1821***	3
1806	18	Gas main	3
1807	18	East/east-aligned wall	3
1808	18	Construction cut for ***1807***	3
1809	18	Mortar surface	2
1810	18	Surface	1
1811	18	Gravel surface	2
1812	18	Yellowish stony surface	2
1813	18	Loose mortar fill of ***1821***	3
1814	18	Same as ***1809***	2
1815	18	North/south-aligned beam slot	1
1816	18	Surface south of ***1806***	1
1817	18	Bedrock	Natural
1818	18	Construction cut for building for standing wall forming southern edge of trench	3
1819	18	Cut to east of ***1803***	3
1820	18	Generic sealing layer	3
1821	18	Cut for service trench containing ***1805***	3

APPENDIX 4: METALWORK CONSERVATION RECORDS

CONSERVATION ASSESSMENT OF MATERIAL FROM CC07 FOR OAN

Jennifer Jones, Conservation Services, Dept of Archaeology, Durham University

QUANTIFICATION AND CONDITION

Thirty four objects (13 copper alloy, 10 iron and 1 zinc) were received for conservation assessment. Ironwork was moderately to highly corroded and mostly found to be stable, with only a few pieces (ex 607, 609) showing signs of cracking of the corrosion layers which might suggest continuing active corrosion. The copper alloy objects were moderately to highly corroded and stable when examined. The roll of zinc was lightly corroded and stable.

Lightly corroded metallic material is defined as having a thin, often compact corrosion surface, sometimes with good patination, which obscures little of the object's form or surface detail. There is significant metal remaining below the corrosion surface. Moderately corroded metallic material is defined as having the surface detail, but not usually the general form of the object, obscured by corrosion products, and has some metal remaining below the corrosion. Highly corroded metallic material is defined as either having both the form and the surface detail of the object obscured by corrosion, and/or having little or no metal remaining in its core.

X-RADIOGRAPHY

The objects were briefly visually examined to assess their condition and stability, to determine the material from which they were made, and to look for surface and technological detail. All objects, apart from the zinc roll, were sorted into groups of a similar density, which were X-rayed together.

Details of the artefacts examined were entered into a database (attached) which includes the context and small finds number, an identification of the material and of the object, where possible, the condition of the object when examined, its XR plate number, and any technological or other observations.

When viewing the XR plates, they should be orientated with the bright spot (a lead marker) in the top left hand corner, to correspond to the annotated XR sleeve.

RESULTS

Many of the iron objects were revealed to be nails or parts of nails. Non-nail ironwork included part of a possible knife blade, a bolster or chisel, the top of a ? button and the iron/copper alloy barrel lock. This can be seen to have copper alloy

plating or decoration covering parts of the iron lock. Little surface detail was revealed on the fragments of copper alloy ?vessel from context 565. These are clearly made from a high-lead copper alloy, and may also have been distorted by exposure to heat. The rectangular metal roll from context 1500 was surface analysed using EDXRF (energy dispersive X-ray fluorescence), and found to be made from zinc. As such, the object is highly likely to be post-medieval in date.

RECOMMENDATIONS

Investigative conservation is to be undertaken on the barrel lock and the copper alloy ?vessel fragments from context 565. Other objects which could benefit from further investigation are:

- 1811 bolster/chisel, to resolve identification
- 609 ?blade, to resolve identification

STORAGE

The material is packed for medium to long term storage. It should continue to be stored in an airtight container at a stable temperature and below 20% RH, to inhibit further corrosion. The RH should be controlled by active silica gel, which is regularly monitored and regenerated as necessary.

Jennifer Jones BA ACR Dip Cons
Conservation Services
Department of Archaeology
Durham University
South Road
Durham DH1 3LE
UK

Tel : 0191 334 1139
Fax : 0191 334 1101
*e-mail : **j.a.jones@durham.ac.uk***
26th Nov 07

CC07
Durham University
Conservation Services
Conservation Record

Date : 12/07
Conservator : JAJ

SF No :	Context : 565	X-radiograph No : 5691

Object : Fragments	Material : CuA	Photography : Digital pix bc&ac

Description :

11 irregularly shaped fragments of CuA sheet, probably associated or from the same object. The two largest, non-joining fragments (designated ii & iii) (dimensions 50x41 and 53x21mm, 4-6mm thick max) are the only pieces with an original surviving (?top) edge, which is flat on the inner surface and has a rounded bevel on the outside. These may be vessel fragments. The pieces are undecorated. Surfaces are variable in colour, from very dark/black to black/green. The pieces may have been exposed to heat, but only 1 piece (designated vii) shows possible heat related distortion.

Surface EDXRF (energy dispersive X-ray fluorescence) found the alloy composition to be sufficiently similar to suggest that all the fragments are from the same object.

Condition :

Highly corroded but stable, some pieces appearing to be totally mineralised. Corroded surfaces are uneven and slightly warty.

Conservation Treatment :

- Limited surface soil and loose corrosion removal using hand tools
- Surfaces consolidated with 8% Paraloid B72 in acetone

Analysis :

Surface EDXRF (energy dispersive X-ray fluorescence) analysis found the metal

Levels of **be regarded** **ately reflect the quan**

Fragments with an original ?top edge

Storage :

Should b **perature and belo** **H should be controlle** **ored and regenera**

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Date : 1/08
Conservator : JAJ

SF No :	Context : 609	X-radiograph No : 5690

Object : Bar/tool frag	Material : Fe	Photography : Digital pix bc&ac

Description :

Part of an iron tool or bar, currently 41mm long, 21mm tapering to 16mm wide and 6.6mm tapering to 1mm thick. The narrower end is possibly original, though its edge is irregular. The thicker end has been cut in antiquity, with one face of the cut having a burred edge. The section shape of the object suggests that it is not a blade.

Condition :

Moderately corroded and stable.

Conservation Treatment :

- Part air abraded
- Surfaces consolidated with 8% Paraloid B72 in acetone

Analysis :

none

Storage :

Should be stored in an airtight container at a stable temperature and below 20% RH, to inhibit further corrosion. The RH should be controlled by active silica gel, which is regularly monitored and regenerated as necessary.

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Conservation Services
Conservation Record

Date : 1/08
Conservator : JAJ

SF No :	Context : 1811	X-radiograph No : 5689

Object : Spike/tool	Material : Fe	Photography : Digital pix bc&ac

Description :

An iron spike or possible tool, 160mm long. It has a sub-circular (18mm diam) to square (10x10mm) section. The extreme point is damaged and lost. The sub-circular end is possibly original and complete and has a slightly burred edge.

Condition :

Moderately corroded and spalling

Conservation Treatment :

- Part air abraded
- Surfaces consolidated with 8% Paraloid B72 in acetone

Analysis :

none

Storage :

Should be stored in an airtight container at a stable temperature and below 20% RH, to inhibit further corrosion. The RH should be controlled by active silica gel, which is regularly monitored and regenerated as necessary.

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Durham University
Conservation Services
Conservation Record

Date : 1/08
Conservator : JAJ

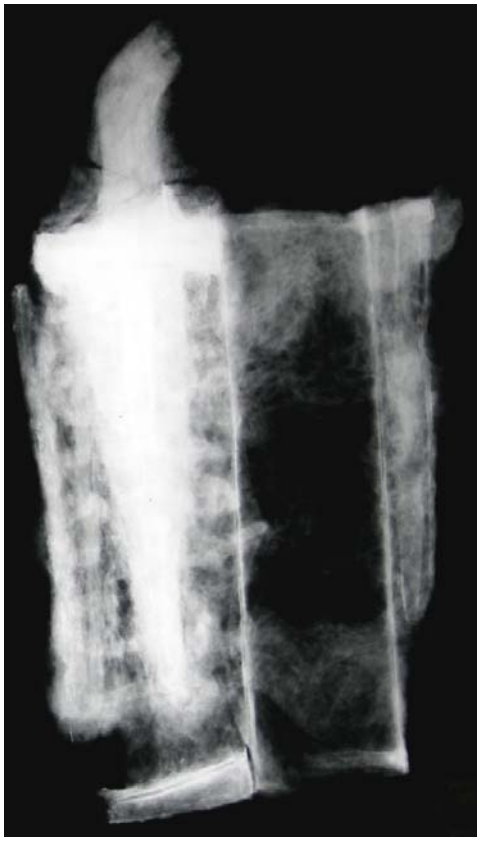
SF No :	Context : 609	X-radiograph No : 5691

Object : Padlock	Material : Fe/CuA	Photography : Digital pix bc&ac

Description :

Part of a copper alloy-decorated iron padlock and bar, currently 84mm long max and 45mm wide including the bar. The case is round and c20mm diam. A 22mm length of the (bent) bolt survives outside the case. X-radiography shows the padlock springs inside the case, though the high level of corrosion makes details of these difficult to discern. The bar is separated from the padlock case by a thin flat iron plate. Traces of copper alloy decoration, in the form of vertically and horizontally applied strips, survive on the intact endplate and on the case. This was identified as copper alloyed with a little lead and silver.

Areas of rather disorganised mineralised wood on the case and on both sides of the plate possibly derive from the artefact to which the padlock was attached. The wood is not identifiable, but appears to be a hardwood.



Condition :

Highly corroded and damaged. The key endplate is lost and there is a long vertical crack in the case, which appears to have been crushed.

Conservation Treatment :

- Part air abraded
- Surfaces consolidated with 8% Paraloid B72 in acetone

Analysis :

Surface EDXRF (energy dispersive X-ray fluorescence) analysis detected high levels of copper along with a little lead and silver.

Levels of elements detected in surface corrosion should be regarded as being qualitative only, as they do not accurately reflect the quantitative composition of the original alloy.

<u>Storage</u> :

Should be stored in an airtight container at a stable temperature and below 20% RH, to inhibit further corrosion. The RH should be controlled by active silica gel, which is regularly monitored and regenerated as necessary.

ILLUSTRATIONS

LIST OF FIGURES

Figure 1: Site Location

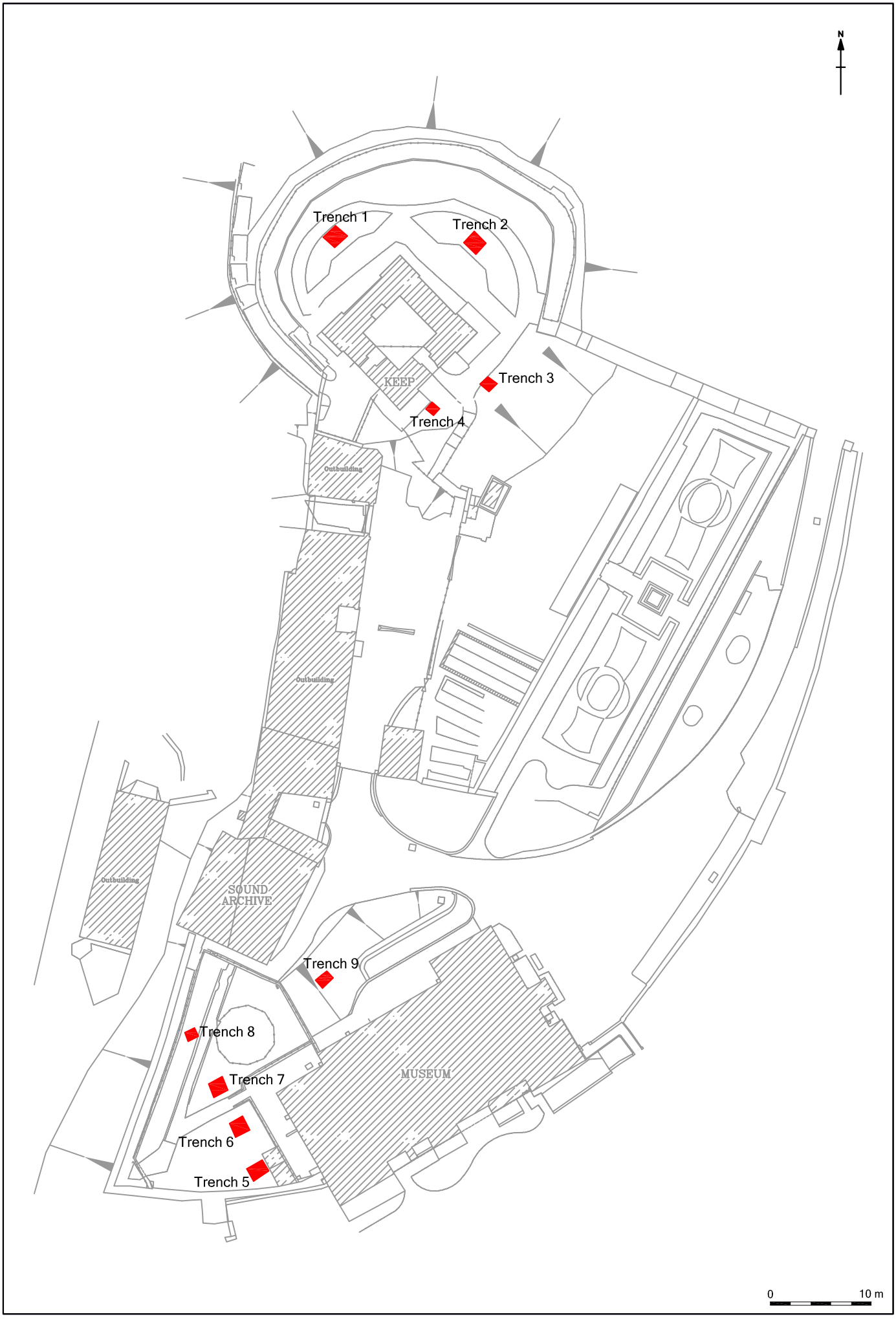


Figure 2: Location plan of evaluation trenches

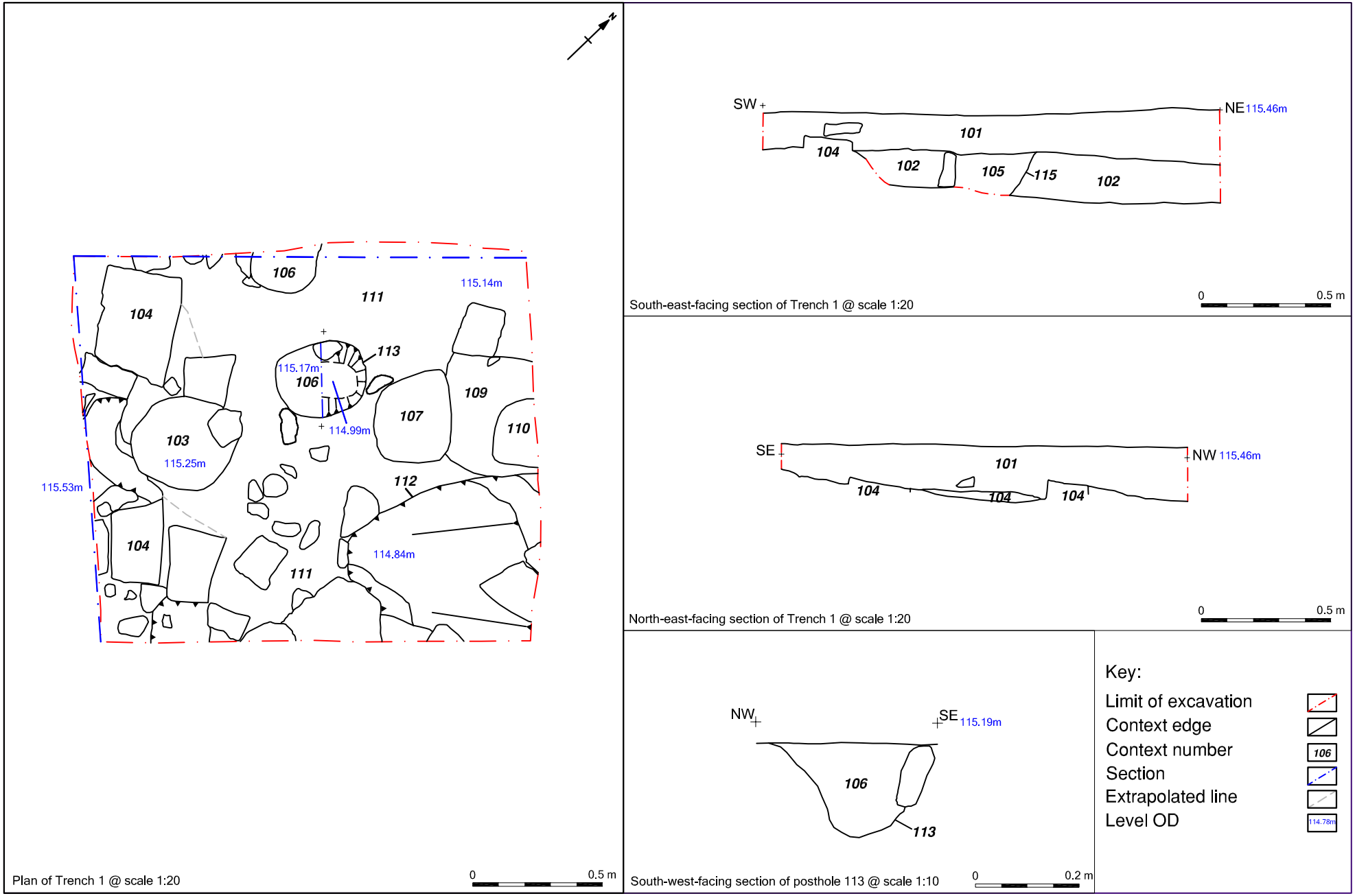


Figure 3: Plan and sections of Trench 1

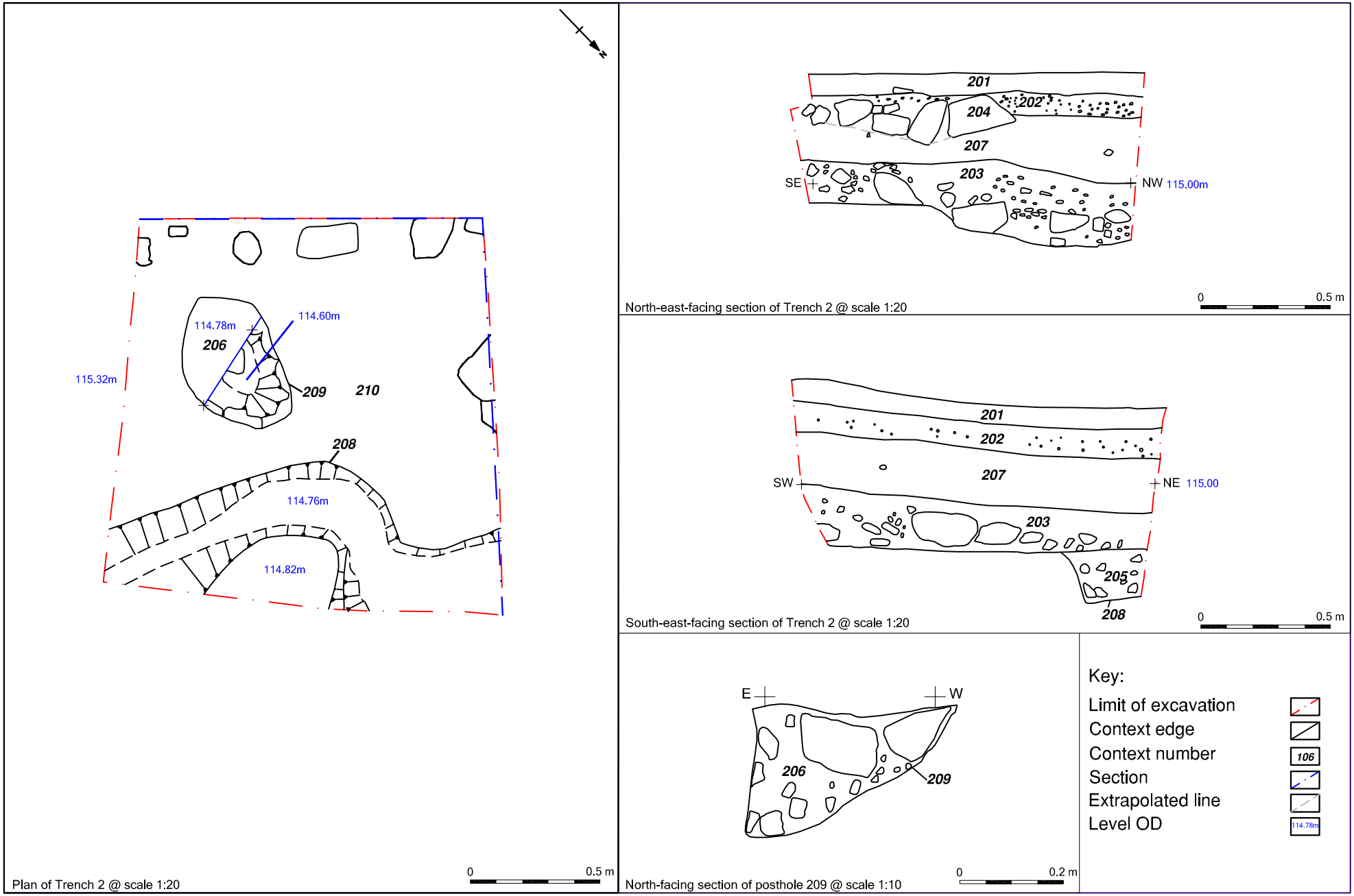


Figure 4: Plan and sections of Trench 2

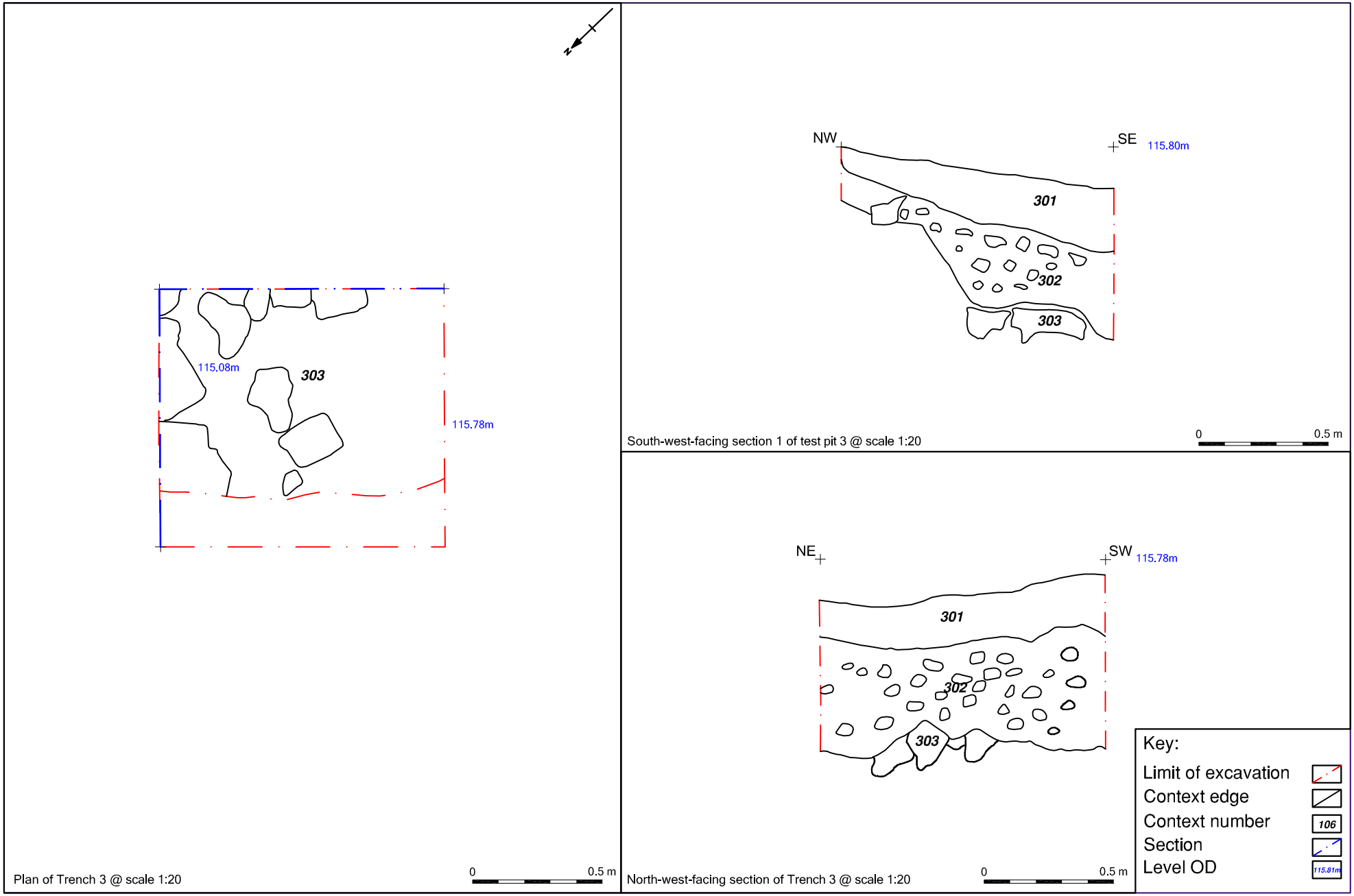


Figure 5: Plan and sections of Trench 3

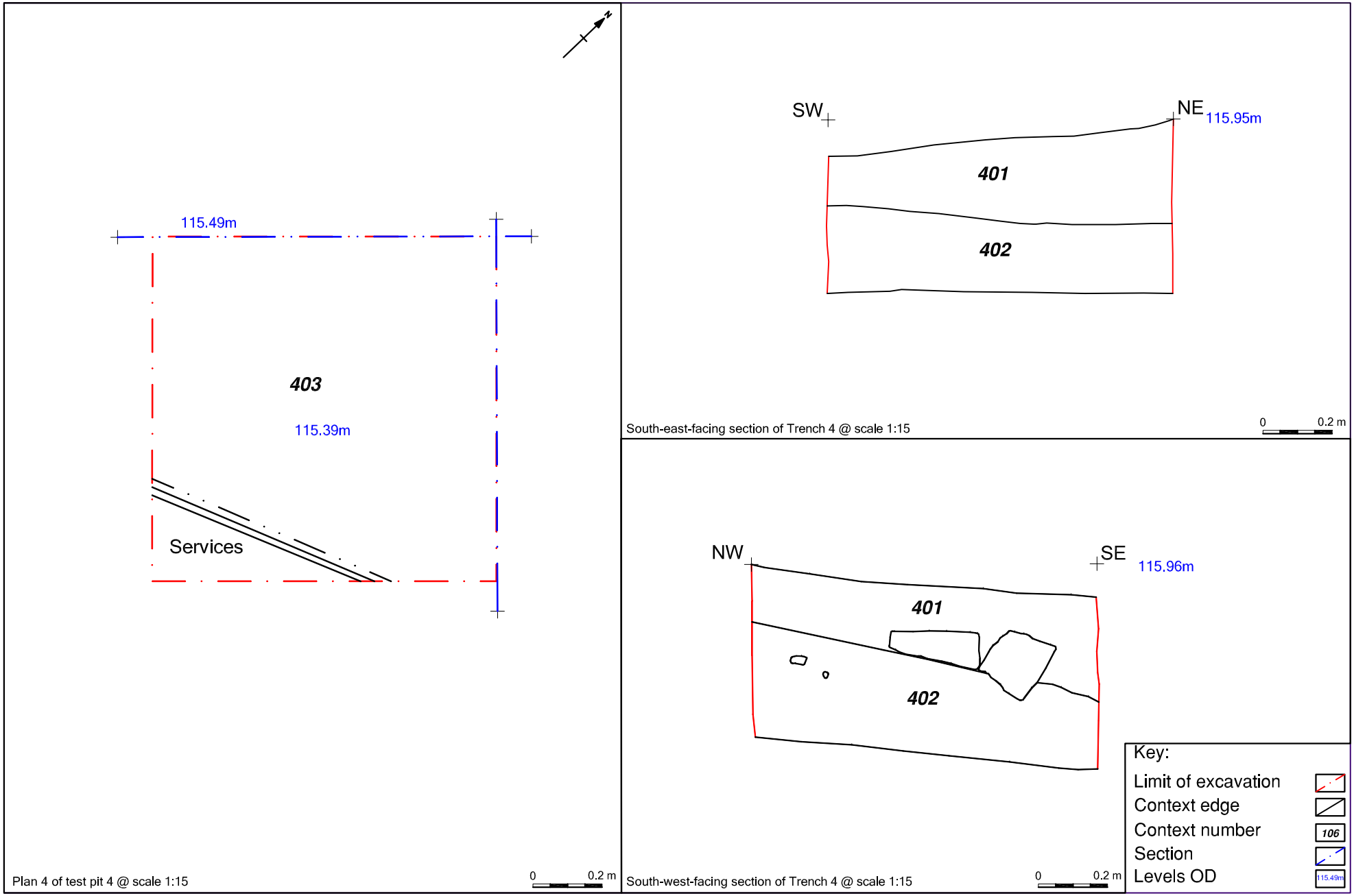


Figure 6: Plan and sections of Trench 4

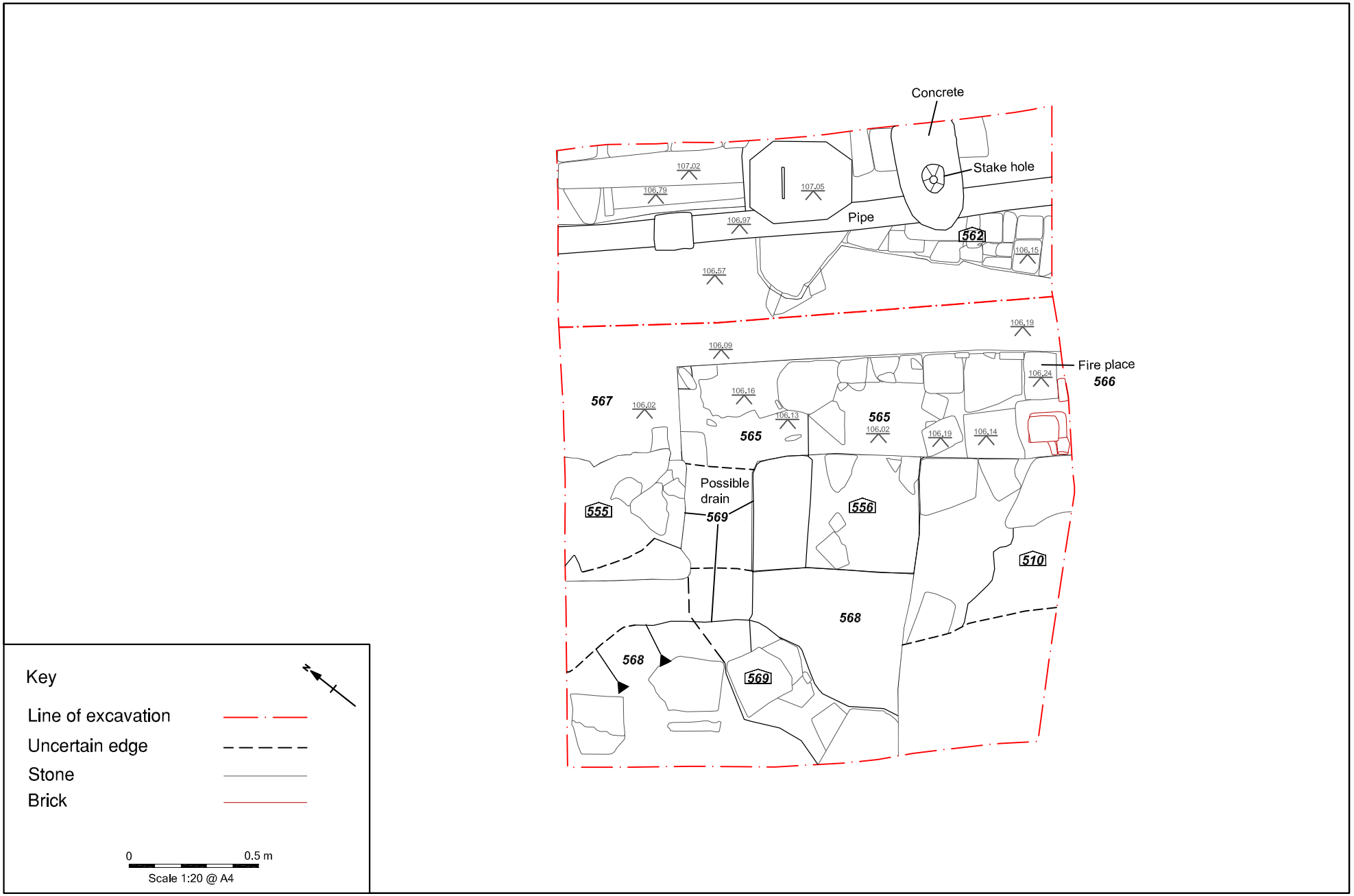


Figure 7: Plan of Trench 5A

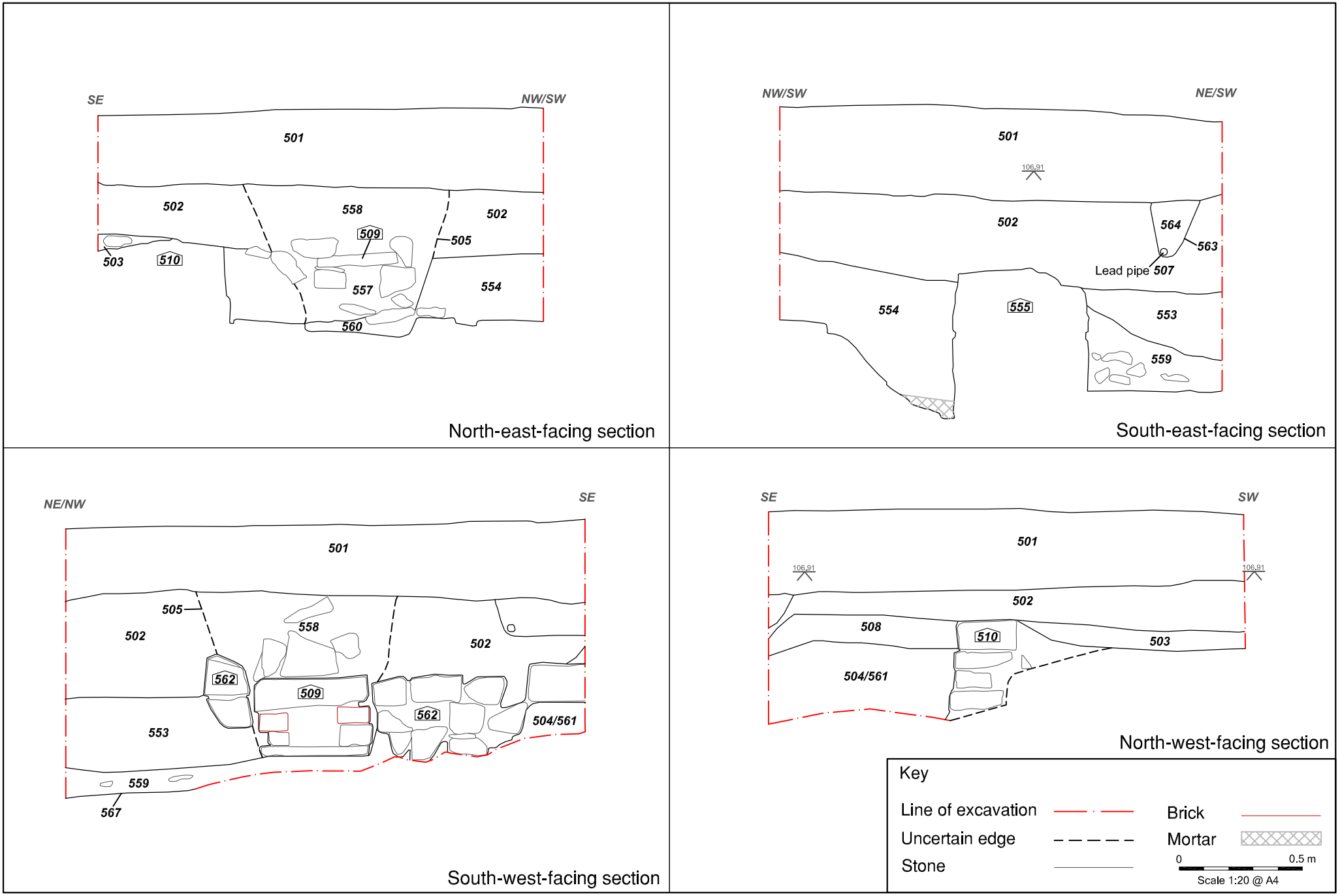
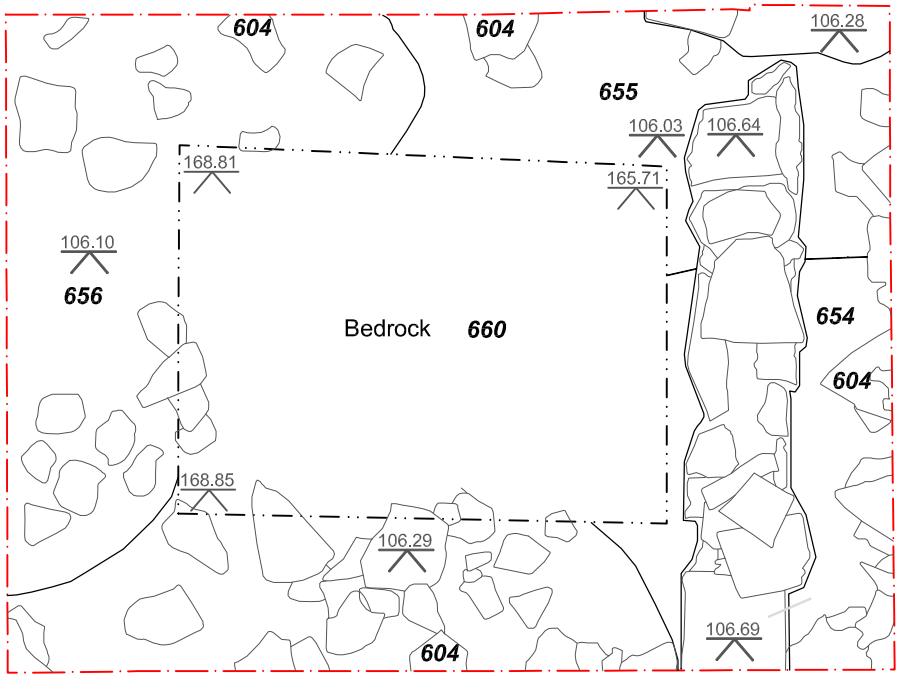


Figure 8: Sections of Trench 5A



Key

Line of excavation

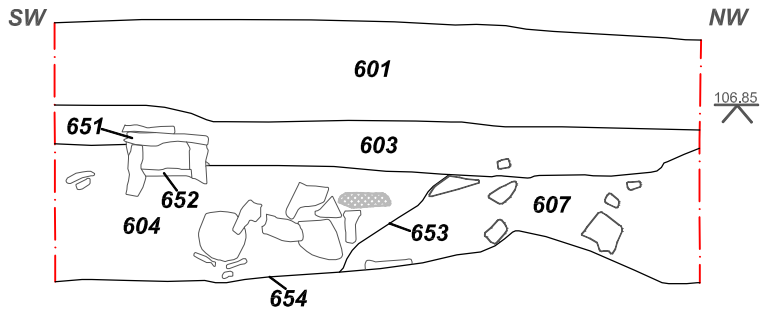
Sondage

Stone

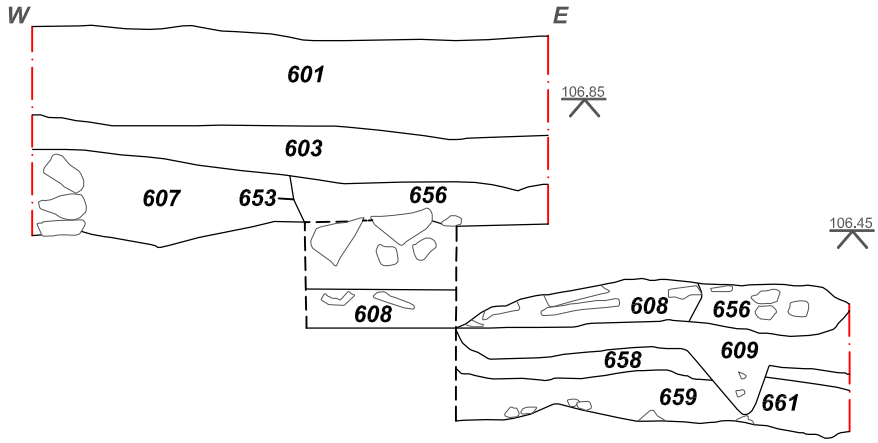
0 0.5 m

Scale 1:20 @ A4

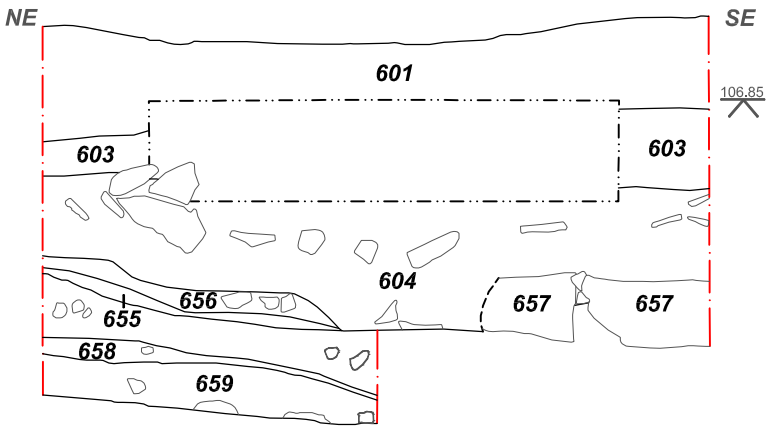
Figure 9: Plan of Trench 6A



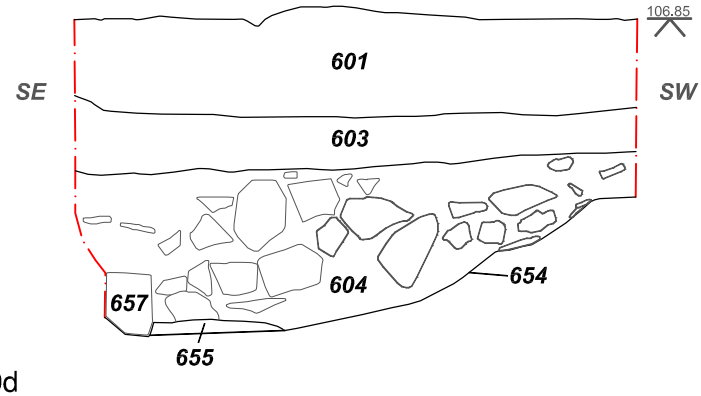
Section 9a



Section 9b



Section 9c



Section 9d

Key

Line of excavation

Uncertain edge

Stone

Backfill

Mortar

0 0.5 m

Scale 1:25 @ A4

Figure 10: Sections of Trench 6A

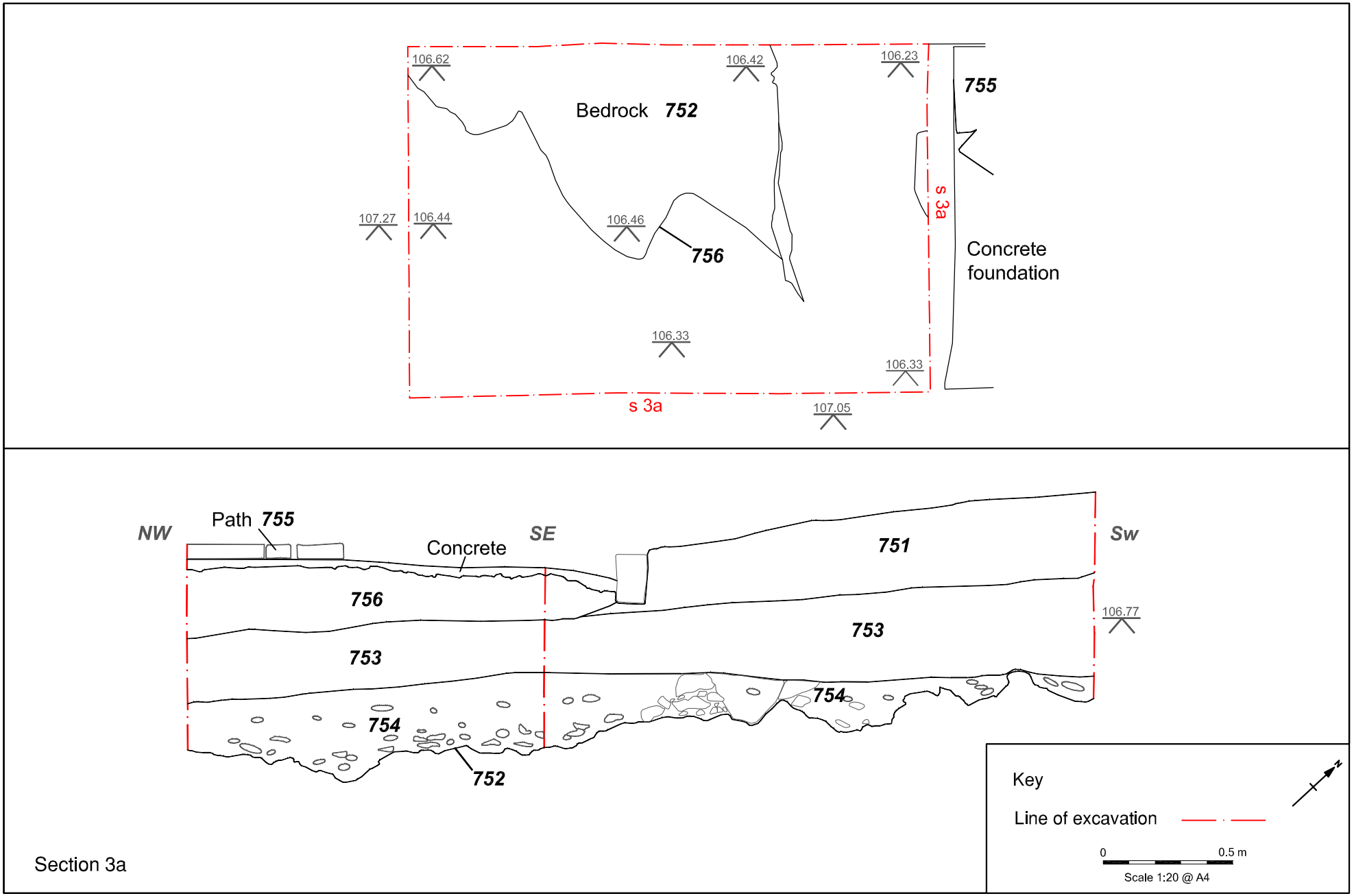


Figure 11: Plan and sections of Trench 7A

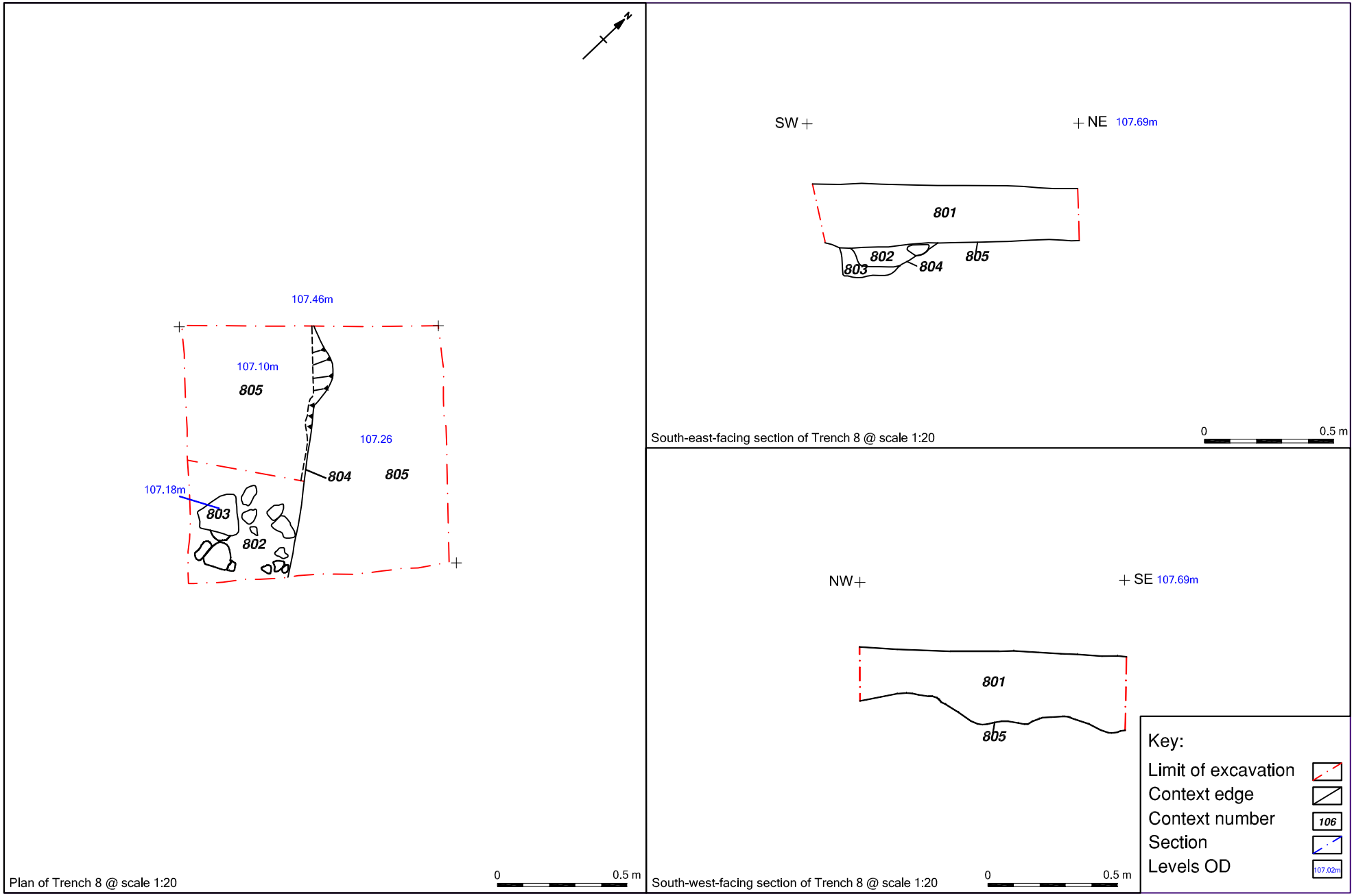
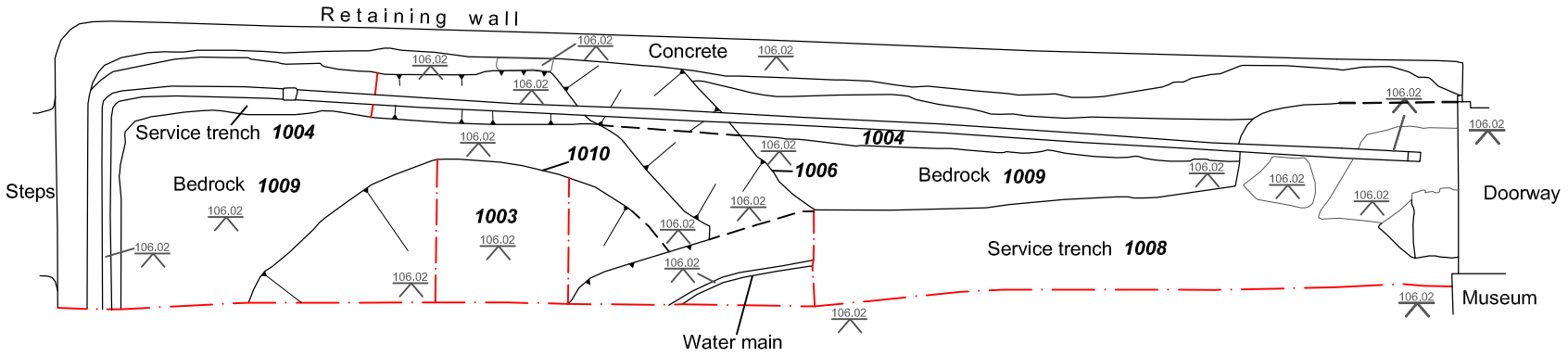


Figure 12: Plan and sections of Trench 8



Key

Line of excavation

Uncertain edge

Stone

N

0 1 m

Scale 1:40 @ A4

Figure 13: Plan of Trench 10

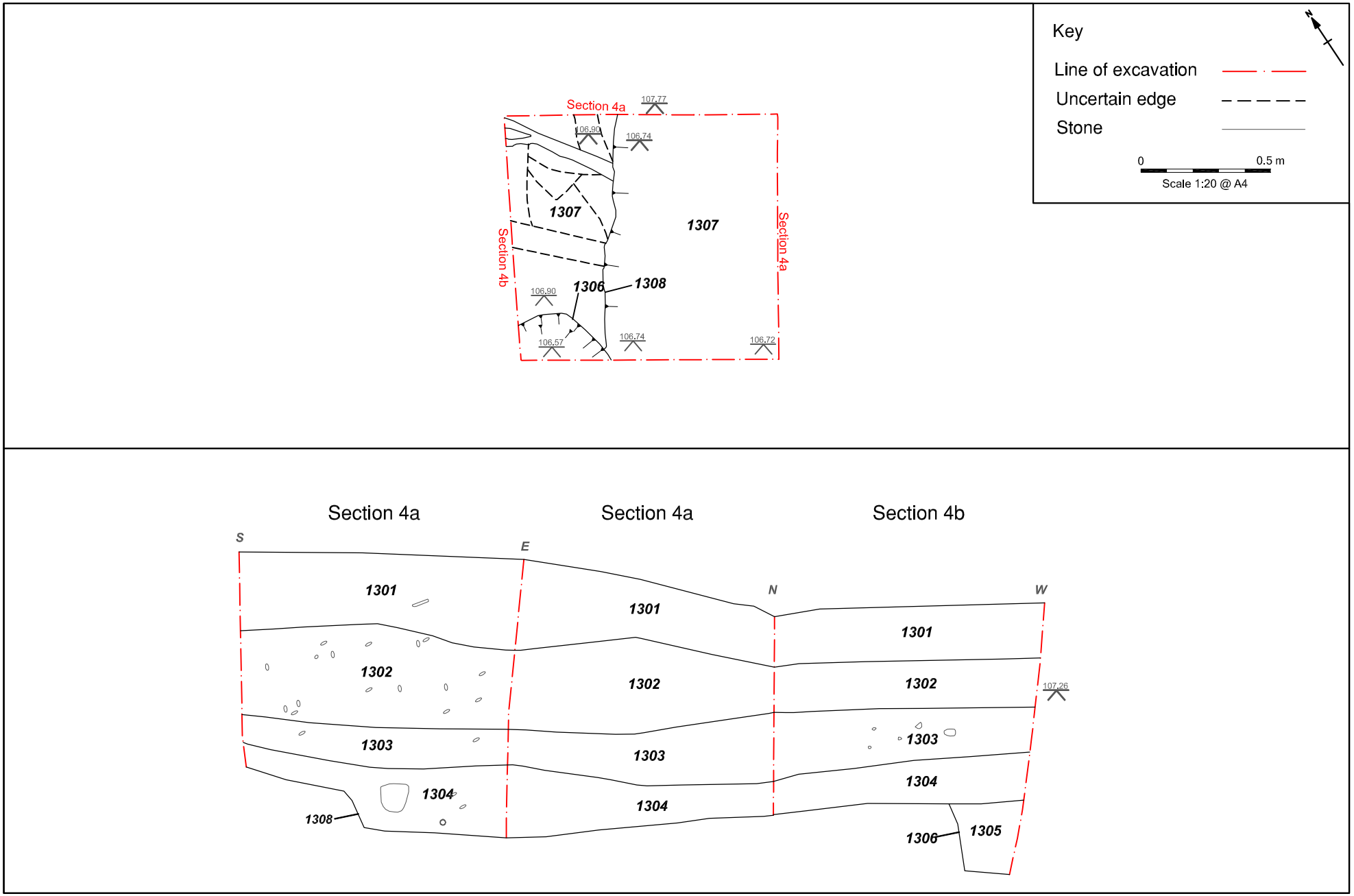


Figure 14: Plan and sections of Trench 13

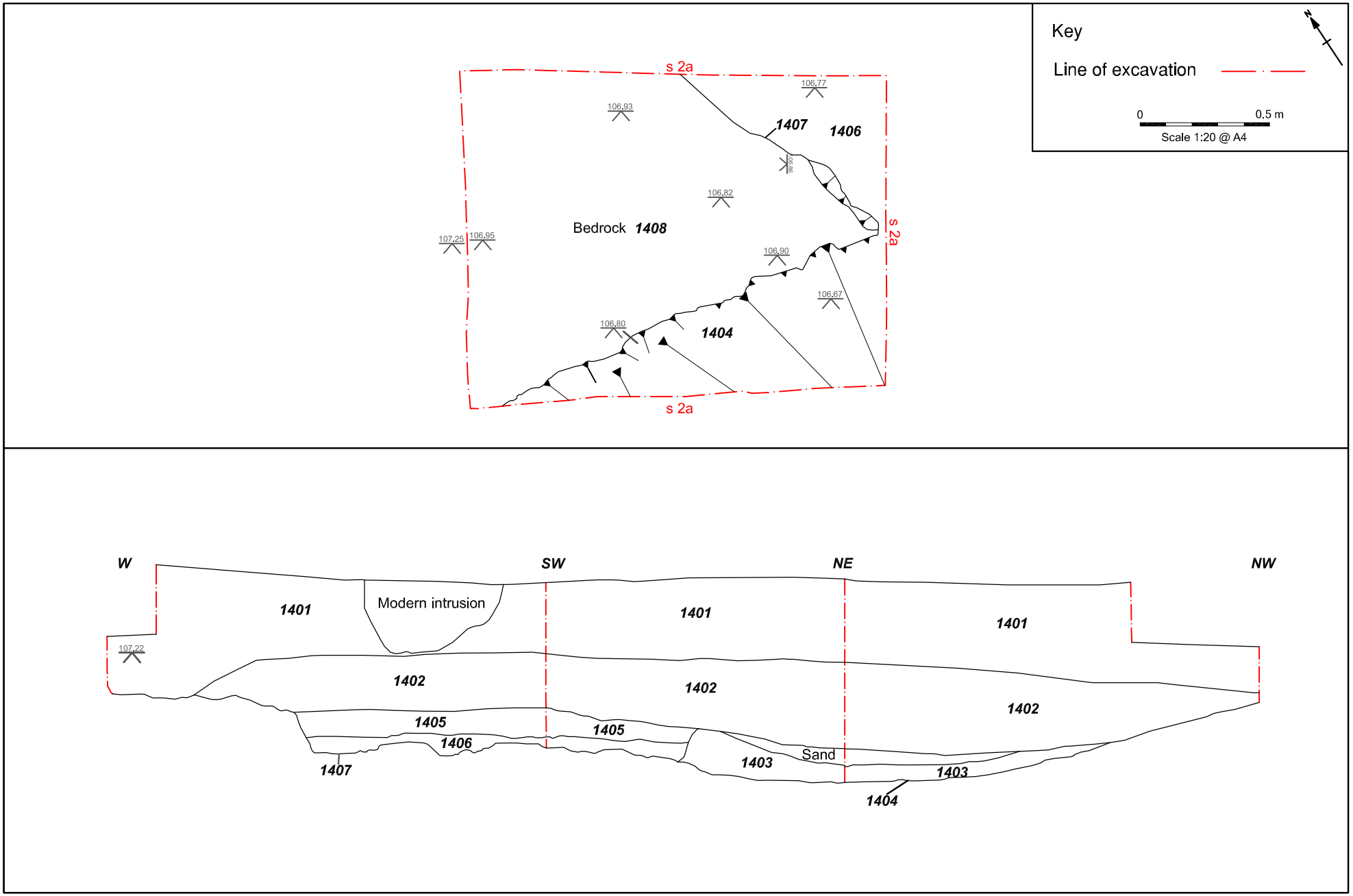


Figure 15: Plan and sections of Trench 14

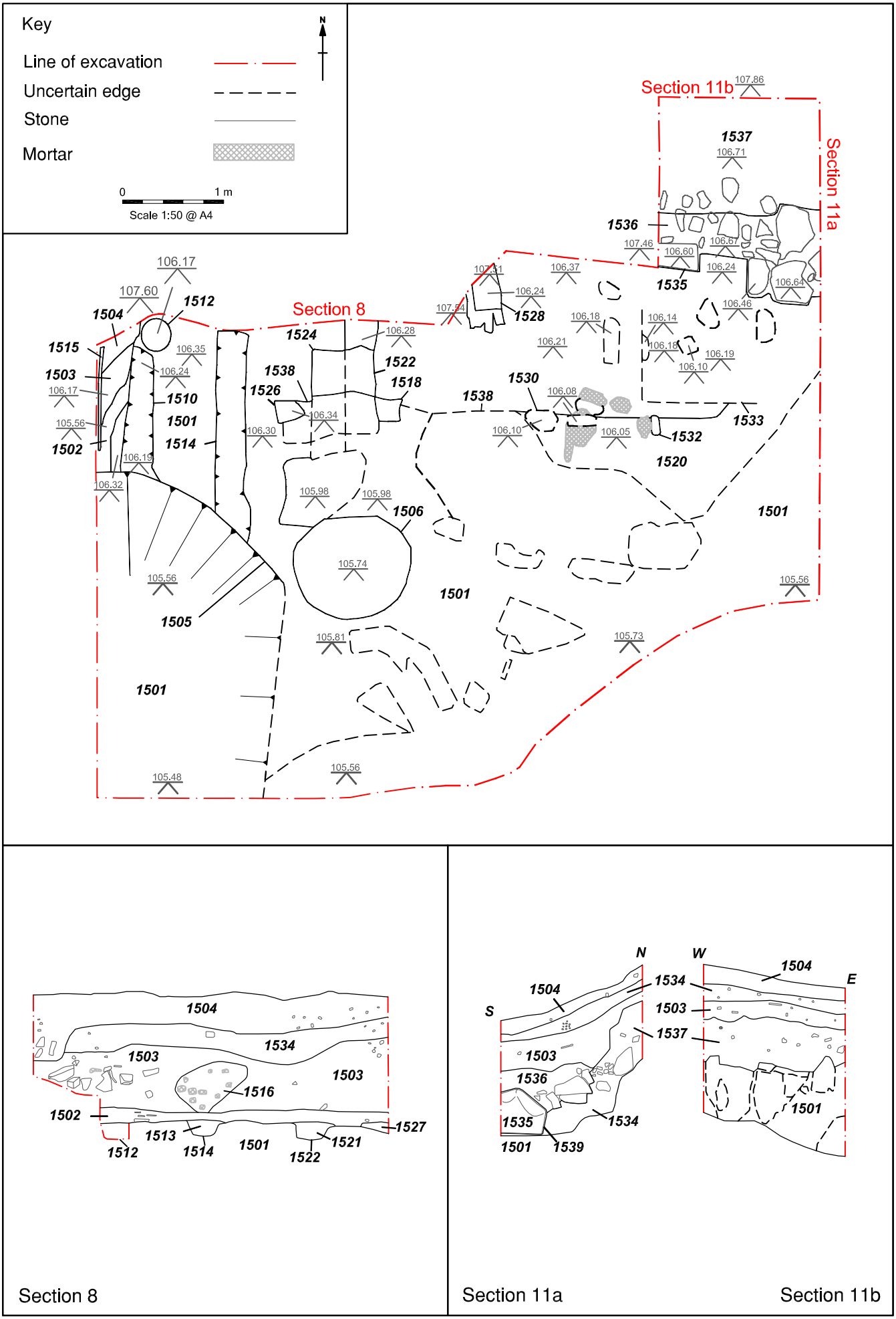


Figure 16: Plan and sections of Trench 15

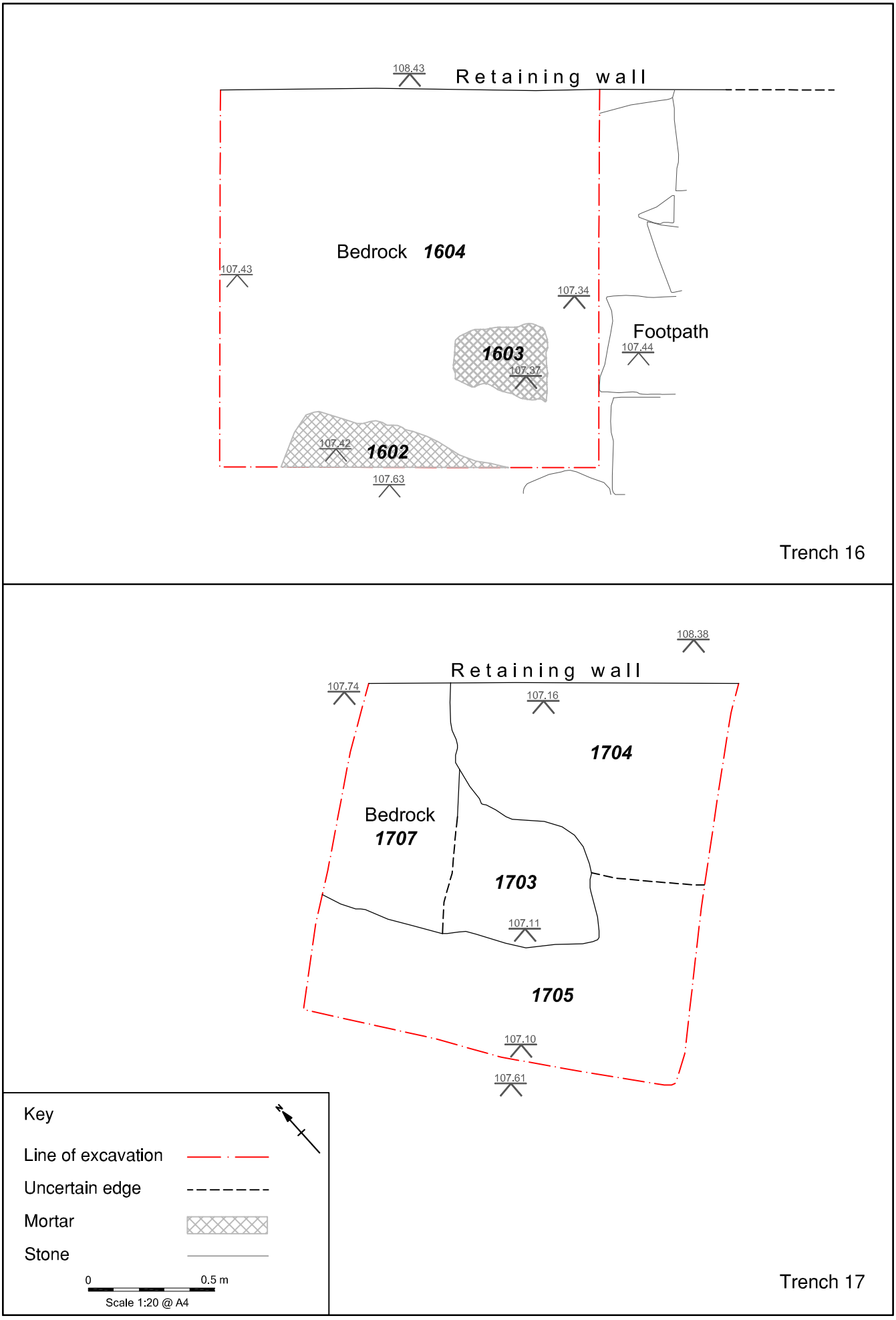


Figure 17: Plans of Trenches 16 and 17

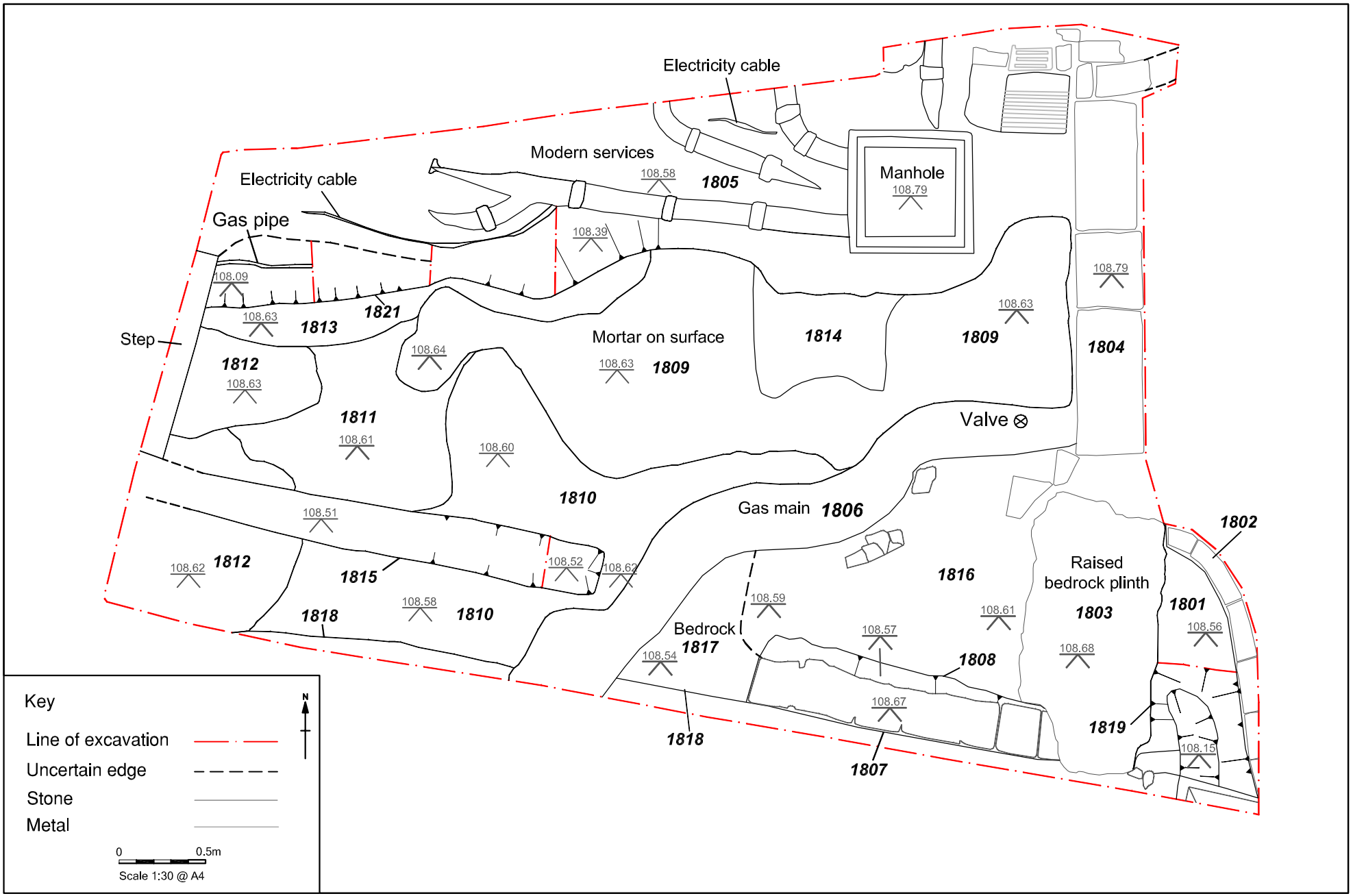


Figure 18: Plan of Trench 18

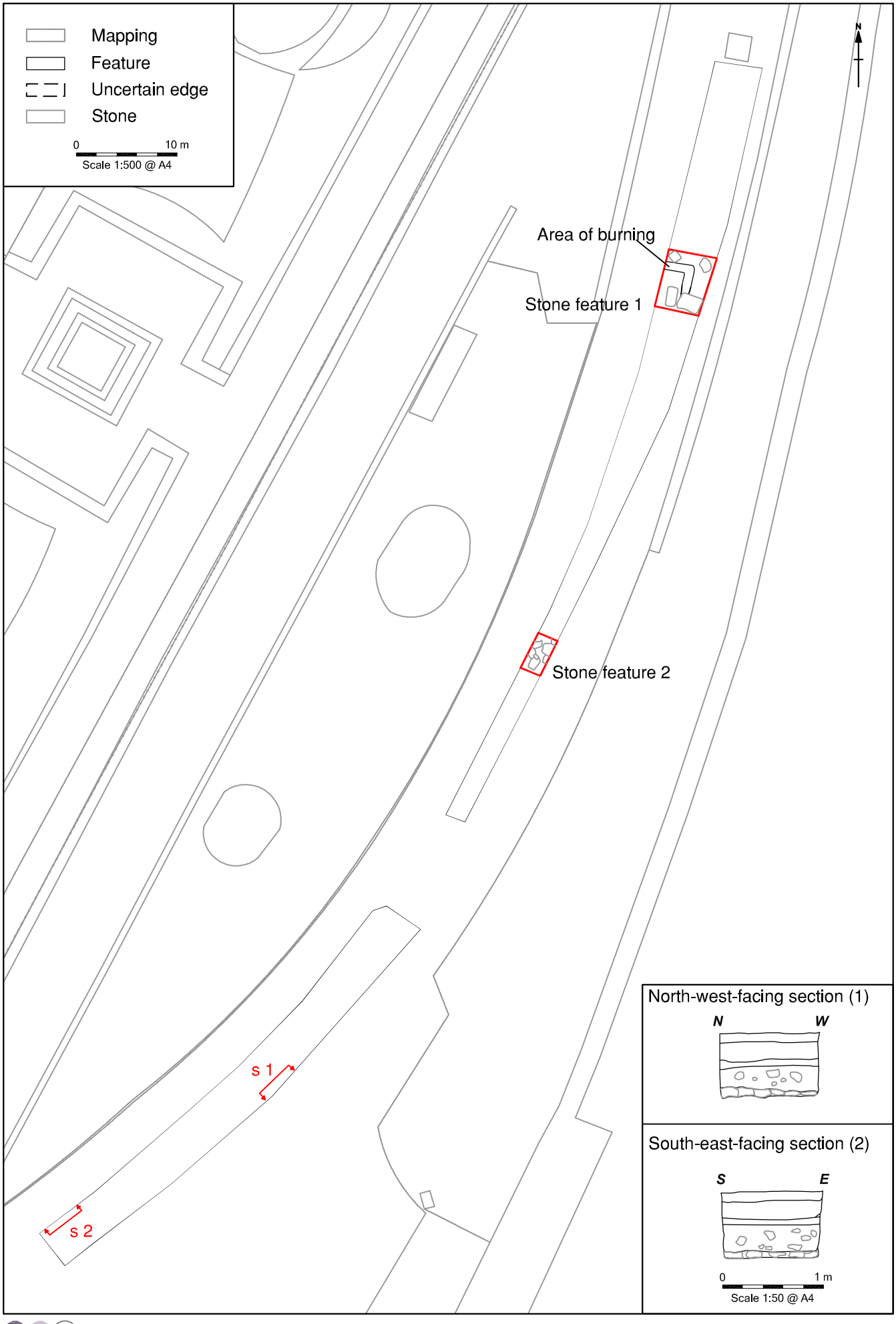


Figure 19: Watching brief carried out on the entrance driveway