



# **COBBLED SURFACE REPAIRS, BROUGH CASTLE, CHURCH BROUGH, CUMBRIA**

## **Archaeological Recording and Watching Brief**



**Oxford Archaeology North**

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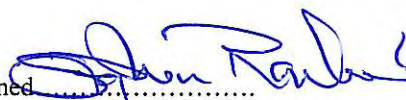
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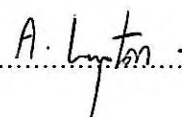
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**Prepared by:** Anthony Haskins  
**Position:** Supervisor  
**Date:** July 2008

**Checked by:** Stephen Rowland  
**Position:** Project Manager  
**Date:** September 2008

**Approved by:** Alan Lupton  
**Position:** Operations Manager  
**Date:** September 2008

Signed 

Signed 

**Oxford Archaeology North**

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

w: [www.oxfordarch.co.uk](http://www.oxfordarch.co.uk)  
e: [info@oxfordarch.co.uk](mailto:info@oxfordarch.co.uk)

**© Oxford Archaeological Unit Ltd (2008)**

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

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## SUMMARY

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As part of a scheme of repairs to a series of cobbled surfaces at Brough Castle, Church Brough, Cumbria (NGR NY 79135 14070), Oxford Archaeology North (OA North) were commissioned by English Heritage (EH) to undertake a programme of archaeological recording and monitoring prior to, during, and after the remedial works within a Scheduled Monument (SM No 334). Four areas were selected for repair, comprising part of the courtyard outside the keep, inside the brew/bake house, within the kitchen, and a small area against the gate house.

Prior to repairs, each of the areas was recorded through scaled drawings and photography. A watching brief was then undertaken during the repairs, which involved the lifting of any loose cobbles within the selected areas, together with the removal of any unsuitable underlying substrate; the cobbles were re-laid within a lime mortar matrix. A single piece of fine unglazed pottery, dated to the late twelfth to early thirteenth century, was identified from the cobble matrix within the brew house. Following completion of repairs, a detailed photographic record was compiled. The works were undertaken in June 2008.

## ACKNOWLEDGEMENTS

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OA North would like to thank Iain Whittick of English Heritage for commissioning the project, for his advice, and for supplying the background information.

The fieldwork was undertaken by Anthony Haskins and by Annie Hamilton-Gibney. Anthony recorded the animal bone recovered during the works and wrote the report, which was illustrated by Alix Sperr and Marie Rowland, whilst Ian Miller examined the pottery. Stephen Rowland managed the project and edited the report.

## 1. INTRODUCTION

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### 1.1 CIRCUMSTANCES OF PROJECT

- 1.1.1 English Heritage (EH) have sought to undertake a programme of repair and consolidation at their guardianship of Brough Castle, Church Brough, Cumbria (NGR NY 79135 14070; Fig 1). The proposed repairs were to be undertaken on a number of cobbled surfaces in three areas (Fig 2): Area 1, to the east of the keep; Area 2, within the brew house and bake house; and Area 3, within the kitchen. Prior to works starting, a fourth area just outside the gatehouse was added. The repair work was to involve the lifting of any loose cobbles within the selected areas, together with the removal of any unsuitable underlying substrate; the cobbles were then to be re-laid within a lime mortar matrix. As the repairs were to be undertaken within a Scheduled Monument (SM No 334), EH issued a specification (*Appendix 1*) for an associated programme of archaeological works, comprising the recording of each area prior to the repairs, monitoring during any negative groundworks associated with the repairs, and the photographic recording of the areas subsequent to the relaying of the cobbles. Following submission of a project design (*Appendix 2*) to meet the requirements of the specification, Oxford Archaeology North (OA North) were commissioned by EH to undertake the works in June 2008.

### 1.2 LOCATION, TOPOGRAPHY AND GEOLOGY

- 1.2.1 Brough Castle stands on a steep natural rise above the Swinedale Beck, to the immediate west of Church Brough, within the upper reaches of the Eden Valley, and approximately 6km north-east of Kirkby Stephen. Brough lies on the boundary of three main types of regional landscapes, as defined by the Countryside Commission (1998). These are the North Pennines to the north-east, the Orton Fells to the south-west, with the Eden Valley in between. Essentially, the surrounding area comprises gently undulating lowland and river valley, with the rugged uplands visible to the north and east.
- 1.2.2 The solid geology consists of Lower Permian deposits of dune-bedded red and brown sandstones, with intercalated breccias, and dating to between 280 and 225 million years ago (British Geological Survey 1982). The drift geology is largely a product of glacial activity common in the northern counties, being mostly till (boulder clay) deposited in the post-glacial period over 10,000 years ago, although more recent riverine deposits are to be found along the Eden peripheries (*ibid*). The overlying soils are predominately of the Wick 1 Association, which are typical brown earths (Lawes Agricultural Trust 1983).

### 1.3 HISTORICAL AND ARCHAEOLOGICAL BACKGROUND

- 1.3.1 **Introduction:** the following section seeks to provide a brief historical and archaeological context to the present programme of archaeological works, focusing specifically on the site of the castle and the Roman fort that preceded

it; it is not an exhaustive survey, examples of which can be found elsewhere in published literature.

- 1.3.2 **Roman period:** Brough lies in a position of strategic importance, at the western entrance to the trans-Pennine Stainmore Pass, through which passed an important Roman road (Road 82, Margary 1973) linking each of the key north-east and north-west arterial roads (Roads 7 and 8, Margary 1973). The need to protect this route, and possibly that to the south through Ravenstonedale (Birley 1958), encouraged the Romans to build a fort, *Verteris*, on the site in around AD 80. The fort seems to have remained in occupation until the later fourth or early fifth century AD, when its garrison of auxiliaries, the *Numerous Directorum* (translated as the Company of Plain Speakers), are recorded in the *Notitia Dignitatum* (Roman-Britain.org 2005). The only specific archaeological investigation of the fort took place in 1954 (Birley 1958), although Roman remains have been encountered during works on the medieval castle defences in 1924 and 1993 (EH 2007). Finds from the area of the Swinedale Beck (which skirts the northern foot of fortified escarpment) made in the eighteenth and nineteenth centuries include a coin hoard and a substantial quantity of metal objects likely to have eroded from a Roman rubbish tip (Birley 1958), amongst them a large quantity of lead seals, sadly depleted by the depredations of a local blacksmith (*ibid*).
- 1.3.3 Two trenches were investigated during the 1954 excavations. That closest to the western rampart revealed a series of structures, including cobble foundations, and indicated the potential for well-preserved and deep stratigraphy within the area of the fort (Birley 1958, 52). The second trench, placed on the outer bank of the castle moat opposite the gatehouse identified several north/south aligned walls and cobble foundations, interpreted as those of the *principia* and a granary. Finds ranged in date from the mid-first to mid-third century AD (*op cit* 55). Excavations within the village of Church Brough in 1971-2 and to the east of the fort uncovered elements of the civilian settlement, or *vicus*, including surfaces, walls, pits, timber dwellings and a bath-house of the second to third century AD (Jones 1977). The eighteenth- and nineteenth-century discoveries of bronze objects, including bronze figures and a statuette, indicated that there was probably also a bronze workshop within the *vicus*, dating to the second century AD (Birley 1958). Elements of the associated cemetery, located some 300m to the east of the fort, were recorded by dedicated local enthusiasts before destruction by road works in 1971. At least 50 cremations, including two in lead caskets, were identified, although the human remains were in poor condition. Pottery from the excavation dated to the second and third centuries AD (Jones 1977).
- 1.3.4 **Medieval and post-medieval periods:** the Roman fort's ramparts were still extant when the first medieval installation was constructed around 1093, possibly as one of a series of defences built by William Rufus during his recapture of those parts of Cumbria annexed by Scotland in the wake of the Norman Conquest (Jackson 1990). The entirety of the Roman circuit was re-established, with spoil from the re-cutting of the ditch thrown onto the surviving rampart and gateways (Birley 1958). The Norman focus, comprising a stone ringwork and possibly a motte, occupied the northern part of the re-



commissioned defences, and was separated by an internal moat from the bailey, which occupied the southern part of the former Roman fort. Excavations undertaken in 1925 suggested a rectangular tower, possibly the original keep, was added to the defences *c* 1100 (Jackson 1990). Scottish designs on Northern England were not quelled, however, and the castle was ceded to the Scotts in 1136, before being regained in 1157 and passing into the hands of Hugh de Morville, who may have rebuilt the early twelfth-century keep in around 1170, only to have the castle confiscated three years later (Jackson 1990, 34). In 1174, following a hotly-contested siege by a Scottish army under their king, William ‘the Lion’, the English garrison of just six knights and their followers, was forced to surrender and the twelfth-century fortification was razed almost to its foundations (*ibid*; Microarts 2007). Elements of Norman herringbone masonry do survive (presumably vestiges of de Morville’s keep), however, and were incorporated into the extant square three-storey keep, built in the later twelfth century by Theobald de Valoignes sometime between 1174 and 1190, when he too incurred Royal displeasure and was divested of the installation he had only just rebuilt (Jackson 1990; Robins 2007). In 1203 King John gave the castle to Robert de Vieuxpont (Jackson 1990) who laid the basic elements of the courtyard castle seen today, repairing the curtain wall and building a new gatehouse and a hall (which later collapsed through neglect; Microart 2007).

- 1.3.5 Under the Cliffords, who acquired the fortification in 1269 (Jackson 1990), the castle was modified over the fourteenth century, with the round tower (also known as the Clifford Tower) constructed at the south-east corner *c* 1300, and the adjoining large hall and accommodation block built *c* 1350 (EH 2007). From 1388, following damage to their other local possessions at the hands of invading Scots, the castle became the Clifford’s principal residence (Microarts 2007). The gatehouse was partially rebuilt in the fifteenth century (*ibid*), but in 1521 the castle was gutted by fire during Yuletide festivities. The fortification lay ruinous until 1660-63, when it was substantially renovated as a country mansion by Lady Anne Clifford (Castleuk.net 2007) but, by 1695, the castle was being used as a source of materials for repairs to that at Appleby (Jackson 1990) and of various other buildings in the area (Microarts 2007).
- 1.3.6 The medieval castle has been the subject of a number of archaeological investigations. Those undertaken in the 1920s by the Ministry of Works were largely associated with consolidation of unstable surviving structures, but the investigation undertaken in 1993 was more extensive, and comprised the evaluation of a *c* 66m section of the east ditch of the castle, ahead of drainage works. The evaluation encountered a mass of facing stones and wall core material indicating the collapse of part of the castle wall into the ditch. Twelfth- to thirteenth-century pottery, together with some Roman material was also recovered (English Heritage 2007). Excavations undertaken in 1971-2 within Church Brough, and on the site of the Roman *vicus*, just to the east of the castle, identified medieval and post-medieval remains that were interpreted as part of a planned settlement and market place planted, essentially, to service the castle (Jones 1989, 169 and 178).



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## 2. METHODOLOGY

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### 2.1 PROJECT DESIGN

- 2.1.1 The EH-approved project design (*Appendix 2*) was adhered to as fully as possible, and all works were consistent with the relevant standards and procedures of the Institute of Field Archaeologists, and generally accepted best practice. All modifications from the project design were agreed with EH, and comprised principally the recording of a fourth area of cobbles within the south gatehouse (Fig 2, Area 4).

### 2.2 WATCHING BRIEF

- 2.2.1 Full liaison was maintained throughout the works with the EH representative and with the on-site contractors. A systematic approach was taken to the recording of the cobbled surface selected for repair. Each area was located on a temporary grid, itself tied into structural elements of the castle, specifically wall corners, that could then be dropped onto a complete plan of the castle. Drawings of each area were made on permatrace at a scale of 1:20 and using a 1m planning frame. A fully-indexed photographic record was maintained using monochrome print, colour slide and colour digital formats.
- 2.2.2 Monitoring during the lifting of loose stones by specialist contractors comprised examination of all exposed horizons and deposits and their recording through the annotation of scaled drawings and photography. Disturbed areas were scanned for finds and written notes were compiled on *pro-forma* recording sheets. Following the relaying of the cobbles, these too were recorded photographically.

### 2.3 ARCHIVE

- 2.3.1 A full professional archive has been compiled in accordance with the project design (*Appendix 2*), and with current IFA and English Heritage guidelines (English Heritage 1991). The paper and digital archive will be deposited with the Cumbria Record Office, Kendal on completion of the project. Copies of this report will be lodged with English Heritage and the Cumbria Historic Environment Record, Kendal.

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### 3. FIELDWORK RESULTS

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#### 3.1 RECORDING

- 3.1.1 **Area 1:** Area 1 was located around the base of the eastern side of the keep, extending 8m from the south curtain wall and was up to 7.1m wide (Fig 3; Plate 1), bounded to the west by a small grassed area. The remaining cobbles of the surface, **7**, were in a generally good state of repair, although there were seven distinct bare patches of exposed bedding material where cobbles had been lost (**8-14**), the edges of which were starting to degrade and thus expand further. The surviving cobble surface consisted of rounded and sub-rounded large sandstone 'cobbles' ranging in size from 50mm to over 500mm in length, although the majority were approximately 100-200mm in length.
- 3.1.2 **Areas 2 and 3:** these areas were located within the north-east service range (Fig 4; Plates 2 and 3). Area 2, measuring *c* 11.5m east/west by 7.5m north/south, encompassed much of the contiguous bake house and brew house, together with part of the southern wall of that structure and an area of adjoining exterior cobbles. The cobbles in the area of the bake house (surfaces **1** and **2**) and brew house (surface **3**; Plate 2) were essentially similar in their dimensions and arrangement to those observed within Area 1. Of some interest was the fact that these cobbles, and those of the adjoining courtyard, appeared to have been laid within a series of north/south aligned linear cells, each about 4m wide and defined by strips of larger, more rectangular cobbles. Surfaces **1-3** were generally in a good state of repair; however, a large area (**4**) in the middle of these buildings was bare of cobbles and is likely to expand without remedial treatment as the edges, particularly to the east and west, had started to degrade. Bare patch **4** abutted the southern wall of the service range, **5**, and was thus planned in detail in the event of any changes associated with the repair works.
- 3.1.3 Area 3 (Plate 4) was located within the western part of the kitchen and measured 4m north/south by 2m east/west, bounded to the south by the remnants of service range wall **5** and to the west by an internal wall. Within the kitchen, the majority of cobbled surface **15**, which was similar in character to those in Areas 1 and 2, was generally in a good state of repair, although some of the cobbles along the western edge were loose as they skirted bare patch **16**.
- 3.1.4 **Area 4:** Area 4 measured 2m north/south by 1m east/west, located just inside the western wall of the gatehouse (Fig 5; Plate 5). Cobbled surface **6** resembled each of the other recorded areas and, whilst in a better sate of repair, there were a number of loose, but otherwise *in-situ*, cobbles.

### 3.2 WATCHING BRIEF RESULTS

- 3.2.1 **Area 1:** the repairs to cobbled surface **7** around the keep were focused around bare patches **10-12**, with those cobbles that were lifted and re-set shown on Figure 3. Each bare patch consisted of a dark reddish-brown friable silty sand without inclusions and, along with the matrices of similar bare patches **8, 9, 13** and **14**, are most likely the same cobble-bedding deposit, although it was impossible to demonstrate a direct relationship between them.
- 3.2.2 **Area 2:** this area was assessed by the repair contractors, who concluded that, whilst the edge of the cobbles of the bake house surface (**2**) were stable enough to be left without remedial work, surface **3** within the brew house was in need of consolidation (Fig 4). A single piece of medieval pottery (*Section 3.4*) was recovered during the removal of loose stones from surface **3** although it may well have originated from underlying bedding layer **4**, a deposit of dark reddish-brown friable silty sand without inclusions.
- 3.2.3 **Area 3:** observations within Area 3 essentially matched those within Areas 1 and 2, with the exception that the exposed dark reddish-brown friable silty sand bedding layer **16** contained paler lenses.
- 3.2.4 **Area 4:** minimal work was carried out on cobbled surface **6**, within the area of the gatehouse. The loose *in-situ* stones were directly lifted and replaced in the same location with lime mortar to bed them in. No substrate or bedding material was exposed and it was therefore impossible to tell whether construction of this surface differed from any other of the recorded cobbled surfaces.

### 3.3 THE REPAIR WORKS

- 3.3.1 Those loose cobbles that were lifted as part of the repair works, together with additional cobbles (that no doubt originated from the surfaces), were re-set within a matrix of lime mortar mixed with some of the removed original silty sand bedding material (contexts **4, 10, 11, 12** and **15**; Plates 6 and 7). The areas of repair were then covered with further scraped-up bedding material to effectively restore the original appearance of the cobbles. As can be seen in Plate 8, the repairs are not obvious and match with the state of the cobbled surface prior to work commencing.

### 3.4 FINDS

- 3.4.1 Two artefacts were recovered from the programme of works, comprising a single sherd of pottery and a piece of animal bone. The pottery, from brew house cobbled surface **3**/bedding layer **4**, was an unglazed sherd in a fine, wheel-thrown, pinkish-buff fabric. It appeared to derive from a slender vessel, perhaps a jug, although there was no sign of a handle, and to date from the late eleventh to early twelfth century. The sherd was relatively unabraded,

suggesting that it had not been regularly disturbed from its context of deposition. One dog-gnawed rib fragment was also recovered from cobble layer 7, at the base of the keep. The bone was well-preserved, but could easily be intrusive into the surface.

## 4. CONCLUSIONS

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### 4.1 DISCUSSION

- 4.1.1 The scheme of works has provided an opportunity to record and, albeit on a limited scale, examine the construction of the castle's cobbled surfaces within a range of locations. Although there is localised damage to the surfaces, the majority survive in a good state of repair and, following the present remedial works, should remain so. Although it cannot be proven definitively, the similarity in construction of the various recorded surfaces implies that they are essentially contemporary, although given the somewhat random nature of the constituent cobbles, any phasing of construction might be hard to establish from the present, largely superficial, examination. Similarly, any repairs, unless they utilised distinctive material, would be hard to determine. It is of interest that, where visible, the bedding material for the cobbles is so consistent; had there been multiple phases of construction and repair, one might expect this to be reflected in the bedding substrate, which would be more susceptible to the influence of imported or impressed material.
- 4.1.2 The actual date of the cobbled surfaces is harder to adjudge; the castle has seen numerous phases of construction, with the last culminating with its conversion to a country house under Lady Anne Clifford during 1660-63. Lady Anne's renovations came over a century after a catastrophic fire which affected much of the castle. The fact that the cobbles around the brew house and bake house, particularly surface 3, abut the southern wall of the service range, may imply they post-date any reconstruction of this structure following the sixteenth century conflagration. However, it is possible that existing foundations may have been re-used during any seventeenth-century reconstruction, whilst the cobbles themselves are unlikely to have been heavily effected by the fire. Within this context, the single sherd of unabraded late twelfth- to early thirteenth-century pottery may be of significance in helping to date surface 3.

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## 6. ILLUSTRATIONS

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### 6.1 FIGURES

Figure 1: Site Location

Figure 2: Plan showing areas of repair

Figure 3: Detail of Area 1

Figure 4: Detail of Areas 2 and 3

Figure 5: Detail of Area 4

### 6.2 PLATES

Plate 1: General shot of Area 1, facing south-west, prior to remedial works

Plate 2: Cobbled surface **2** within the bake house (Area 2), facing east, prior to remedial works

Plate 3: Cobbled surface **3** within the brew house (Area 2), facing south, prior to remedial works

Plate 4: Cobbled surface **15** within the kitchen (Area 3), facing south, prior to remedial works

Plate 5: Cobbled surface **06** within gateway (Area 4), facing west, prior to remedial works

Plate 6: Working shot of remedial works

Plate 7: Surface **3** (Area 2), facing west, during repairs

Plate 8: Surface **3** (Area 2), facing south-west, following repairs

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## APPENDIX 1: ENGLISH HERITAGE SPECIFICATION

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### **Brough Castle**

#### Re-fixing of loose cobble stones

##### Outline Specification

The central courtyard of the Castle is cobbled. In some areas these cobbles have become loose, and some have become lost. The remaining loose cobbles are in place on the edge of more solid areas. The purpose of this project is to consolidate what remains and replace those stones that are still on site in areas where the cobbles are missing.

1. Survey the areas shown in photographs and plans to establish the extent of loose cobble stones. Drawings and/or photographs to be made to ensure stones are replaced in their original positions.
2. Lift loose cobbles and set aside for re-fixing. Cobbles to be removed only where they are already loose, and taken back to such a point that the remaining stones are firmly fixed in place.
3. Clean back loose mortar and earth until a solid base is found.
4. Re-bed cobbles in new mortar (1:2:9 cement:lime:sand mix). Ensure that original profile is retained as closely as possible. Replace stones as close to original positions as possible.
5. Where there are areas of missing stone (particularly to the East of the Keep on slope) these can be made up using stones currently stored within the lock up adjacent to the gatehouse (Key available from Mrs Beckwith at the farm). Other stones can be found around the site on the outside of the walls (particularly to the North where they have been thrown by local youths).
6. Where areas are to be left without cobbles due to lack of stone the edge is to be bedded securely in the new mortar to prevent removal by vandals. A tidy edge is to be created, but not to a regular line – the cobbles have a random pattern, and straight lines should not be created where they do not already exist.

## APPENDIX 2: PROJECT DESIGN

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# COBBLED SURFACE REPAIRS, BROUGH CASTLE, CUMBRIA

## Archaeological Recording and Watching Brief: Project Design



**Oxford Archaeology North**

June 2008

**English Heritage**

OA North Job No: L10039  
NGR: NY 79135 14070

## 1. INTRODUCTION

### 1.1 PROJECT BACKGROUND

- 1.1.1 Proposals have recently been submitted for the repair and consolidation of a number of cobbled surfaces at Brough Castle, Church Brough, Cumbria (NGR NY 79135 14070), which is under the guardianship of English Heritage (EH, henceforth, 'the client'). The proposed repairs will be undertaken within three areas: within the Brew House and Bake House (c 7m by 7m); to the east of the Keep (c 7m by 7m); and just outside the gatehouse (c 2m by 2m). The repair work will involve the lifting of any loose cobbles within the selected areas, together with the removal of any unsuitable underlying substrate; the cobbles will then be relaid within lime mortar. These repairs will be undertaken within a scheduled ancient monument and, accordingly, EH requested that a programme of archaeological works be undertaken in association with the repairs, comprising recording of each area prior to the repairs, and monitoring during any negative groundworks associated with the repairs. In response to a communication from EH, the following project design has been compiled to meet IFA standards.

### 1.2 ARCHAEOLOGICAL BACKGROUND

- 1.2.1 The site lies in a position of strategic importance, occupying a steep natural rise above the Swinedale Beck close to the union of the Stainmore Pass running east/west through the Pennines, and the Eden Valley, the route of the main Roman road between York and Carlisle. The need to protect this route, and possibly that to the south through Ravenstonedale (Birley 1954), encouraged the Romans to build a fort, *Verteris*, on the site in around AD 80, which seems to have remained in occupation until the later fourth or early fifth century AD, when its garrison of Auxiliaries, the *Numerous Directorum*, are recorded in the *Notitia Dignitatum*. The only specific archaeological investigation of the fort took place in 1954 (Birley 1954), although Roman remains have been encountered during works on the castle defences in 1924 and 1993, whilst finds from the area of the Swinedale Beck made in the eighteenth and nineteenth centuries include a coin hoard and a substantial quantity of metal objects likely to have eroded from a Roman rubbish tip (Birley 1954), amongst them a large quantity of lead seals (Collingwood 1934), sadly depleted by the depredations of a local blacksmith (Birley 1954). Two trenches were investigated during the 1954 excavations, of which that on the moat outer bank, opposite the castle gatehouse, is the most relevant to the present works. Here, several north/south aligned walls and cobble foundations were interpreted as those of the *principia* and a granary (*op cit* 55).
- 1.2.2 The Roman fort's ramparts were still extant when the first medieval installation was constructed around 1093, possibly as one of a series of defences built by William Rufus during his re-conquest of those parts of Cumbria annexed by Scotland in the wake of the Norman Conquest (Jackson 1990). The entirety of the Roman circuit was re-established, with spoil from the re-cutting of the ditch thrown onto the surviving rampart and gateways (Birley 1954). The Norman focus, comprising a stone ringwork and possibly a motte, occupied the northern part of the re-commissioned defences, and was separated by an internal moat from the bailey which occupied the southern part of the former Roman fort. Excavations undertaken in 1925 suggested a rectangular tower, possibly the original keep, was added to the defences c 1100 (Jackson 1990). Scottish designs on Northern England were not quelled, however, and the castle was ceded to the Scots in 1136, before being regained from their clutches in 1157 and passing into the hands of Hugh de Morville, who may have rebuilt the early twelfth-century keep in around 1170, only to have the castle confiscated three years later (Jackson 1990). In 1174, following a hotly-contested siege by a Scottish army under their king, William 'the Lion', the English garrison was forced to surrender and the twelfth-century fortification was razed almost to its foundations (Microarts 2007). Elements of Norman herring bone masonry do survive (presumably vestiges of de Morville's keep), however, and were incorporated into the extant square three-storey keep, built in the later twelfth century by Theobald de Valoignes sometime between 1174 and 1190 when he too incurred Royal displeasure and was divested of the installation he had only just rebuilt (Jackson 1990; Robins 2007). In 1203 Robert de Vieuxpont was given the castle by King John (Jackson 1990) and

laid the basic elements of the courtyard castle seen today, repairing the curtain wall and building a new gatehouse and a hall (which later collapsed through neglect; Microart 2007).

- 1.2.3 Under the Cliffords, who acquired the fortification in 1269 (Jackson 1990), the castle was modified over the fourteenth century, with the round tower (also known as the Clifford Tower) constructed at the south-east corner (overlooking the proposed drainage route) *c* 1300, and the adjoining large hall and accommodation block built *c* 1350 (EH 2007). From 1388, following damage to their other local possessions at the hands of invading Scots, the castle became the Clifford's principal residence (Microarts 2007). The gatehouse was partially rebuilt in the fifteenth century (*ibid*), but in 1521 the castle was destroyed by fire during Yuletide festivities. The fortification lay ruinous until 1660-63, when it was substantially renovated as a country mansion by Lady Anne Clifford (Castleuk.net 2007), but by 1695 the castle was being used as a source of materials for repairs to that at Appleby (Jackson 1990) and of various other buildings in the area (Microarts 2007).
- 1.2.4 The medieval castle has been the subject of a number of archaeological investigations. Those undertaken in the 1920s by the Ministry of Works were largely associated with consolidation of unstable surviving structure, but the investigation undertaken in 1993 was more extensive, and comprised the evaluation of a *c* 66m section of the east ditch of the castle, ahead of drainage works. The evaluation encountered a mass of facing stones and wall core material indicating the collapse of part of the castle wall into the ditch. Twelfth- to thirteenth-century pottery, together with some Roman material was also recovered (English Heritage 2007).

### 1.3 OXFORD ARCHAEOLOGY NORTH

- 1.3.1 Oxford Archaeology North (OA North) has considerable experience of undertaking watching briefs of all periods, having conducted a great number of small and large scale projects during the past 25 years. Fieldwork has taken place within the planning process and construction programmes, to fulfil the requirements of clients and planning authorities, to very rigorous timetables.
- 1.3.2 OA North is an Institute of Field Archaeologists (IFA) **registered organisation, registration number 17**, and all its members of staff operate subject to the IFA Code of Conduct.

## 2. OBJECTIVES

- 2.1 The following programme has been designed in accordance with EH and IFA guidelines and recommended practice, as well as the normal standards of practice for archaeological works in Cumbria.
- 2.2 **Archaeological Recording:** to undertake a programme of graphic recording, accompanied by appropriate written notes, of each area within which the groundworks will take place.
- 2.3 **Watching Brief:** in order to recover dating evidence and record the deposits into which the present cobbles have been laid, together with any other underlying strata that may be disturbed, a permanent presence archaeological watching brief will be maintained during the negative groundworks associated with the repairs.
- 2.4 **Report and Archive:** a report will be produced for the Client within about eight weeks of completion of the fieldwork. The report will aim to summarise the results of the watching brief within the context of existing knowledge about the site and its surroundings. These results will provide the basis for any recommendations for further work, should this prove appropriate. A site archive will be produced to English Heritage guidelines (MAP 2) and in accordance with the *Guidelines for the Preparation of Excavation Archives for Long Term Storage* (UKIC 1990).

## 3. METHODOLOGY

### 3.1 ARCHAEOLOGICAL RECORDING

- 3.1.1 The programme of recording prior to the repairs will record the current condition of the cobbled surfaces within each of the selected areas. A plan of each area, illustrating individual cobbles, will be produced at an appropriate scale, and will be located with reference to extant walls. An indexed photographic record will be generated using archivable monochrome print film and colour digital photography and a graduated scale. A series of written notes will accompany the drawings to record those details that cannot be captured graphically.

### 3.2 WATCHING BRIEF

- 3.2.1 A programme of field observation will accurately and systematically examine and record the location, extent, and character of any surviving archaeological features, horizons and/or deposits revealed during the course of ground disturbance, along with any artefacts, identified during observation. Those cobbles that are to be lifted should be annotated on the plans (or an overlay) generated during the initial stage of recording (*Section 3.1*). There is no requirement for any of the cobbles to be marked or to be returned to their exact locations during the works. The completed works should be comprehensively recorded photographically.
- 3.2.2 Any putative archaeological features and/or deposits identified during groundworks, together with the immediate vicinity of any such features, will be cleaned by hand, using either hoes, shovel scraping, and/or trowels, depending on the subsoil conditions and, where appropriate, sections will be studied and drawn. Any such features will only be investigated further where, and to the depth, that they will be impacted upon by the repairs, and following consultation with EH. Any such investigation would take the form of sample excavation.
- 3.2.3 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, but this would only be called into effect in agreement with EH and will require a variation to costing.
- 3.2.4 **Recording:** during this phase of work, all information identified in the course of the watching brief works will be recorded stratigraphically using a paper system, adapted from that used by the English Heritage Centre for Archaeology recording. This 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) using existing plans provided by EH and those plans generated during the recording (*Section 3.1*). An indexed photographic record of archaeological features and general working shots, utilising monochrome print and colour digital photography will be undertaken simultaneously. A measured section will be produced to illustrate the stratigraphy, with additional examples to record where this stratigraphy varies; due to the nature of the intrusive groundworks, such sections may be quite short. Levels on plans and sections will be tied-into Ordnance Datum as accurately as on-site equipment allows and utilising the levels provided by EH. Primary records will be available for inspection at all times. The archive will include both a photographic record and accurate large-scale plans and sections at an appropriate scale (1:50, 1:20, and 1:10).
- 3.2.5 **Treatment of finds:** excavated soil will be searched as practicable for finds. The presence and nature of finds definitely dating to the nineteenth and twentieth centuries will be noted but they will not otherwise be retained. All other finds will be exposed, lifted, cleaned, conserved, marked, bagged and boxed, as appropriate, in accordance with the United Kingdom Institute for Conservation (UKIC) *First Aid For Finds*, 1998 (new edition) and the recipient museum's guidelines. Except where noted above, all identified finds and artefacts will be retained, although certain classes of building material can sometimes be discarded after recording if an appropriate sample is retained on advice from the recipient museum's archive curator. Organic or metal artefacts may require specialist conservation; the requirement for such work would be agreed with EH, and any additional costs would need to be agreed as a variation.
- 3.2.6 **Treasure:** any gold and silver artefacts recovered during the course of the excavation will be removed to a safe place and reported to the local Coroner according to the procedures relating



to the Treasure Act, 1996. Where removal cannot take place on the same working day as discovery, suitable security will be employed to protect the finds from theft.

3.2.7 **Human Remains:** there is almost no chance of finding human remains during the course of the present works; however, any human remains uncovered will be left *in situ*, covered and protected. No further investigation will continue beyond that required to establish the date and character of the burial. EH and the local Coroner will be informed immediately. If removal is essential, the exhumation of any funerary remains will require the provision of a Department of Constitutional Affairs (DCA) license, under section 25 of the Burial Act of 1857. An application will be made by OA North for the study area on discovery of any such remains and the removal will be carried out with due care and sensitivity under the environmental health regulations, and if appropriate, in compliance with the Disused Burial Grounds (Amendment) Act, 1981.

3.2.8 **Contingency plan:** in the event of significant archaeological features being encountered during the watching brief, discussions will take place with the Planning Archaeologist, as to the extent of further works to be carried out, and in agreement with EH. All further works would be subject to a variation to this project design.

#### 4. REPORT

4.1 The results of the data gathered during the course of the siteworks (*Section 3*), will be collated and submitted in report format, illustrated with the relevant photographs and drawings. Such illustrations will include fully-digitised versions of each of the site plans produced during the works, together with any relevant section drawings. An assessment of any finds recovered from the works will also be included. Where appropriate, the report will attempt to relate any findings to the known history and archaeology of the site, and to its local setting.

4.2 One bound, one digital and one unbound copy of the report will be submitted to EH, and one bound copy will be submitted to CCCHES for inclusion on the Cumbria Historic Environment Record. Any subsequent work arising from this fieldwork will be subject to separate consideration in liaison with EH.

4.3 The final report will include a copy of this project design and indications of any agreed departure from that design. It will present, summarise, and interpret the results of the programme detailed above, and will include details of the final deposition of the project archive. It will also include a summary of the fieldwork archive submitted to the Cumbria Record Office, Kendal. Illustrations will include a location map, trench location plan and plans and sections of trenches drawn at an appropriate scale.

4.4 A brief summary of the fieldwork will be prepared and submitted to the Council for British Archaeology North West *Archaeology North West* within 12 months of the completion of the project.

#### 5. ARCHIVE

5.1 The results of the watching brief will form the basis of a full archive to professional standards, in accordance with current English Heritage guidelines (*Management of Archaeological Projects*, 2nd edition, 1991). The fully indexed project archive represents the collation and indexing of all the data and material gathered during the course of the project. It will include all the original records and drawings along with fully labelled and indexed slides and contact prints. It will include summary processing and analysis of any features and finds recovered during fieldwork, in accordance with UKIC guidelines. 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, and arrangement to this effect will be made with the museum curator prior to the commencement of the project.

- 5.2 All finds will be treated in accordance with OA North standard practice, which follows current IFA guidelines and will be deposited, along with a copy of the report and of the original site records, with an appropriate museum or other repository recommended by EH.
6. HEALTH AND SAFETY
- 6.1 OA North provides a Health and Safety Statement for all projects and maintains a Unit Safety policy. All site procedures are in accordance with the guidance set out in the Health and Safety Manual compiled by the Standing Conference of Archaeological Unit Managers (1997). A written risk assessment will be undertaken in advance of project commencement and copies will be made available on request to all interested parties.
- 6.2 The client would be asked to determine the nature of any utility services to the properties and site prior to any fieldwork being carried out.
- 6.3 OA North has professional indemnity to a value of £2,000,000, employer's liability cover to a value of £10,000,000 and public liability to a value of £15,000,000. Written details of insurance cover can be provided if required.
7. CONFIDENTIALITY
- 7.1 The final report is designed as a document for the specific use of the Client, and should be treated as such; it is not suitable for publication as an academic report, or otherwise, without amendment or revision. Any requirement to revise or reorder the material for submission or presentation to third parties beyond the project brief and project design, or for any other explicit purpose, can be fulfilled, but will require separate discussion and funding. Any proposed variations to the project design will be agreed with EH, but it is assumed that EH will be aware of the start and finishing dates of the fieldwork.
8. WORK PROGRAMME
- 8.1 The following programme is proposed:
- 8.2 **Archaeological Recording:** it is estimated that the archaeological recording will take around four days to complete
- 8.3 **Watching Brief:** the duration of the watching brief will be dependent upon the progress of the drainage installation contractor, although it is thought that the works will last between eight and ten days.
- 8.4 **Archive/Report:** the report and archive will be produced following the completion of all the fieldwork. The final report will be submitted within about eight weeks of completion of the fieldwork and the archive deposited within six months. If desired, an interim statement could be produced within ten days of completion of the fieldwork.
9. STAFFING
- 9.1 The project will be managed by **Stephen Rowland** (OA North Project Manager) to whom all correspondence should be addressed.
- 9.2 The recording and watching brief will be undertaken by Anthony Haskins, OA North Assistant Supervisor, who is experienced with fieldwork techniques. Digitisation of the site drawings would be undertaken by an experienced OA North Illustrator, whilst assessment of any finds would be undertaken under the auspices of Chris Howard-Davis, OA North Finds Manager.
- 9.3 The archaeological work will be monitored by EH, which will be arranged accordingly.

10. BIBLIOGRAPHY

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### APPENDIX 3: CONTEXT INDEX

Context	Area	Interpretation	Description
<b>1</b>	2	Cobbled surface	Cobbled surface to south of brew/bake house
<b>2</b>	2	Cobbled surface	Cobbled surface within bake house
<b>3</b>	2	Cobbled surface	Cobbled surface within brew house
<b>4</b>	2	Deposit	Bare patch in brew/bake house; exposed bedding material comprising reddish-brown friable silty sand with no inclusions
<b>5</b>	2	Wall	South wall of service range encompassing brew and bake houses
<b>6</b>	4	Cobbled surface	Cobbled surface around gate house
<b>7</b>	1	Cobbled surface	Cobbled surface at base of keep
<b>8</b>	1	Deposit	Bare patch at base of keep; exposed bedding material comprising reddish-brown friable silty sand with no inclusions
<b>9</b>	1	Deposit	Bare patch at base of keep; exposed bedding material comprising reddish-brown friable silty sand with no inclusions
<b>10</b>	1	Deposit	Bare patch at base of keep; exposed bedding material comprising reddish-brown friable silty sand with no inclusions
<b>11</b>	1	Deposit	Bare patch at base of keep; exposed bedding material comprising reddish-brown friable silty sand with no inclusions
<b>12</b>	1	Deposit	Bare patch at base of keep; exposed bedding material comprising reddish-brown friable silty sand with no inclusions
<b>13</b>	1	Deposit	Bare patch at base of keep; exposed bedding material comprising reddish-brown friable silty sand with no inclusions
<b>14</b>	1	Deposit	Bare patch at base of keep; exposed bedding material comprising reddish-brown friable silty sand with no inclusions
<b>15</b>	3	Cobbled surface	Cobbled surface within kitchen
<b>16</b>	3	Deposit	Bare patch within kitchen; exposed bedding material comprising reddish-brown friable silty sand with no inclusions

## FIGURES

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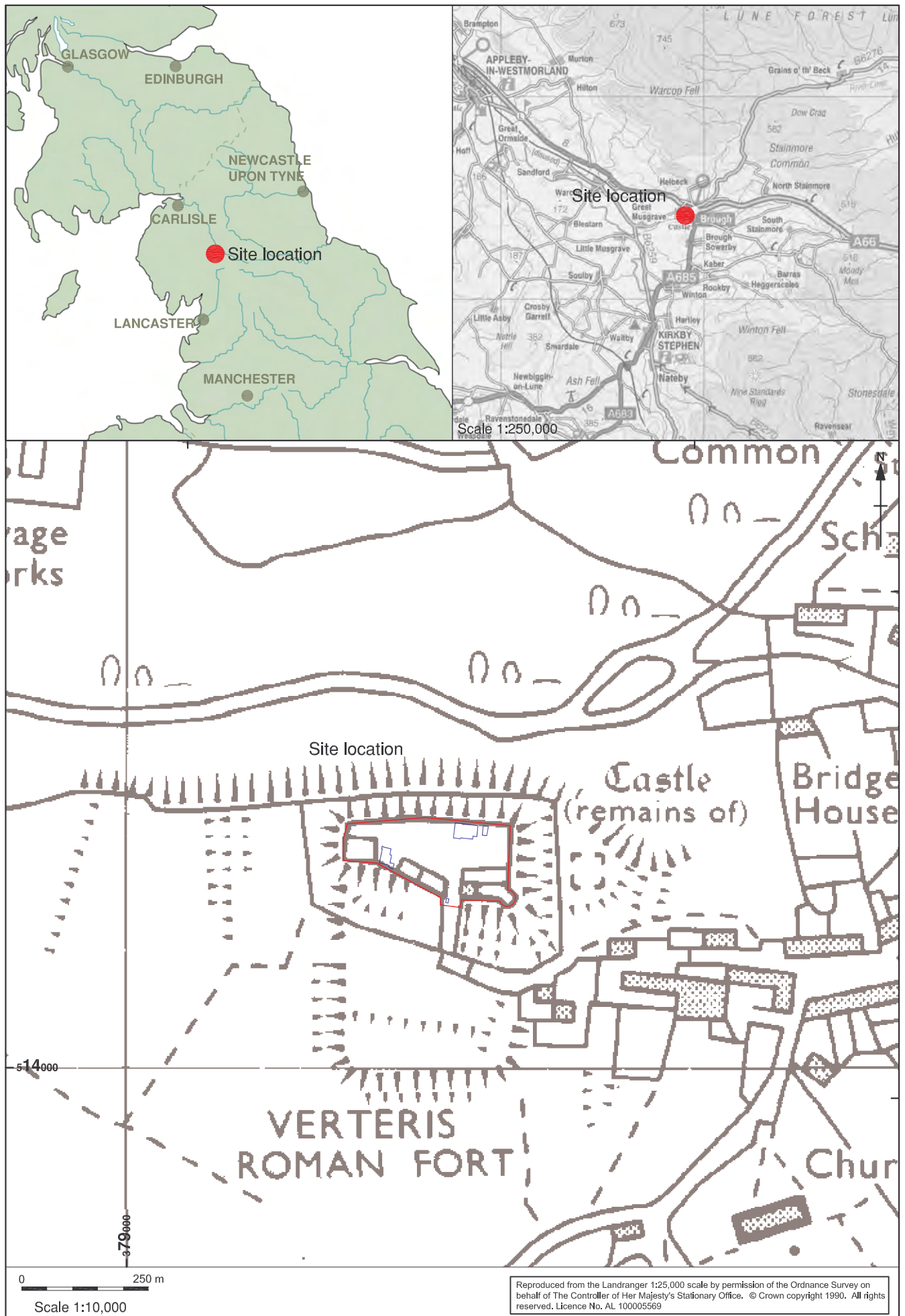


Figure 1: Site location



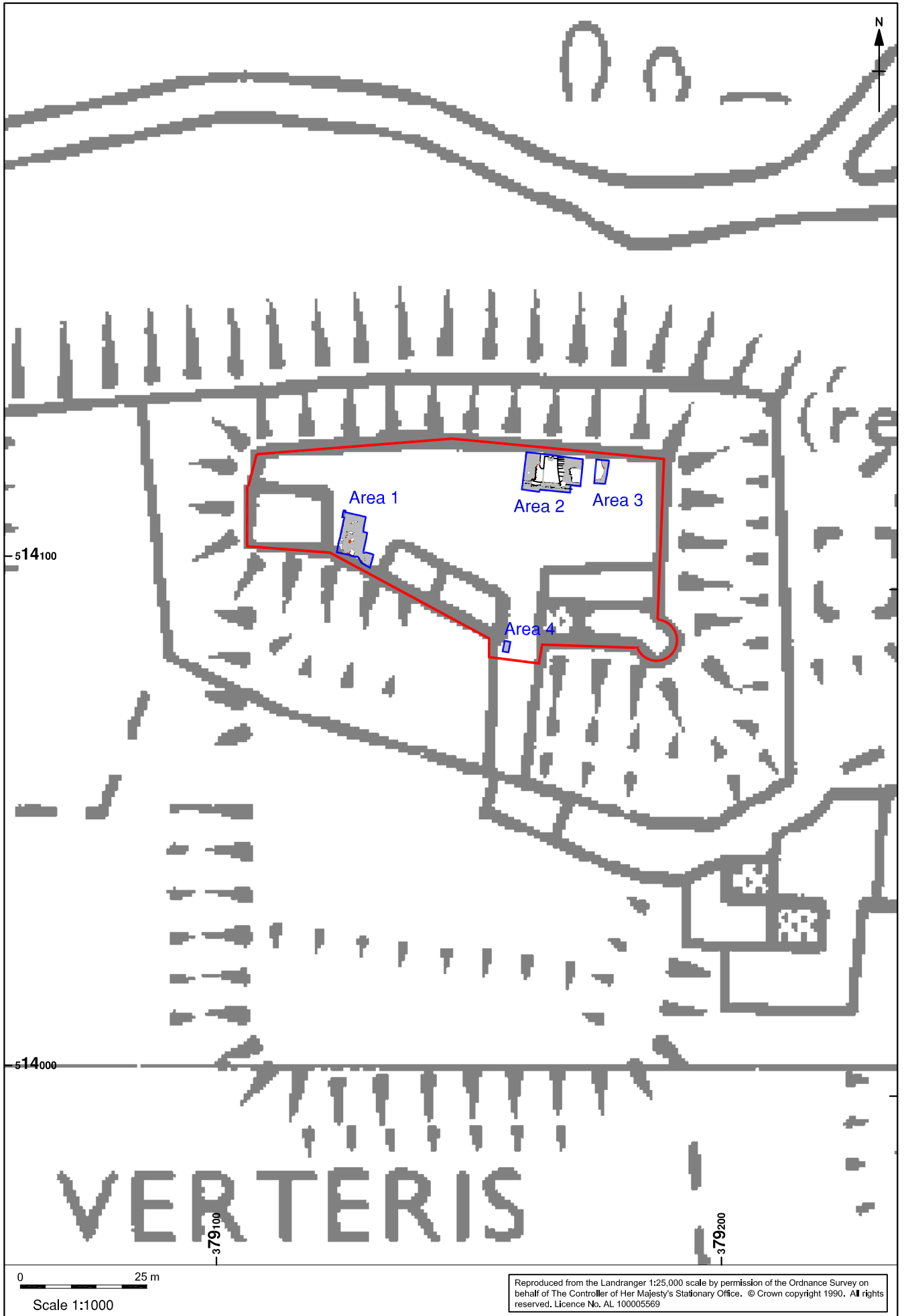


Figure 2: Plan showing areas of repair

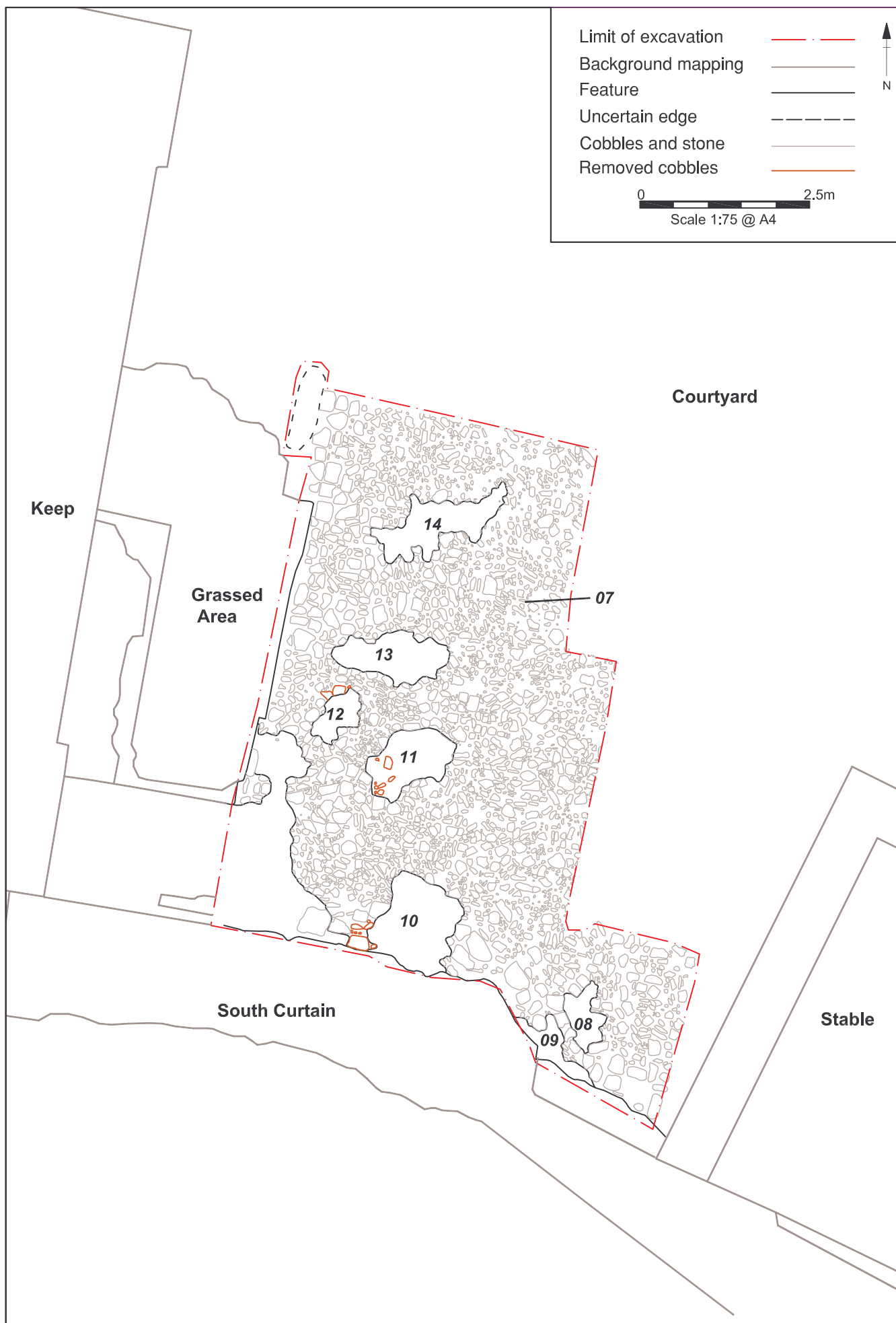


Figure 3: Detail of Area 1

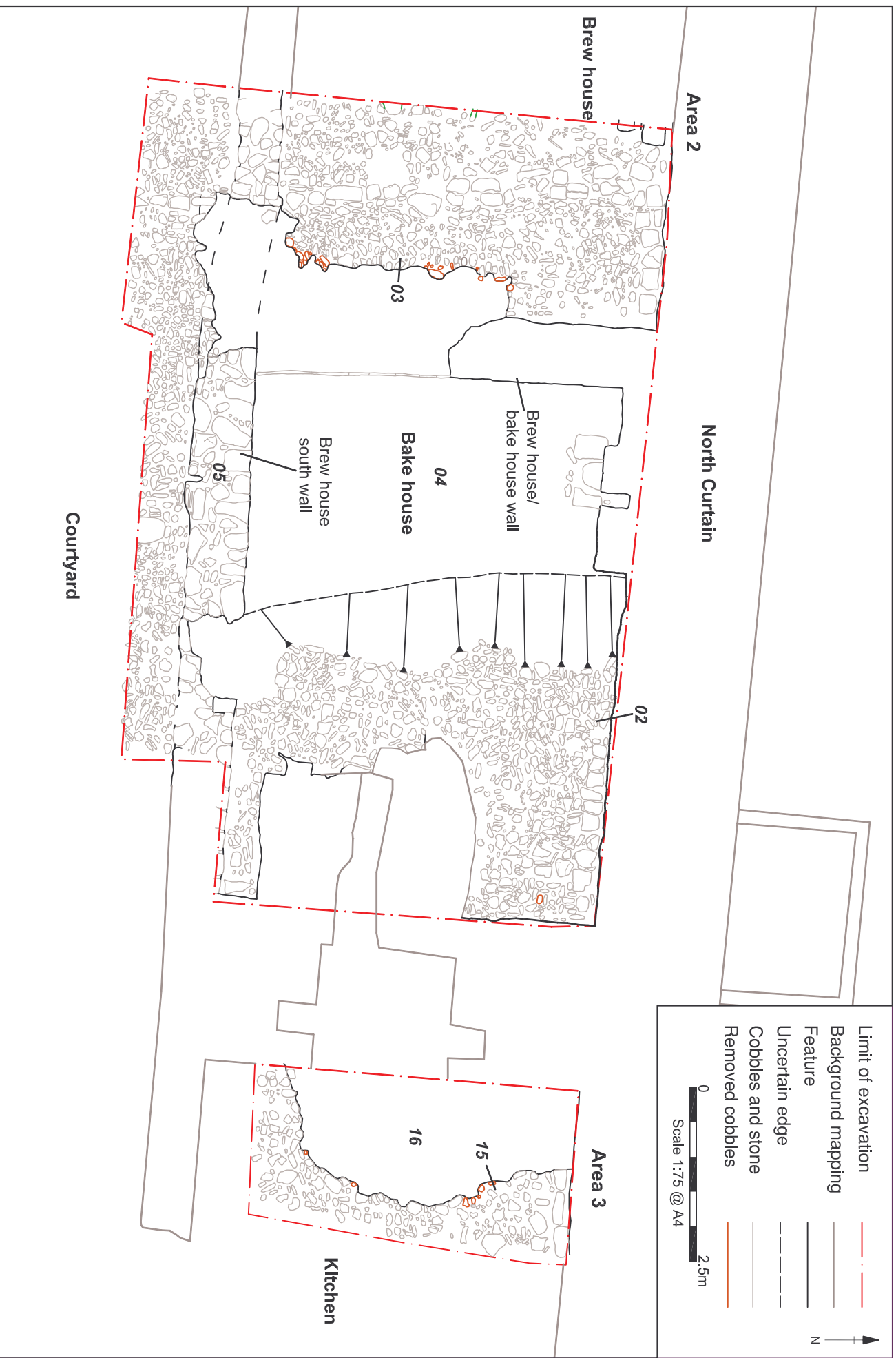


Figure 4: Detail of Areas 2 and 3

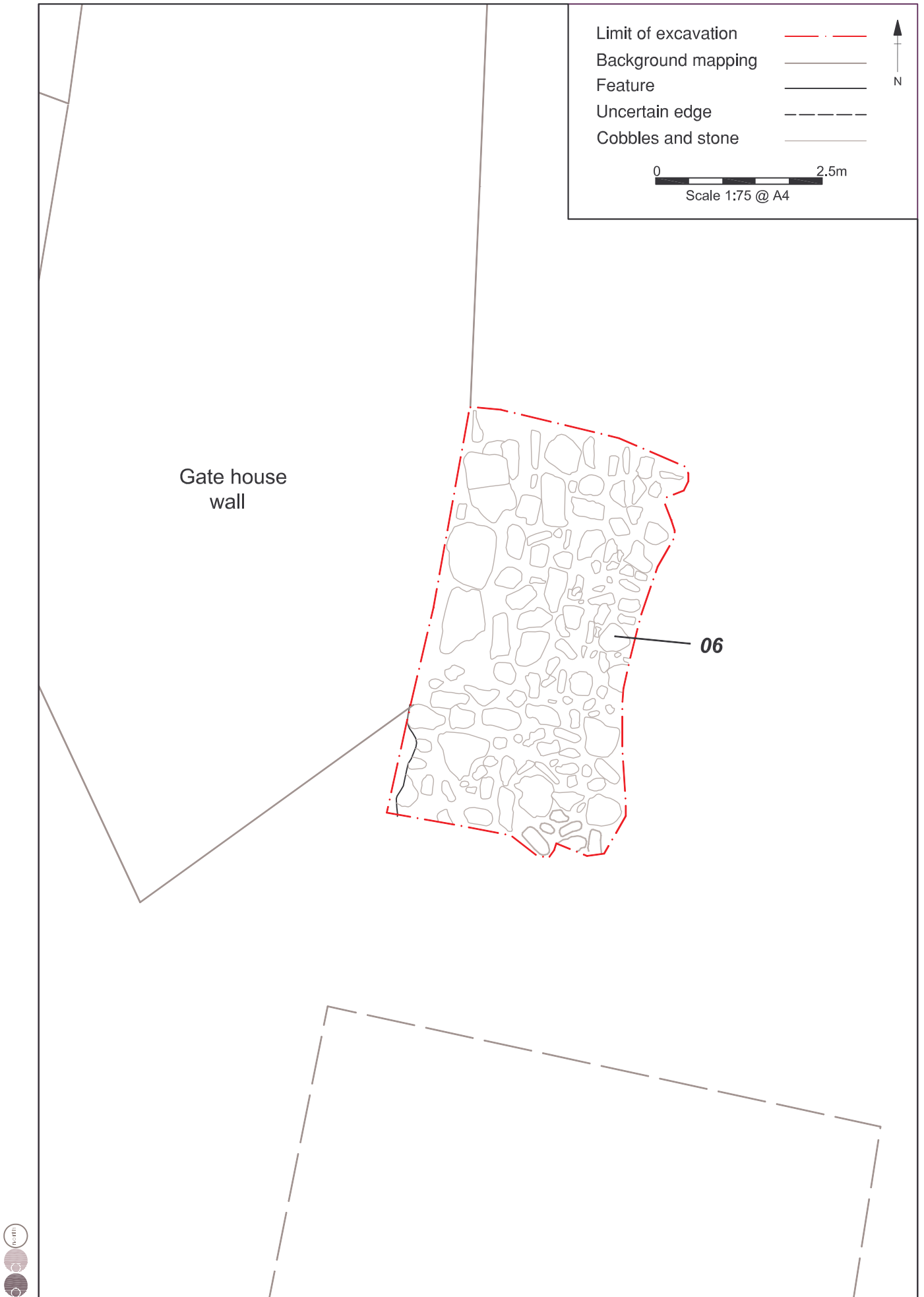


Figure 5: Detail of Area 4





## PLATES

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Plate 1: General shot of Area 1, facing south-west, prior to remedial works



Plate 2: Cobbled surface 2 within the bake house (Area 2), facing east, prior to remedial works





Plate 3: Cobbled surface **3** within the brew house (Area 2), facing south, prior to remedial works



Plate 4: Cobbled surface **15** within the kitchen (Area 3), facing south, prior to remedial works





Plate 5: Cobbled surface **06** within gateway (Area 4), facing west, prior to remedial works



Plate 6: Working shot of remedial works





Plate 7: Surface 3 (Area 2), facing west, during repairs



Plate 8: Surface 3 (Area 2), facing south-west, following repairs