



# **KNOCKUPWORTH FARM, BURGH BY SANDS, CUMBRIA**

## **Archaeological Evaluation Report**



**Oxford Archaeology North**

October 2011

**MR YOUNG**

Issue No: 2011-12/1235  
OA North Job No: L10419  
NGR: NY 3680 5690

**Document Title:** KNOCKUPWORTH FARM, BURGH BY SANDS, CUMBRIA

**Document Type:** Archaeological Evaluation Report

**Client Name:** MR YOUNG

**Issue Number:** 2011-12/1235

**OA North Job Number:** L10419

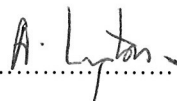
**National Grid Reference:** SE 3680 5690

Prepared by: Jeremy Bradley  
Position: Project officer  
Date: October 2011

Checked by: Fraser Brown  
Position: Project Manager  
Date: October 2011

Approved by: Alan Lupton  
Position: Operations Manager  
Date: September 2011

Signed.....

Signed.....

**Oxford Archaeology North**

Mill 3  
Moor Lane Mills  
Lancaster  
LA1 1GF  
t: (0044) 01524 541000  
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 Archaeology Ltd (2011)**

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

Oxford Archaeology Limited is a Registered Charity No: 285627

**Disclaimer:**

*This document has been prepared for the titled project or named part thereof and should not be relied upon or used for any other project without an independent check being carried out as to its suitability and prior written authority of Oxford Archaeology being obtained. Oxford Archaeology accepts no responsibility or liability for the consequences of this document being used for a purpose other than the purposes for which it was commissioned. Any person/party using or relying on the document for such other purposes agrees, and will by such use or reliance be taken to confirm their agreement to indemnify Oxford Archaeology for all loss or damage resulting therefrom. Oxford Archaeology accepts no responsibility or liability for this document to any party other than the person/party by whom it was commissioned.*

## TABLE OF CONTENTS

<b>SUMMARY.....</b>	<b>2</b>
<b>ACKNOWLEDGEMENTS.....</b>	<b>3</b>
<b>1. INTRODUCTION.....</b>	<b>4</b>
1.1 Circumstances of the Project.....	4
1.2 Site Location, Topography and Geology.....	4
1.3 Archaeological and Historical Background.....	4
1.4 The Prehistoric Period.....	5
1.5 The Romano-British Period.....	6
1.6 Post-Roman Period.....	6
<b>2. METHODOLOGY.....</b>	<b>8</b>
2.1 Project Design.....	8
2.2 Fieldwork.....	8
2.3 Archive.....	9
<b>3. RESULTS.....</b>	<b>10</b>
3.1 Introduction.....	10
3.2 Finds.....	13
<b>4. DISCUSSION .....</b>	<b>14</b>
4.1 Introduction .....	14
4.2 Impact .....	14
<b>BIBLIOGRAPHY.....</b>	<b>16</b>
Primary sources.....	16
Secondary Sources.....	16
<b>ILLUSTRATIONS</b>	<b>18</b>
<b>APPENDIX 1: CONTEXT INDEX.....</b>	<b>19</b>
<b>APPENDIX 2: CCCHES DESIGN BRIEF</b>	<b>20</b>
<b>APPENDIX 3: PROJECT SPECIFICATION.....</b>	<b>26</b>
<b>APPENDIX 4: RAPID DESK-BASED ASSESSMENT.....</b>	<b>32</b>

---

## SUMMARY

---

Cumbria County Council's Historic Environment Service (CCCHES) was consulted by Carlisle City Council regarding a planning application for the relocation of Knockupworth Farm, near Burgh by Sands. The area affected by the planning application (no. 1/11/0610) covers approximately 1ha and centres on NGR NY 3680 5690.

The scheme affects an area of high archaeological potential close to Hadrian's Wall World Heritage Site and where important archaeological remains are known to survive. Because of the high archaeological potential of the site, CCCHES advised that the applicant should provide information on the significance of any archaeological remains surviving on the site and how that significance would be impacted upon by the proposed development. In order to provide this information programmes of archaeological work, including a rapid desk-based (DBA) assessment and a walkover survey, followed by evaluation trenching, were requested, as described within a Design Brief, issued by CCCHES (23-09-11). Patrick Reynolds, the land agent acting on behalf of Mr Young of Knockupworth Farm, subsequently commissioned Oxford Archaeology North (OA North) to undertake this work and a Project Specification was prepared.

The results of the rapid desk-based assessment and walkover survey, presented in *Appendix 3* identified six sites of archaeological interest were within the immediate vicinity of the proposed development area and the area was confirmed as featuring an extremely high density of significant sites. The potential for previously unrecognised sub-surface remains within the proposed development area is extremely high. Accordingly, based on the results of the DBA, a programme of trial trenching was undertaken in order to establish the extent, date, nature and preservation of archaeological deposits. The following report summarises the results of the archaeological evaluation of the site.

Eight trenches were excavated during October 2011, which targeted specific areas within the site boundary in order to restrict the impact of the development on the archaeological resource. The DBA had indicated that there were a number of cropmark enclosures running along the northern boundary of the site. Trench 6 had been located in order to establish the presence, or otherwise, of the cropmark enclosures. In the event, Trench 6 was extended as it was found that the cropmark lay some 5m to the north-east of its plotted position. A further trench (Trench 8) was then excavated, after consultation between the CCCHES and Patrick Reynolds, to locate the southern arm of the cropmark ditch. Excavation of the enclosure ditch revealed a single sherd of second to fourth century greyware and a chamfered stone, believed to be of Roman date, that may have been a plinth for a monument or part of an architectural feature from the nearby milecastle at Boomby Gill. In the south-west of the site, Trenches 1 and 2 revealed evidence of a ditch that perhaps indicated the line of the Burgh Road prior to the enclosure of the area in 1808.

The presence of Roman period remains from the cropmark enclosure has allowed a scheme to be devised that will allow the development to commence, whilst retaining integrity of the archaeological resource. This will involve moving the development boundary some 4m south of the projected line of the cropmark enclosure, whilst at the same time moving the location of the proposed dwelling to the south-east.

---

## **ACKNOWLEDGEMENTS**

---

Oxford Archaeology North (OA North) would like to thank Mr Young for commissioning the project and Patrick Reynolds for his assistance and cooperation. Thanks are also due to Jeremy Parsons of at Cumbria County Council's Historic Environment Service (CCCHES) for his help and advice.

The fieldwork investigation was undertaken by Jeremy Bradley, assisted by Paul Dunn and Andrew Frudd. Jeremy Bradley compiled the report, whilst Anne Stewardson, Alastair Vannan, Paul Clark, and Fraser Brown produced the drawings. The project was managed by Fraser Brown, and the report was edited by Alan Lupton.

---

## 1 INTRODUCTION

---

### 1.1 CIRCUMSTANCES OF THE PROJECT

- 1.1.1 Cumbria County Council's Historic Environment Service (CCCHES) was consulted by Carlisle City Council regarding a planning application for the relocation of Knockupworth Farm, near Burgh by Sands (Fig 1). The area affected by the planning application (no. 1/11/0610) covers approximately 1ha and centres on NGR NY 3680 5690.
- 1.1.2 The scheme affects an area of high archaeological potential close to Hadrian's Wall World Heritage Site and where important archaeological remains are known to survive. Because of the high archaeological potential of the site, CCCHES advised that the applicant should provide information on the significance of any archaeological remains surviving on the site and how that significance would be impacted upon by the proposed development. In order to provide this information programmes of archaeological work, including a rapid desk-based assessment, a walkover survey and evaluation trenching, were requested, as described within a Design Brief, issued by CCCHES (23-09-11; *Appendix 2*). Patrick Reynolds, the land agent acting on behalf of Mr Young of Knockupworth Farm, subsequently commissioned Oxford Archaeology North (OA North) to undertake this work and a Project Specification was prepared (*Appendix 3*).
- 1.1.3 The results of the rapid desk-based assessment and walkover survey, presented in *Appendix 3*, identified seven sites of archaeological interest within the immediate vicinity of the proposed development area and the area was confirmed as featuring an extremely high density of significant sites. The potential for previously unrecognised sub-surface remains within the proposed development area is extremely high. Accordingly, based on the results of the DBA, programme of trial trenching was undertaken in order to establish the extent, date, nature and preservation of archaeological deposits. The following report summarises the results of the archaeological evaluation of the site.

### 1.2 SITE LOCATION, TOPOGRAPHY AND GEOLOGY

- 1.2.1 The proposed development site is located to the north-west of the existing Knockupworth Farm, north-east of Burgh Road, to the west of Carlisle, centred on NGR NY 3680 5690. The site is located on the top of a small hill, overlooking the River Eden, at *c* 30m OD.
- 1.2.2 The underlying drift geology consists of Stanwix shales overlain by drift deposits of boulder clay (British Geological Survey 2011). The local soils are attributed to the Wick Association, coarse well-drained brown earths, which extend westwards to Burgh-by-Sands and Kirkbampton (Countryside Commission 1998).

### 1.3 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

- 1.3.1 The following section presents a summary of the archaeological and historical background in the vicinity of the site, presented by historical period, followed by a map regression, and

a detailed description of recent archaeological work along the line of the Carlisle Northern Development Route (CNDR), immediately to the south-east and east of the site. This has been compiled in order to place the site into its wider archaeological context.

Period	Date Range
Palaeolithic	30,000 – 10,000 BC
Mesolithic	10,000 – 3,800 BC
Neolithic	4000 – 2,500 BC
Bronze Age	2,500 – 700 BC
Iron Age	700 BC – AD 43
Romano-British	AD 43 – AD 410
Early Medieval	AD 410 – AD 1066
Medieval	AD 1066 – AD 1540
Post-medieval	AD 1540 – c1750
Industrial Period	cAD1750 – 1901
Modern	Post-1901

Table 1: Summary of British archaeological periods and date ranges

## 1.4 THE PREHISTORIC PERIOD

- 1.4.1 The recolonisation by humans of the Cumbrian landscape, following the last deglaciation, is not presently archaeologically well attested or understood, although some evidence for activity dating to the Late Upper Palaeolithic/Early Mesolithic (Hodgson and Brennand 2006), Later Mesolithic (*eg* Bonsall *et al* 1994) and Neolithic (*eg* Darbishire 1873) periods is known from sites near to the western coast, and from the site at Stainton West (OA North 2011a), 750m east of the study area, excavated as part of the mitigation for CNDR.
- 1.4.2 During the Bronze Age and Iron Age periods, the evidence for prehistoric settlement in the Carlisle area has increased considerably in recent years (McCarthy 2002, 33-50; OA North 2011b and c), but remains fairly sparse. Whilst this may, to a degree, genuinely reflect a comparatively low density of settlement, it is probably due principally to the difficulties inherent in identifying prehistoric sites in a region that is largely under pasture (which is generally far less conducive to aerial photography than most types of arable agriculture), and where prehistoric cultures appear to have produced relatively few artefacts durable enough to have survived to the present day. In the Iron Age, for example, the region appears to have been almost entirely aceramic (Hodgson and Brennand 2006, 56), vessels and containers presumably being fashioned from perishable materials such as wood, leather and horn.
- 1.4.3 Aerial photography in the immediate vicinity of the proposed development site has revealed a number of cropmarks (Fig 2), with more identified in the wider area, particularly north of the Eden; these include circular, semi-circular, linear and rectilinear features and appear to represent activity from both the Prehistoric and later periods (OA North 2011c).
- 1.4.4 Prehistoric features identified during the works associated with CNDR (OA North 2011b), and the presence of Grinsdale Camp (HER 399), a fairly large, multivallate enclosure of presumed prehistoric date at Cargo on the north bank of the Eden, 1.7km to the north of the proposed development (McCarthy 2002, 46-7), provide a strong indication that this area was settled in prehistory. An entry in the Directory of Cumberland in 1847 described

impressions of human footprints within stone close to the river's edge (Mannix and Whellan 1847). Whether these were simply natural formations or prehistoric impressions cast in earlier mud levels, as have been recorded at Formby Point (Hodgson and Brennand 2006) is not known.

## **1.5 THE ROMANO-BRITISH PERIOD**

1.5.1 Whilst some of the rectilinear features traced by aerial photography in the area could conceivably be of Roman date (Fig 2), the archaeology of the Roman period within the vicinity of the site is dominated by Hadrian's Wall and Vallum (Fig 2), which at this point ran on a roughly north-west to south-east alignment, on the steep escarpment forming the south bank of the Eden, 300m north of the proposed development site. The Wall itself, which in this area, was constructed initially of turf and rebuilt in stone some time later, was only one element of the frontier system; to the south, situated at widely varying distances from the Wall, lay the Vallum, a substantial but enigmatic earthwork comprising a flat-bottomed ditch flanked by mounds, the purpose of which continues to excite debate (Breeze 2006, 86-7). The Vallum is located less than a hundred metres to the north of the development site. The position of Milecastle 68 (Boomby Gill), lies to the north-east of the site, traces of an antiquarian excavation were visible in 1972, which appear to have represented an attempt to locate the north-west angle of the milecastle (Royal Commission on Historic Monuments (England; RCHME) 1996, 374). This investigation had no recorded success, although many undressed stones were visible in the spoil generated by the work. No trace of the excavation is now visible. A hoard of Roman coins (Fig 2) was also found within Beaumont or St Andrews during the cutting of the Carlisle Canal, which lies to the north and east of the of the site, although the exact whereabouts of this findspot is not known.

1.5.2 To the north of the proposed development area, probable camps are visible from the air to the south of the Vallum and within 4-500m to the west of the proposed development site. None of these features has been excavated and their date is unknown, but some at least are potentially pre-Hadrianic in date. In 1847 the Directory of Cumberland (Mannix and Whellan 1847) described two large square entrenchments that had formerly been present within Grinsdale close to Hadrian's Wall, but which had been levelled to the extent that no visible traces remained. It is likely that these entrenchments were two of the rectilinear enclosures visible on aerial photographs. In addition to those enclosures previously identified by the English Heritage National Mapping Programme (NMP), an enclosure was identified during the present study from current aerial photographs. This site lies within 400m to the west of the proposed development area.

## **1.6 POST-ROMAN PERIOD**

1.6.1 *The early medieval and medieval periods:* despite the sparsity of evidence for continuity of occupation in the frontier zone once the Legions had withdrawn, at Birdoswald and in Carlisle itself, there is evidence to suggest some form of sub-Roman activity was taking place (Zant 2009, 466). There is then a dearth of evidence until much later in the period, when it is known that Knockupworth lay within the former parish of Grinsdale. Grinsdale was formerly a manor within the Barony of Burgh (Lysons and Lysons 1816, 101-9;



Mannix and Whellan 1847) and was first recorded in c 1180 as *Grennesdal* (Armstrong *et al* 1943, 140-1). The place-name of Grinsdale might have derived from the location of a town field within a green dale, or might relate to a personal nickname from the old Norse *Grennir*, meaning ‘grinner’ (*ibid*). This place-name could, therefore, have been associated with Norse populations in the local area during the early-medieval period, although linguistic continuity means that such names can be assigned long after the initial migrant settlement of an area. Knockupworth may have been recorded as early as 1290, as *cnochubert*, and could derive from the old Irish *cnocc*, meaning hillock, and the Germanic personal name of Hubert (*ibid*). The topographic nature of the area, which features a very conspicuous rise, is certainly consistent with *cnocc* as a descriptive term.

- 1.6.2 ***The post-medieval and industrial periods:*** one of the earliest direct descriptions of Knockupworth is from 1618 (YDX 103/27) and comes from a conveyance of arable land, meadows, grounds, and grassings, which provides an image of the area that is not significantly different to the current local character. Grinsdale was incorporated into the Lowther estate in 1685 (DLons/49) and the common fields had been enclosed by 1808 (DLonsL/16/1/1). The immediate environs of the study area, however, lay just beyond the extent of the common land, as shown on the Grinsdale enclosure award map of 1798 (DX 1388/1).
- 1.6.3 The line of the former Carlisle Navigation Canal (Fig 2), completed in 1823 (Ramshaw 1997, 25), runs to the north and east of the site of the proposed development. In the 1850s, the now dismantled Carlisle and Silloth Railway (Fig 2) was built along the line of the disused canal (*op cit*, 136-7). Excavations across these features during the course of the works for CNDR revealed almost no structural remains (OA North 2011c).
- 1.6.4 Since 1865, when the first Ordnance Survey maps of the area were surveyed, the number of field sub-divisions in the study area has decreased and the single field within which the development is proposed was formerly sub-divided into seven units. Little indication of these former boundaries is visible at ground level, with the exception of a prominent lynchet (Fig 2) associated with the most recently removed boundary, at the eastern side of the area. Knockupworth now falls within Beaumont County Parish.

---

## 2 METHODOLOGY

---

### 2.1 PROJECT DESIGN

- 2.1.1 The OA North project design (*Appendix 3*), which was approved by CCCHES, was adhered to in full, and the work was consistent with the relevant standards and procedures of the Institute for Archaeologists (IfA), and generally accepted best practice.

### 2.2 FIELDWORK

- 2.2.1 ***Aims and Objectives:*** a programme of trial trenching was carried out to establish the extent, date, nature and preservation of archaeological deposits. Seven trenches (two measuring 30m by 2m; two measuring 25m by 2m; two measuring 20m by 2m; and one measuring 4m by 2m) were excavated (Figs 1 and 2). The locations and proportions of trenches were determined on the basis of the construction design provided by the client and covered a 5% sample of the impacted area, in accordance with the stipulations of the CCCHES Brief. The smallest trench was sited within the footprint of a wind turbine which may be installed as part of the development. The results of the rapid desk-based assessment and walkover survey, presented in *Appendix 3*, identified seven sites of archaeological interest within the immediate vicinity of the proposed development area. These comprised two conjoined enclosures and third larger enclosure, the two most westerly enclosures lay partly within the northern boundary of the development and partly within the area of the proposed dwelling to be erected on the site. Accordingly, a trench (Trench 6) was placed to evaluate this area. Once this trench had been excavated, and extended by 5m to the north to locate the cropmark, it was apparent that the enclosure complex was some 5m further north than the NMP plot. However, in order to establish the line of the southern arm of the enclosure a further trench (Trench 8; Fig 2) was excavated after consultation between Jeremy Parsons of CCCHES and Patrick Reynolds. It was also agreed during the site meeting that as the trench would serve to establish the final site boundary, and all archaeological features and deposits would lie to the north of this boundary, there would be no need for the features to be excavated.
- 2.2.2 It should be noted that, although Trench 3 had been placed to evaluate the area of the access road, due to a variation between the position of the gateway on the ground and its location on plan, the trench had been placed some 7.5m to the north-west of its intended position.
- 2.2.3 ***Methodology:*** initial topsoil removal was undertaken by machine to the level of the first significant archaeological resource or undisturbed natural deposit, whichever was encountered first, with all subsequent cleaning and investigation undertaken by hand. The excavations employed a tracked 360° excavator fitted with a wide, toothless ditching bucket, with the work will being supervised by a suitably experienced archaeologist. Spoil was stored adjacent to the trenches, subsoil being kept separate from topsoil.
- 2.2.4 ***Recording:*** all information identified during 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. Results of all field investigations were recorded on OA North's *pro forma* context sheets. All features and deposits were planned at an appropriate scale and representative trench sections were drawn. Digital photographs were used to record the trenches and illustrate individual features. The elevation of the underlying natural deposits was recorded, as were the elevation of any archaeological horizons. Primary records were available for inspection at all times.

### **2.3 ARCHIVE**

- 2.3.1 The results of all archaeological work carried out will form the basis for a full archive to professional standards, in accordance with current English Heritage guidelines (Management of Research Projects in the Historic Environment, 2006). The original record archive of the project will be deposited with the Cumbria Archive Service (CAS) in Carlisle.
- 2.3.2 The Arts and Humanities Data Service (AHDS) online database Online Access to index of Archaeological Investigations (OASIS) will be completed as part of the archiving phase of the project.

---

## 3 RESULTS

---

### 3.1 INTRODUCTION

- 3.1.1 In total, eight trenches were excavated across the development area (Fig 2), with trenches varying in size from 3.5m to 30m length and generally 2m wide, in accordance with the Project Design (*Appendix 3*) and the methodology (*Section 2.2*). An overview of the results, including descriptions of each trench and any archaeological features observed is presented below, with a catalogue of the contexts contained in *Appendix 1*. Of the eight trenches excavated, four (Trenches 1, 2, 6 and 8) contained significant archaeological remains. In all cases, the topsoil was removed to expose a glacial till, which comprised stony sandy clays to silty sands. The topsoil decreased in depth from 0.45m to 0.3m toward the top of the hill.
- 3.1.2 **Trench 1:** the trench was aligned north-east/south-west and was located within the north west of the site to evaluate the footprint of Building 1 (Fig 2; Plate 1). It measured 30m in length and was excavated to a maximum depth of 0.85m. The trench contained two north/south aligned field drains, and a ditch (**104**) located at the south-west end of the trench (Fig 3). The feature, which did not contain any dating evidence was north-west/south-east aligned and lay partly beyond the limit of excavation.



Plate 1: Trench 1 from the south-west showing typical make-up found throughout the evaluation

- 3.1.3 **Trench 2:** Trench 2 was aligned north-west/south-east, measuring 30m long and was excavated to a maximum depth of 0.51m. It was positioned to evaluate the location of Building 2 (Figs 2 and 3). The trench contained a single field drain and a ditch (**205**; Plate 2). The ditch could be traced for some 11m across the trench and measured 1.3m across by 0.23m deep. No dating evidence was recovered. The ditch was thought to be a continuation of ditch **104** in Trench 1.



Plate 2: Trench 2 from the south-east showing ditch **205**

- 3.1.4 **Trench 3:** the trench was aligned north-east/south-west and was located within the south-east of the site to evaluate the area of the access road (Fig 2). It measured 25m in length and was excavated to a maximum depth of 0.5m. The trench did not contain any archaeological features or deposits.
- 3.1.5 **Trench 4:** Trench 4 was aligned north/south, measuring 20m long and was excavated to a maximum depth of 0.4m (Fig 2). It was positioned to evaluate the location of the proposed pond. The trench contained a single field drain.
- 3.1.6 **Trench 5:** this trench measured 25m long, with a maximum depth of 0.4m, and was aligned on an approximate north/south orientation. It was positioned to evaluate the location of the northern part of the access road (Fig 2). Two north-west/south-east aligned field drains were the only features within the trench.
- 3.1.7 **Trench 6:** this trench was aligned on an approximate north-west/south-east orientation and measured 26m by a maximum of 0.85m deep. The trench was placed across the footprint of the house, as well as the area of the westernmost cropmark, in order to verify the location of the latter (Figs 2 and 4). The trench contained two north-east/south-west aligned field drains, which lay either side of the corner of a ditch (**603**; Plate 3). The ditch was 0.4m

deep and contained a rectangular chamfered stone, and a single sherd of second to fourth century AD Roman greyware.



Plate 3: Ditch 603, Trench 6, viewed toward the north, with the chamfered stone seen in situ

- 3.1.8 **Trench 7:** this trench measured 3.5 by 3.5m and was excavated to a depth of 0.4m. The trench had been placed to evaluate the location of the intended wind turbine (Fig 2). No archaeological features or deposits were recorded in the trench.



Plate 4: Trench 8 showing the continuation of the cropmark enclosure ditch (805) exposed in Trench 6

- 3.1.9 **Trench 8:** Trench 8 measured 11.4m long and was excavated down to a maximum depth of 0.4m. It was aligned approximately north-east/south-west and had been excavated in order to locate the southern ditch of the same cropmark enclosure located in Trench 6 (Figs 2 and 4). This ditch (805; Plate 4) was located toward the centre of the trench and was 1.55m wide. Almost immediately adjacent and to the north was a discrete posthole (804) some 0.26m in diameter. Occupying the northern end of the trench was a silt-filled, north/south

aligned feature with what may have been the remains of a cobbled surface (802).

## 3.2 FINDS

- 3.2.1 A single non-diagnostic sherd of second to fourth century greyware and a chamfered stone were recovered from the fill of ditch 603. Little more can be said about the greyware, whilst the stone presents a relatively unusual find from a native settlement. The stone (Plate 5), which measured 428mm x 275mm x 85mm, was pale yellowish grey sandstone, it was chamfered on three sides, and had been broken. The chamfering and sides exhibited carefully executed diagonal tooling marks, but the upper and lower faces were much more roughly chiselled. Although the object cannot be identified with any certainty, other than perhaps a plinth or ornate architectural stone, its provenance may be less enigmatic, as it was likely to be derived from the nearby Boomby Gill Milecastle, from which building rubble could still be seen as recently as 1972 (RCHME 1996, 374).



Plate 5: The chamfered stone showing the coarser chiselling the upper surface and finer tooling on the edges

---

## 4 DISCUSSION

---

### 4.1 INTRODUCTION

- 4.1.1 The evaluation has successfully demonstrated that for much of the area within the site boundary there are no significant archaeological remains. The ditch located within Trench 1 and 2 (Fig 2 and 3), although undated, contained an upper fill (203) that was almost identical to the overlying topsoil (201), suggesting that it, had at least been backfilled relatively recently. A possible explanation for the ditch, which lies approximately parallel with the present Burgh Road, is that it represents a pre-enclosure ditch perhaps bounding the original course of the Burgh Road, this ditch going out of use when the surrounding fields were enclosed after 1808 (DLonsL/16/1/1).
- 4.1.2 More significant, was locating the corner of the most westerly cropmark enclosure seen in the aerial photographs of the area, within the Trench 6 extension, which indicated that the cropmark lay some 5m north-east of its plotted position (Figs 2 and 4). The location of the enclosure was further corroborated when its southern arm was recorded in Trench 8. The ditch (603) produced a single sherd of Roman greyware datable to the second to fourth century. Perhaps more interesting was the recovery of a rectangular piece of worked masonry from the same feature. This stone with its finely-tooled chamfered edges may be part of a Roman altar, or more likely a plinth. That the cropmark enclosure lies very close to the Milecastle at Boomby Gill (Milecastle 68) might conceivably suggest the source of the putative altar, particularly as altars are known from other Milecastles such as the altar to *Cocidus* from Milecastle 60 (Breeze 2006, 337).

### 4.2 IMPACT

- 4.2.1 The presence of Roman period remains from the cropmark enclosure has allowed a scheme to be devised that will enable the development to commence, whilst retaining integrity of the archaeological resource. The trenching has indicated that the depth of the overburden is fairly shallow, varying from 0.3m to 0.4m, therefore any development would impact on any below ground remains. However, the evaluation has demonstrated that other than the archaeological features encountered within Trenches 6 and 8, and to a lesser extent Trenches 1 and 2, there are no significant archaeological remains.
- 4.2.2 The original position of the northern site boundary encompassed all of the most easterly of the cropmark enclosures, whilst the footprint of the house and area immediately to the north of it would have impacted directly on the archaeological resource (Fig 2). The excavation of Trenches 6 and 8 revealed that the cropmark enclosures were in fact located some 5m further north than their original plotted position. However, this would still mean that the landscaped area would impact on the cropmark enclosures. Thus it was agreed in an on-site meeting between Jeremy Parsons of CCCHES and Patrick Reynolds, that in order to prevent any threat to the below ground remains, the boundary of the site would be moved to the south of the location of the cropmark, the house foot print and its attendant landscaping would be relocated to the south-east, with a 4m exclusion zone between the



development and the cropmark. With the exclusion zone in place, no further archaeological work would be deemed necessary.

---

## BIBLIOGRAPHY

---

### PRIMARY SOURCES

DLons/49 – Papers concerning the rights of the riparian owner at Knockupworth to fishing on the Eden

DLonsL/16/1/1 (box 1243) – Documents relating to Grinsdale Common, including enclosure and surveys, datable to between the seventeenth and nineteenth centuries.

DLonsL/53/3/1/52/1 – Maps and plans of Lowther estate, 1638-1950

DX 1388/1 – Grinsdale enclosure award, 1798

YDX 103/27 – Conveyance of arable, meadows, grounds, and grassings at Knockupworth, 1618

### SECONDARY SOURCES

Armstrong, AM, Mawer, A, Stenton, FM, Dickins, B, 1943 *The place-names of Cumberland, Part I: Eskdale, Cumberland and Leath wards*, Cambridge

Bonsall C, Sutherland, D, and Payton, R, 1994 The Eskmeals coastal foreland: archaeology and shoreline development, in J Boardman and J Walden (eds), *Cumbria Field Guide*, Quat Res Assoc, Oxford, 90-103

British Geological Survey 2011, Geindex, <http://www.bgs.ac.uk/geoindex/>, accessed 13th October 2011

Breeze, D J, 2006 *J Collingwood Bruce's Handbook to the Roman Wall*, 14th edn, Newcastle upon Tyne

CFA Archaeology (CFA), 2005 Carlisle Northern Development Route: Land affected at the crossing of Hadrian's Wall (Parcel 21); archaeological evaluation, unpubl rep

Countryside Commission, 1998 *Countryside character Volume 2: North West. The character of England's natural and man-made landscape*, Cheltenham

Darbishire, R D, 1873 Notes on discoveries in Ehenside Tarn, Cumberland, *Archaeologia*, **44**, 273-92

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

Hodgson, J and Brennan, M, 2006 The prehistoric period resource assessment, in M Brennan (ed) 2006 *The Archaeology of North West England: an archaeological research framework for North West England: volume 1, resource assessment*, Archaeol North West, **8**, Manchester, 23-58

Institute for Archaeologists (IfA), 2001 *Standards and Guidance for Archaeological Desk-Based Assessment*, London

Lysons, D, and Lysons, S, 1816 *Magna Britannia, volume 4: Cumberland*, London

Mannix, and Whellan, W, 1847 *History, Gazetteer and Directory of Cumberland*, Beverley

McCarthy, M R, Zant, J M, Hughes, V, and Robertson, D, 1997 *Knockupworth Farm, Carlisle, Cumbria: report on an archaeological evaluation on the proposed line of the Carlisle Northern Relief Road*, Carlisle Archaeological Unit, unpubl rep

McCarthy, M R, 2002 *Roman Carlisle and the lands of the Solway*, Stroud

OA North, 2011a *Stainton West (Parcel 27 North) CNDR – Post-excavation Assessment*, unpubl rep

OA North, 2011b *Carlisle Northern Development Route – Post-excavation Assessment*, unpubl rep

Ramshaw, D, 1997 *The Carlisle Navigation Canal 1821–1853*, Carlisle

Royal Commission on Historic Monuments (England) (RCHM(E)), 1996 *Hadrian's Wall characterisation survey*, unpubl doc

Zant, J, 2009 *The Carlisle Millennium Project: Excavations in Carlisle, 1998-2001. Volume 1: the Stratigraphy*, Lancaster Imprints **14**, Lancaster

---

## ILLUSTRATIONS

---

### PLATES

Plate 1: Trench 1 from the south-west showing typical make-up found throughout the evaluation

Plate 2: Trench 2 from the south-east showing ditch **205**

Plate 3: Ditch **603**, Trench 6, viewed toward the north, with the chamfered stone seen *in situ*

Plate 4: Trench 8 showing the continuation of the cropmark enclosure ditch (**805**) exposed in Trench 6

Plate 5: The chamfered stone showing the coarser chiselling the upper surface and finer tooling on the edges

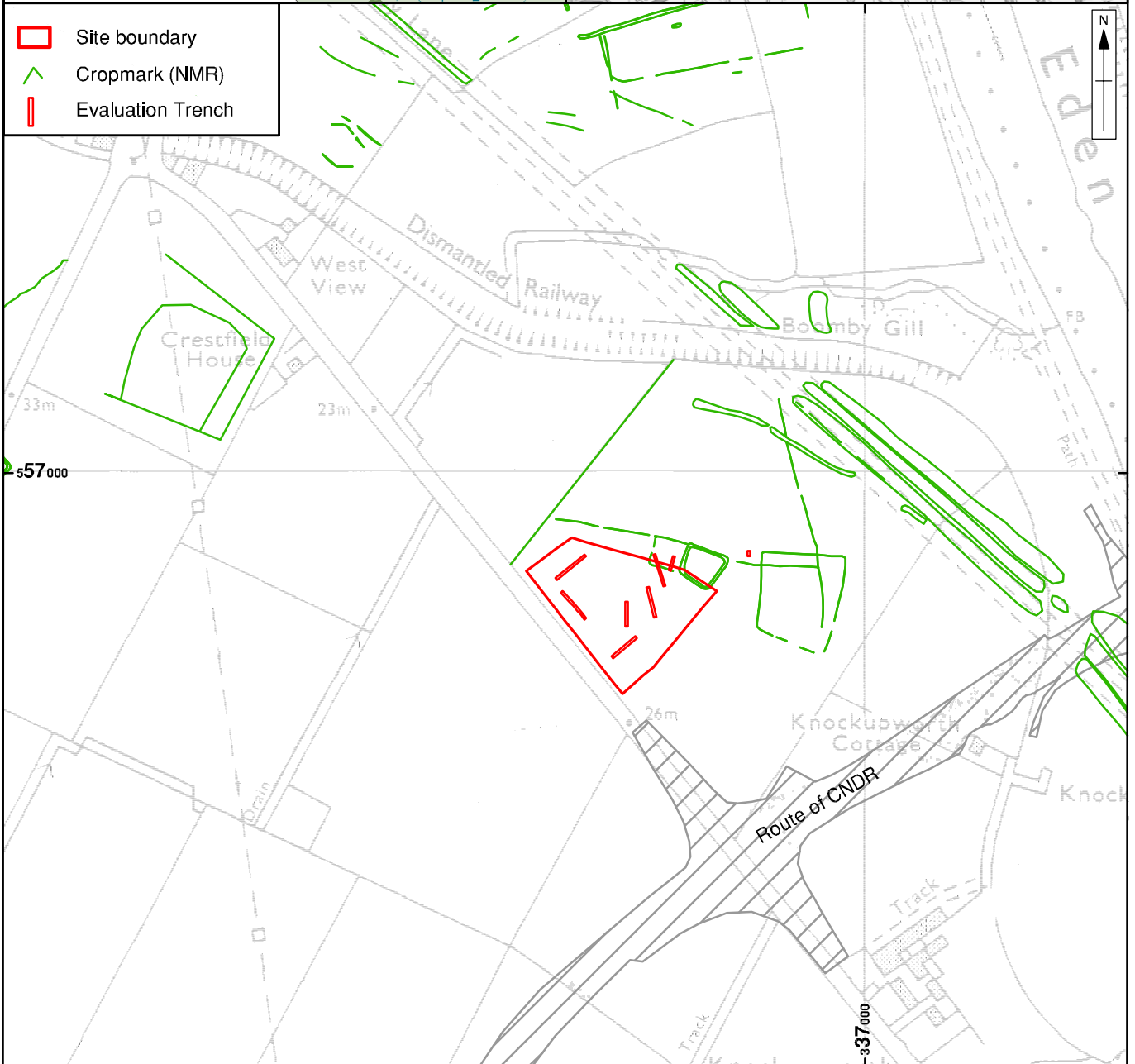
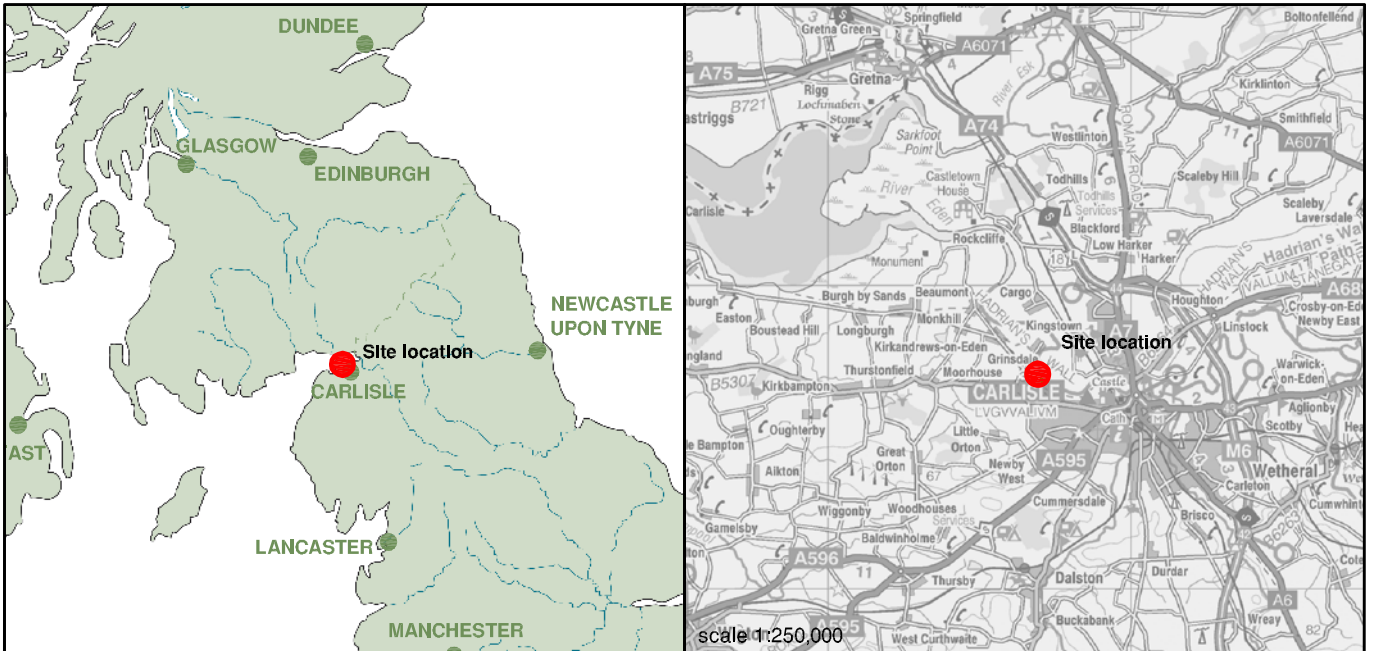
### FIGURES

Figure 1: Trench location

Figure 2: The site in relation to the cropmarks and the repositioned site boundary

Figure 3: Trenches 1 and 2 showing the position of ditch **104/205**, with section inset

Figure 4: Trenches 6 and 8 showing ditches **603/803** in relation to the cropmark enclosure, with section inset



- Site boundary
- ⋈ Cropmark (NMR)
- Evaluation Trench

Figure 1: Trench location

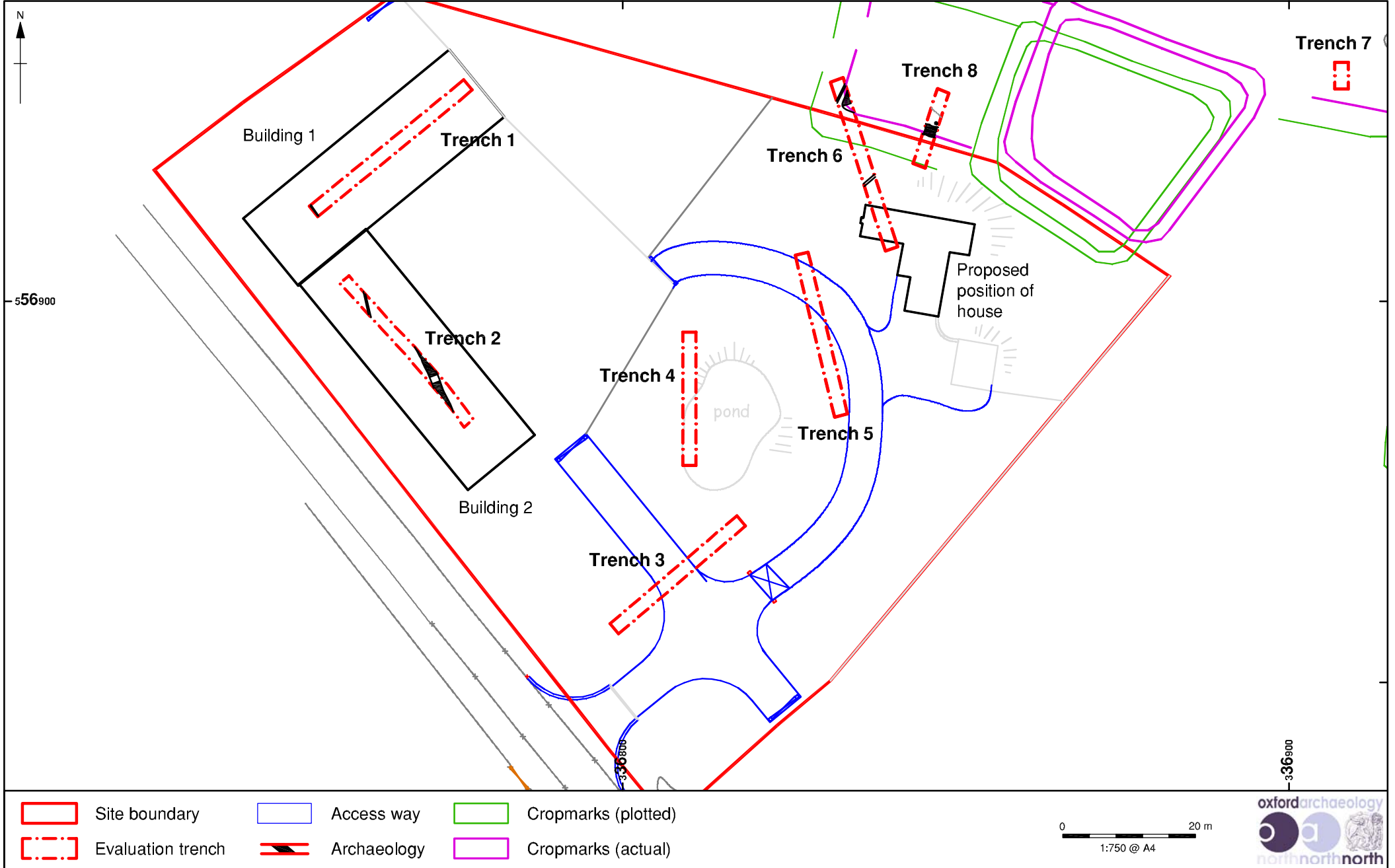


Figure 2: Trench locations in relation to the cropmarks and the repositioned site boundary

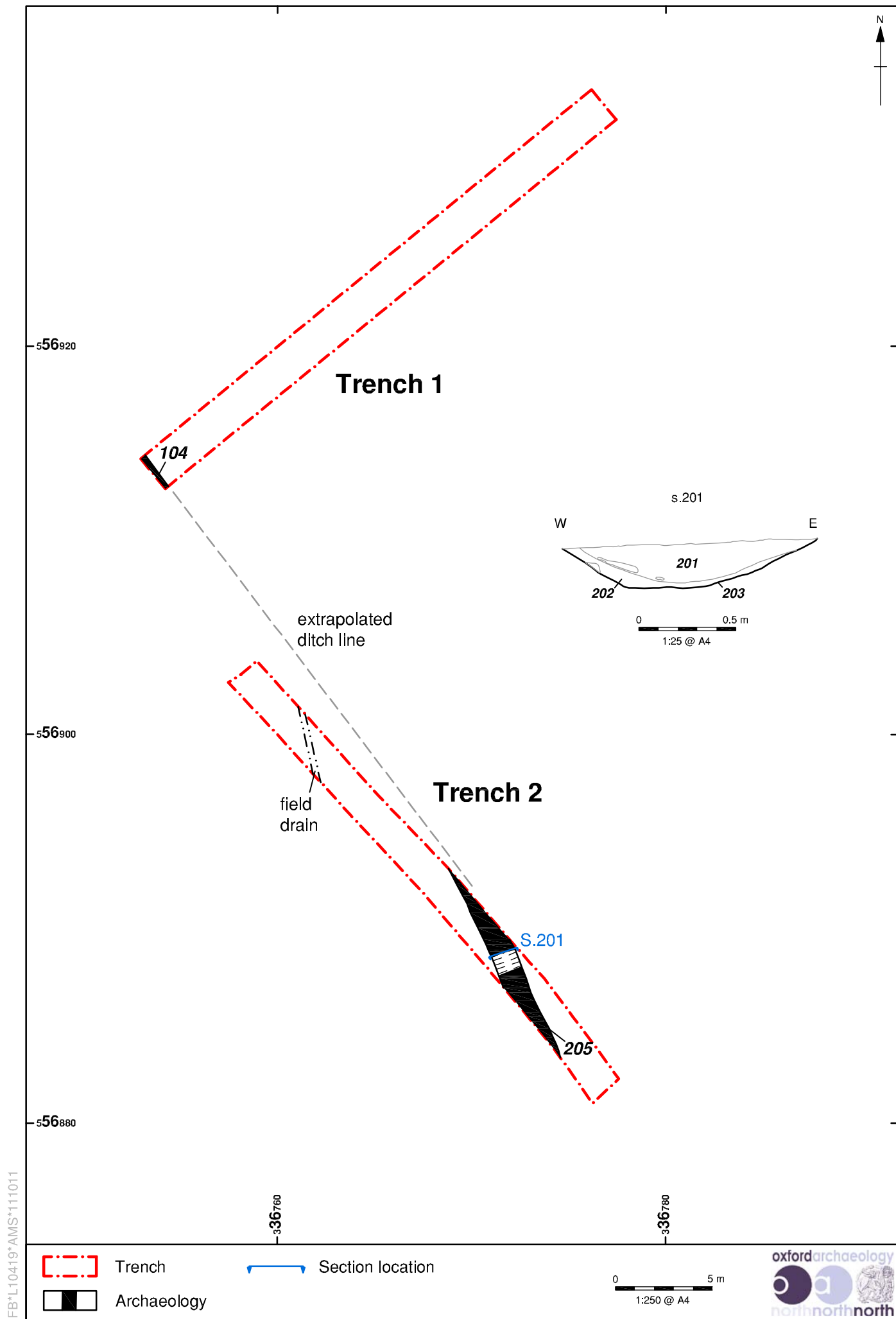


Figure 3: Trenches 1 and 2 showing the course of ditch **104/205**, with section inset

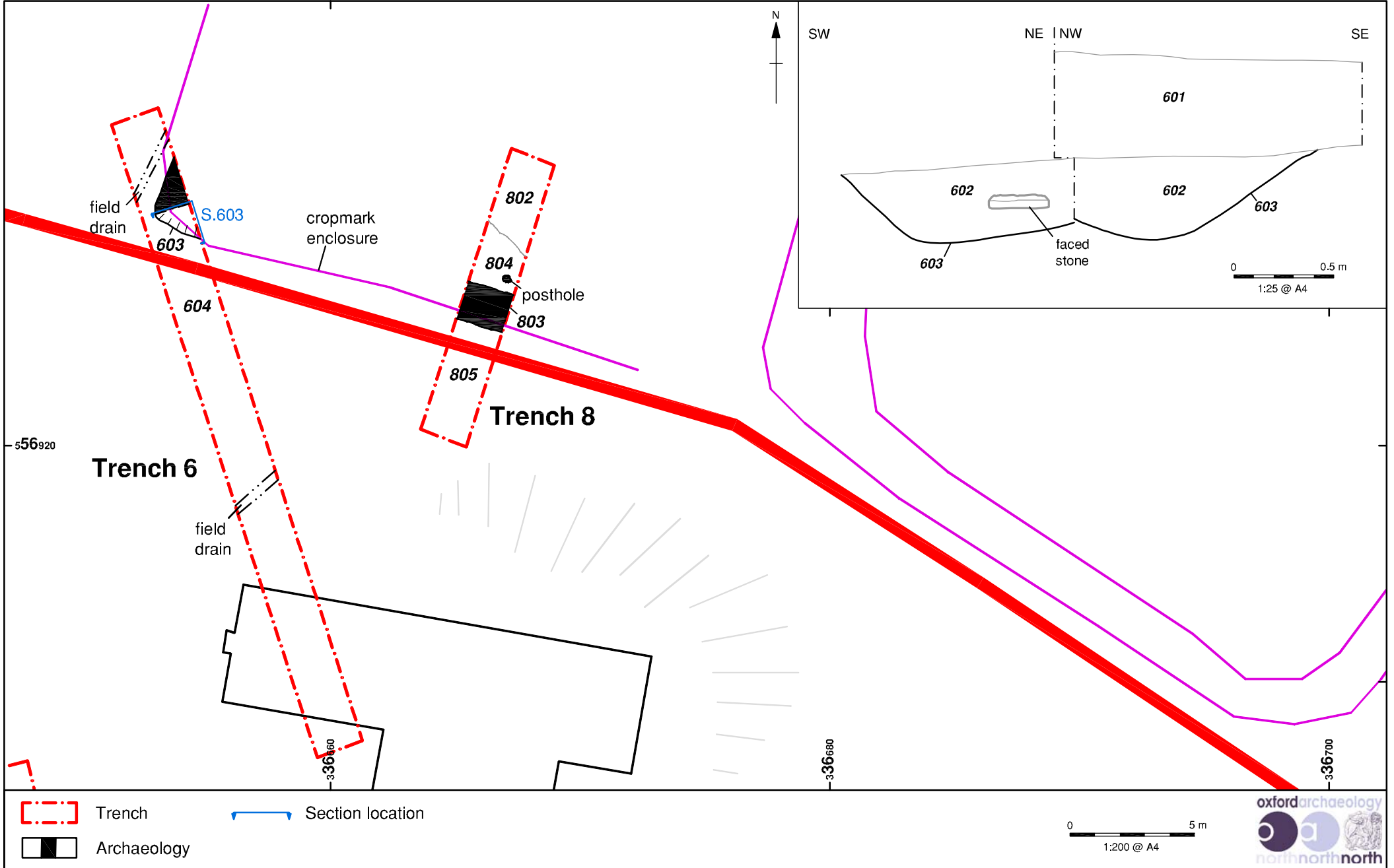


Figure 4: Trenches 6 and 8 showing ditches **603/803** in relation to cropmark enclosure, with section inset



## APPENDIX 1: CONTEXT INDEX

<i>Context</i>	<i>Type</i>	<i>Trench</i>	<i>Interpretation</i>
<b>101</b>	Deposit	1	Topsoil
<b>102</b>	Deposit	1	Natural geology
<b>103</b>	Deposit	1	Fill of ditch <b>104</b>
<b>104</b>	Cut	1	Ditch, continuation of <b>205</b>
<b>201</b>	Deposit	2	Topsoil
<b>202</b>	Deposit	2	Natural geology
<b>203</b>	Deposit	2	Upper fill of ditch <b>205</b>
<b>204</b>	Deposit	2	Lower fill of ditch <b>205</b>
<b>205</b>	Cut	2	North/south aligned ditch
<b>301</b>	Deposit	3	Topsoil
<b>302</b>	Deposit	3	Natural geology
<b>401</b>	Deposit	4	Topsoil
<b>402</b>	Deposit	4	Natural geology
<b>501</b>	Deposit	5	Topsoil
<b>502</b>	Deposit	5	Natural geology
<b>601</b>	Deposit	6	Topsoil
<b>602</b>	Deposit	6	Fill of ditch <b>603</b>
<b>603</b>	Cut	6	Corner of crop mark enclosure ditch
<b>604</b>	Deposit	6	Natural geology
<b>701</b>	Deposit	7	Topsoil
<b>702</b>	Deposit	7	Natural geology
<b>801</b>	Deposit	8	Topsoil
<b>802</b>	Feature	8	Silt and cobble feature
<b>803</b>	Feature	8	North-west/south-east aligned crop mark enclosure ditch
<b>804</b>	Feature	8	Posthole
<b>805</b>	Deposit	8	Natural geology

---

## APPENDIX 2: CCCHES DESIGN BRIEF

---

# BRIEF FOR AN ARCHAEOLOGICAL EVALUATION

AT KNOCKUPWORTH FARM, BURGH BY SANDS, CARLISLE, CUMBRIA

Issued by the

**County Historic Environment Service**

Environment Unit



**Date of Brief: 23 September 2011** \_

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

## SITE DESCRIPTION AND SPECIFICATION

**Site:** Knockupworth Farm, Burgh by Sands, Carlisle

**Grid Reference:** NY 3680 5688

**Planning Application No.:** 1/11/0610

**Scope of Evaluation:** 400 square metres of trial trenching

- 1.1 Detailed proposals and tenders are invited from appropriately resourced, qualified and experienced archaeological contractors to undertake the archaeological project outlined by this Brief and to produce a report on that work. The work should be under the direct management of either an Associate or Member of the Institute for Archaeologists, or equivalent. Any response to this Brief should follow IFA *Standard and Guidance for Archaeological Field Evaluation*, 2008 and be in line with recommendations outlined in English Heritage (1991). The specification must include:
  - ❖ A description of the excavation sampling strategy and recording system to be used
  - ❖ A description of the finds and environmental sampling strategies to be used
  - ❖ A description of the post excavation and reporting work that will be undertaken
  - ❖ Details of key project staff, including the names of the project manager, site supervisor, finds and environmental specialists and any other specialist sub-contractors to be employed
  - ❖ Details of on site staffing, expressed in terms of person days
  - ❖ A projected timetable for all site work and post excavation work
- 1.2 The proposed locations of the trial trenches will need to be determined following the desk-based assessment as some will need to target features of potential archaeological interest shown on aerial photos. The locations must be agreed with the County Historic Environment Service (CCCHES).
- 1.3 Any significant variations to the specification must be agreed by CCCHES in advance. No fieldwork may commence until the specification has been approved by CCCHES.

## PLANNING BACKGROUND

- 2.1 Cumbria County Council's Historic Environment Service (CCCHES) has been consulted by Carlisle City Council regarding a planning application for the relocation of Knockupworth Farm, near Burgh by Sands.
- 2.2 The scheme affects an area of high archaeological potential close to Hadrian's Wall World Heritage Site and where important archaeological remains are known to survive. Because of the high archaeological potential of the site CCCHES has advised that the applicant provides information on the significance of any archaeological remains surviving on the site and how that significance would be impacted upon by the proposed development. In order to provide this information an archaeological evaluation of the site is necessary. This Design Brief sets out the requirements for the adequate archaeological evaluation of the site.
- 2.3 This advice is in accordance with guidance given in Planning Policy Statement 5 (Planning for the Historic Environment) and with saved policies in the Carlisle Local Plan.

## ARCHAEOLOGICAL BACKGROUND

3.1 The site lies 200m to the south of Hadrian's Wall and *vallum* and two Roman forts are located 400m to the east and 400m to the north, all of which form part of the World Heritage Site. Aerial photos show that the remains of a prehistoric or Romano-British enclosure and field systems survive within part of the proposed development site. Furthermore, numerous prehistoric features were revealed in the archaeological investigations that took place in the closest section of the Carlisle Northern Development Route (OAN 2011). The proposed development therefore has the potential to affect significant buried archaeological remains from a range of periods.

## SCOPE OF THE PROJECT

### 4.1 Objectives

4.1.1 The evaluation should aim to determine the location, extent, date, character, condition, significance and quality of any surviving archaeological remains liable to be threatened by the proposed development. An adequate representative sample of all areas where archaeological remains are potentially threatened should be studied.

### 4.2 Work Required

4.2.1 A rapid desk-based assessment of the existing resource, to be undertaken before any work commences on site. This should include an assessment of primary and secondary maps and documents relating to the site, to set the evaluation results in their geographical, topographical, archaeological and historical context. Records and aerial photographs held by the County Historic Environment Record in Kendal should be consulted.

4.2.2 A visual inspection of the site. This should include a walkover of the site noting any surface features of potential archaeological interest, areas of potentially significant disturbance, and hazards and constraints to undertaking further archaeological work on site (including the siting of live services, Tree Preservation Orders and public footpaths).

4.2.3 The excavation of a series of linear trial trenches to adequately sample the threatened available area, and the investigation and recording of deposits and features of archaeological interest identified within those trenches. Some of the trenches will need to target features of potential archaeological interest shown on aerial photos. All features must be investigated and recorded unless otherwise agreed with the County Historic Environment Service. Initial topsoil removal can be undertaken by machine, but subsequent cleaning and investigation must be by hand. A minimum sample of 400 square metres should be investigated.

4.2.4 The evaluation should provide a predictive model of surviving archaeological remains detailing zones of relative importance against known development proposals. An impact assessment should also be provided, wherever possible.

4.2.5 The following analyses should form part of the evaluation, as appropriate. If any of these areas of analysis are not considered viable or appropriate, their exclusion should be justified in the subsequent report.

- A suitably qualified specialist should assess the environmental potential of the site through the examination of suitable deposits, including: (1) soil pollen analysis and the retrieval of charred plant macrofossils and land molluscs from former dry-land palaeosols and cut features, and;

- (2) the retrieval of plant macrofossils, insect, molluscs and pollen from waterlogged deposits.
- Advice is to be sought from a suitably qualified specialist in faunal remains on the potential of sites for producing bones of fish and small mammals. If there is potential, a sieving programme should be undertaken. Faunal remains, collected by hand and sieved, are to be assessed and analysed, if appropriate.
  - The advice from a suitably qualified soil scientist should be sought on whether a soil micromorphological study or any other analytical techniques will enhance understanding site formation processes of the site, including the amount of truncation to buried deposits and the preservation of deposits within negative features. If so, analysis should be undertaken.

## REPORTING AND PUBLICATION

5.1 The archaeological work should result in a report, this should include as a minimum:

- ❖ A site location plan, related to the national grid
- ❖ A front cover/frontispiece which includes the planning application number and the national grid reference of the site
- ❖ The dates on which the fieldwork was undertaken
- ❖ A concise, non-technical summary of the results
- ❖ An explanation of any agreed variations to the brief, including justification for any analyses not undertaken (see 4.2.5)
- ❖ A description of the methodology employed, work undertaken and the results obtained
- ❖ Plans and sections at an appropriate scale, showing the location and position of deposits and finds located, and absolute heights above Ordnance Datum.
- ❖ A list of, and dates for, any finds recovered and a description and interpretation of the deposits identified
- ❖ A description of any environmental or other specialist work undertaken and the results obtained

5.2 Two copies of the report should be deposited with the County Historic Environment Record within two months of completion of fieldwork. This will be on the understanding that the report will be made available as a public document through the County Historic Environment Record.

5.3 The results of the evaluation will need to be made available for inclusion in a summary report to a suitable regional or national archaeological publication if further archaeological fieldwork is expected.

5.4 Recommendations concerning any subsequent mitigation strategies and/or further archaeological work following the results of the field evaluation should **not** be included in the report. Such recommendations are welcomed by the County Historic Environment Service, and may be outlined in a separate communication.

5.5 Cumbria HER is taking part in the Online Access to Index of Archaeological Investigations (OASIS) project. The online OASIS form at <http://www.oasis.ac.uk/> must therefore also be completed as part of the project. Information on projects undertaken in Cumbria will be made available through the above website, unless otherwise agreed.

## THE ARCHIVE

6.1 An archive must be prepared in accordance with the recommendations in Brown (2007). Arrangements must be made for its long term storage and deposition with an appropriate repository. A copy shall also be offered to the National Monuments Record.

- 6.2 The landowner should be encouraged to transfer the ownership of finds to a local or relevant specialist museum. In this case Tullie House Museum is the most likely repository. The museum's requirements for the transfer and storage of finds should be discussed before the project commences.
- 6.3 The County Historic Environment Service must be notified of the arrangements made.

## PROJECT MONITORING

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

## FURTHER REQUIREMENTS

- 8.1 It is the archaeological contractor's responsibility to establish safe working practices in terms of current health and safety legislation, to ensure site access and to obtain notification of hazards (eg. services, contaminated ground, etc.). **The County Historic Environment Service bears no responsibility for the inclusion or exclusion of such information within this Brief or subsequent specification.**
- 8.2 All aspects of the evaluation shall be conducted in accordance with the Institute for Archaeologists' *Code of Conduct* (2009).
- 8.3 Human remains must be left *in situ*, covered and protected when discovered. No further investigation should normally be permitted beyond that necessary to establish the date and character of the burial, and the County Historic Environment Service and the local Coroner must be informed immediately. If removal is essential, it can only take place under appropriate Department for Constitutional Affairs and environmental health regulations.
- 8.4 The involvement of the County Historic Environment Service should be acknowledged in any report or publication generated by this project.

## BIBLIOGRAPHY

Brown, DH, 2007 *Archaeological Archives A Guide To Best Practice In Creation, Compilation, Transfer and Curation*, Archaeological Archives Forum

English Heritage, 1991 *The Management of Archaeological Projects*, 2<sup>nd</sup> ed, Swindon

Institute for Archaeologists, 2009 *By Laws: Code of Conduct*, Reading

OAN, 2011 *Carlisle Northern Development Route, Cumbria Post Excavation Assessment*, unpublished report

## FURTHER INFORMATION

For further information regarding this brief, contact

Jeremy Parsons

Historic Environment Officer

Cumbria County Council, County Offices, Kendal, Cumbria LA9 4RQ

Tel: 01539 713431

Email: [Jeremy.Parsons@cumbria.gov.uk](mailto:Jeremy.Parsons@cumbria.gov.uk)

For further information regarding the County Historic Environment Record, contact

Jo Mackintosh

Historic Environment Records Officer

Cumbria County Council, County Offices, Kendal, Cumbria LA9 4RQ

Tel: 01539 713432

Email: [jo.mackintosh@cumbria.gov.uk](mailto:jo.mackintosh@cumbria.gov.uk)

---

## APPENDIX 3: PROJECT SPECIFICATION

---

October 2011

Oxford  
Archaeology  
North

**KNOCKUPWORTH FARM  
BURGH BY SAND,  
CARLISLE, CUMBRIA  
Project Specification for:  
ARCHAEOLOGICAL EVALUATION**

### ***Proposals***

*The following project design is offered in response to a brief for a proposed archaeological evaluation at Knockupworth Farm issued by Cumbria County Council's Historic Environment Service.*



## **1. BACKGROUND**

### **1.1 CIRCUMSTANCES OF PROJECT**

1.1.1 Cumbria County Council's Historic Environment Service (CCCHES) has been consulted by Carlisle City Council regarding a planning application for the relocation of Knockupworth Farm, near Burgh by Sands. The area affected by the planning application (no. 1/11/0610) covers approximately 1ha and centres on NGR NY 3680 5690, although the area where the development will have a below ground impact covers 0.6ha.

1.1.2 The scheme affects an area of high archaeological potential close to Hadrian's Wall World Heritage Site and where important archaeological remains are known to survive. Because of the high archaeological potential of the site CCCHES has advised that the applicant provides information on the significance of any archaeological remains surviving on the site and how that significance would be impacted upon by the proposed development. In order to provide this information an archaeological evaluation of the site is has been requested. A design Brief, issued by CCCHES (23-09-11), sets out the requirements for the adequate archaeological evaluation of the site.

1.1.3 This advice is in accordance with guidance given in Planning Policy Statement 5 (Planning for the Historic Environment) and with saved policies in the Carlisle Local Plan.

### **1.2 ARCHAEOLOGICAL BACKGROUND**

1.2.1 The site lies 200m to the south of Hadrian's Wall and Vallum and two Roman forts are located 400m to the east and 400m to the north, all of which form part of the World Heritage Site. Aerial photos show that the remains of a prehistoric or Romano-British enclosure and field systems survive within part of the proposed development site. Furthermore, numerous prehistoric features were revealed in the archaeological investigations that took place in the closest section of the Carlisle Northern Development Route (CNRD; OA North 2011a). The proposed development therefore has the potential to affect significant buried archaeological remains from a range of periods.

1.2.2 The archaeological and historical background is expounded in more detail within the report for a rapid Desk-based Assessment that has been undertaken by Oxford Archaeology North in response to the CCCHES Brief (OA North 2011b). Amongst other things, this summarises the findings from the CNDR evaluations and excavations near to the application area.

### **1.3 OXFORD ARCHAEOLOGY NORTH (OA NORTH)**

1.3.1 OA North has considerable experience of the evaluation and excavation of sites of all periods, having undertaken a great number of small and large scale projects throughout Northern England, including Cumbria, during the past 25 years. In the past OA North has undertaken archaeological work within the fields surrounding Knockupworth Farm in advance of the construction of the CNDR. OA North is an Institute of Field Archaeologists (IFA) registered organisation, number 17, and all its members of staff operate subject to the IFA Code of Conduct. A rigorous approach is taken towards health and safety and our staff are CSCS accredited. OA North are insured for third party liability and carry Public, Employers and Professional indemnity.

## **2 AIMS AND OBJECTIVES**

### **2.1 PROJECT AIMS**

2.1.1 The CCCHES Brief stipulates that the evaluation should aim to determine the location, extent, date, character, condition, significance and quality of any surviving archaeological remains liable to be threatened by the proposed development. It also states that an adequate representative sample of all areas where archaeological remains are potentially threatened should be studied.

2.1.2 The evaluation will aim to provide a predictive model of surviving archaeological remains detailing zones of relative importance against known development proposals. An impact assessment will also be provided, wherever possible.

### **2.2 REPORT AND ARCHIVE PRODUCTION**

2.2.1 The archaeological work will result in a report, that will include:

- A site location plan, related to the national grid;
- A front cover/frontispiece which includes the planning application number and the national grid reference of the site;
- The dates on which the fieldwork was undertaken;
- A concise, non-technical summary of the results;
- An explanation of any agreed variations to the brief, including justification for any analyses not undertaken (*Section 3.1.13*);
- A description of the methodology employed, work undertaken and the results obtained;
- Plans and sections at an appropriate scale, showing the location and position of deposits and finds located, and absolute heights above Ordnance Datum;
- A list of, and dates for, any finds recovered and a description and interpretation of the deposits identified;
- A description of any environmental or other specialist work undertaken and the results obtained.

2.2.2 T2.wo copies of the report will be deposited with the County Historic Environment Record (CHER) within two months of completion of fieldwork. This will be on the understanding that the report will be made available as a public document through the CHER.

2.2.3 The results of the evaluation will be made available for inclusion in a summary report to a suitable regional or national archaeological publication if further archaeological fieldwork is expected.

2.2.4 Recommendations concerning any subsequent mitigation strategies and/or further archaeological work following the results of the field evaluation will not be included in the report. Any such recommendations may instead be made to the CCCHEs, in a separate communication.

2.2.5 An archive will be prepared in accordance with the recommendations in Brown (2007). Arrangements will be made for its long term storage and deposition with an appropriate repository. A copy shall also be offered to the National Monuments Record.

2.2.6 In the event that any finds are recovered, the transfer of the ownership of finds will be made to a local or relevant specialist museum, assuming the landowner gives their approval. In this case Tullie House Museum and Art Gallery is the most likely repository. The museum's requirements for the transfer and storage of finds will be discussed before the project commences. The County Historic Environment Service will be notified of the arrangements made.

2.2.7 Cumbria HER is taking part in the Online Access to Index of Archaeological Investigations (OASIS) project. The online OASIS form at <http://www.oasis.ac.uk/> will, therefore, also be completed as part of the project. This will be on the understanding that information on projects undertaken in Cumbria will be made available through the above website, unless otherwise agreed.

### **3. METHOD STATEMENT**

#### **3.1 FIELDWORK**

3.1.1 All aspects of the evaluation shall be conducted in accordance with the Institute for Archaeologists' *Code of Conduct* (2009).

3.1.2 Evaluation techniques will be selected to cause the minimum amount of destruction and will comply with all relevant health and safety regulations.

- 3.1.3 The results of a desk-based assessment will provide overall context for the works. All of those working on site will be made aware of the significance and history of the site.
- 3.1.4 A programme of trial trenching will take place in order to establish the extent, date, nature and preservation of area. Initial topsoil removal will be undertaken by machine to the level of the first significant archaeological resource or undisturbed natural deposit, whichever is encountered first, but any subsequent cleaning and investigation will normally be by hand. Excavations will employ a tracked 360° excavator of sufficient power to accomplish the job efficiently. A wide, toothless ditching bucket will be employed. The work will be supervised by a suitably experienced archaeologist. Spoil will be stored adjacent to the trenches, subsoil being kept separate from topsoil. Every effort will be made to avoid damaging land drains, although this may not always be possible, and the requirements of the archaeological evaluation must necessarily take precedence. OA North will not be responsible for effecting repairs to any drains that are damaged.
- 3.1.5 A sufficient sample of features and deposits will be investigated to understand the full stratigraphic sequence in each trench, down to natural deposits (where it was safe to do so). Excavation will not proceed if there is any possibility of compromising the future interpretation of the archaeology or affecting the integrity of deposits. The arisings will be backfilled in the same order that they were excavated, and the soil will be compressed by tracking over the backfilled trench, no further reinstatement will take place.
- 3.1.6 Human remains will be left *in situ*, covered and protected if discovered. No further investigation will normally proceed beyond that necessary to establish the date and character of the burial, and the CCCHEs and the local Coroner will be informed immediately if a burial is discovered. If removal is essential, this will only take place under appropriate Department for Constitutional Affairs and environmental health regulations.
- 3.1.7 It should be noted that no archaeological deposits will be entirely removed from the site unless their excavation is necessary for reasons of artefact/sample recovery or in order to reveal other features and/or deposits they seal. No archaeological feature will be excavated if it is deemed desirable to preserve it *in situ*.
- 3.1.8 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. Results of all field investigations will be recorded on OA North's *pro forma* context sheets. All features and deposits will be planned at an appropriate scale and representative trench sections will be drawn. Digital photographs will record the trenches and illustrate individual features. The elevation of the underlying natural deposits will be recorded as will the elevation of any archaeological horizons. Primary records will be available for inspection at all times.
- 3.1.9 Finds recovery and sampling programmes will be in accordance with current best practice (following IfA and other specialist guidelines). All artefacts and ecofacts will be treated in accordance with OA North standard practice, which is cognisant of IfA and UKIC Guidelines. In general this will mean that (where appropriate or safe to do so) finds are washed, dried, marked, bagged and packed in stable conditions; no attempt at conservation will be made unless special circumstances require prompt action. In such a case guidance and/or expertise will be sought from a suitably qualified conservator. OA North will assess the finds for conservation after fieldwork has been completed, but the cost of conservation must be born by the client (*Section 7*).
- 3.1.10 Samples will be collected for artefact retrieval should this prove necessary, for example, in the case of deposits associated with metalworking being identified.
- 3.1.11 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, 1996/7.
- 3.1.12 The following analyses will form part of the evaluation, as appropriate. If any of these areas of analysis are not considered viable or appropriate, their exclusion will be justified in the subsequent report:
- A suitably qualified specialist will assess the environmental potential of the site through the examination of suitable deposits, including: (1) soil pollen analysis and the retrieval of charred plant macrofossils and land molluscs from former dry-land palaeosols and cut features, and; (2) the retrieval of plant macrofossils, insect,

molluscs and pollen from waterlogged deposits;

- Advice has been sought from OA North's specialist in faunal remains on the potential of the evaluation for producing bones of fish and small mammals. It is their opinion, based on the results of the CNDR, that bones of this sort will probably not survive, except in extremely rarefied circumstances ie in the case of burnt deposits of calcined bone or if the bone from larger animals survives in a good state of preservation; a sieving programme will only be undertaken if such conditions prevail. Faunal remains, collected by hand or from sieving, will be assessed and analysed, if appropriate;
- Advice will be sought from a suitably qualified soil scientist on whether a soil micromorphological study or any other analytical techniques will enhance understanding site formation processes of the site, including the amount of truncation to buried deposits and the preservation of deposits within negative features. If so, such analysis will be undertaken.

The field team will be advised and supported by Oxford Archaeology's in house environmental specialists. A strategy will be devised on site when the nature of any archaeology is known. In essence, environmental samples (bulk samples of 40 litres volume, to be sub-sampled at a later stage) will be collected from suitable deposits (ie. the deposits are reasonably well dated and are from contexts the derivation of which can be understood with a degree of confidence). Special attention will be paid to sampling securely dated deposits and features and, specifically, any waterlogged and/or burnt deposits encountered. If 40 litres is not available to sample then the entire deposit will be removed. A contingency charge (*Section 7*) would apply for each sample that is processed and assessed (restricted at this stage to establishing the presence or absence of significant material), following a strategy agreed with CCCHES.

As it is not currently known what, if any, palaeoenvironmental analysis will be required, the cost of this work has not been included in the fixed cost for the evaluation. Contingent costs for this work and for any scientific dating that might be required have been quoted in *Section 7*.

### 3.4 HEALTH AND SAFETY

- 3.4.1 OA North recognises its responsibilities with regard to health and safety, and will establish safe working practices in accordance with current legislation. OA North provides a Health and Safety Statement for all projects and maintains a Health and 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 (1991) and OA North's own health and safety guidance documentation. OA North's site staff are CSCS accredited and senior staff are qualified First Aiders. All staff are issued with Personal Protective Equipment and each team with a telephone and a first aid kit. OA North will liaise with all parties to ensure all site specific health and safety regulations are met. A risk assessment will be completed in advance of any on-site works, which will be made available with our method statement.
- 3.4.2 Site access will be well regulated and notification of hazards such as services and contaminated ground will be obtained. It will be the farmer's responsibility to alert OA North of any such services that they have installed without informing the utility providers.

## 4. RESOURCES AND PROGRAMMING

### 4.1 STAFF AND TIMETABLE PROPOSALS

- 4.1.2 The overall management of the project will be undertaken by **Fraser Brown** (OA North Senior Project Manager) to whom all correspondence should be addressed.
- 4.1.3 The trial trenching will probably be directed by an OA North Supervisor or Project Officer (to be determined). OA North Supervisors and Project Officers are experienced field archaeologists who have undertaken supervision of numerous small - and large-scale evaluation and excavation projects. The site director will be assisted by one or more archaeological assistants.
- 4.1.4 It is expected that the fieldwork could be achieved within three working days. The assessment of any finds and environmental samples would be undertaken following the completion of fieldwork. The project archive

will be compiled and a MAP 2 (English Heritage 1991) style evaluation report (MoRPHE compatible) will be produced, following the completion of the fieldwork and the assessment of the finds and environmental samples.

- 4.1.5 The processing and analysis of any palaeoenvironmental samples will be carried out by **Elizabeth Huckerby BA, MSc** (OA North Project Officer), who has extensive experience of the palaeoecology of Northern England, having been one of the principal palaeoenvironmentalists in the English Heritage-funded North West Wetlands Survey.
- 4.1.6 Assessment of any finds from the excavation will be undertaken by **Chris Howard-Davis** or an appropriate specialist.
- 4.1.7 If finds or deposits are encountered that require specialist input, OA North will use Oxford Archaeology's in-house specialists out of preference, but external specialists may also be commissioned, subject to the agreement of the CCCHEs, should no in house expertise be available.
- 4.1.8 Normally OA North staff work a 37.5 hours week, Monday to Friday, though adjustments to hours may be made to maximise daylight working time in winter and to meet travel requirements

## **5. PROJECT MONITORING**

### **5.1 PROCEDURE**

- 5.1 Fieldwork will be monitored by the Historic Environment Officer on behalf of the local planning authority. It is a requirement of the CCCHEs Brief that one week's notice must be given to them prior to the commencement of fieldwork.
- 5.2 OA North will backfill any trenches devoid of archaeological features, on the understanding that they will not need to be inspected by CCCHEs. Trenches or segments of trenches that contain archaeological features can be left open for inspection by CCCHEs, if this can be scheduled within the course of the evaluation and will not unduly prolong the works.
- 5.3 The involvement of CCCHEs will be acknowledged in any report or publication generated by this project.

## **6. REFERENCES**

Brown, DH, 2007 *Archaeological Archives A Guide To Best Practice In Creation, Compilation, Transfer and Curation*, Archaeological Archives Forum

English Heritage, 1991 *The Management of Archaeological Projects*, 2<sup>nd</sup> ed, Swindon

Institute for Archaeologists, 2009 *By Laws: Code of Conduct*, Reading

OA North, 2011a Carlisle Northern Development Route, Cumbria Post Excavation Assessment, unpublished report

OA North, 2011b Knockupworth Farm, Burgh by Sands, Carlisle, Rapid Desk-based Assessment, unpublished report

---

## APPENDIX 4: RAPID DESK-BASED ASSESSMENT

---

# KNOCKUPWORTH FARM, BURGH BY SANDS, CUMBRIA

## RAPID DESK-BASED ASSESSMENT



**Oxford Archaeology North**

October 2011

Issue No: 2011–12/1233  
OA North Job No: L10419  
NGR: NY 3680 5690

---

## SUMMARY

---

Cumbria County Council's Historic Environment Service (CCCHES) was consulted by Carlisle City Council regarding a planning application for the relocation of Knockupworth Farm, near Burgh by Sands (NY 3680 5690). The scheme affects an area of high archaeological potential close to Hadrian's Wall World Heritage Site and where important archaeological remains are known to survive. Because of the high archaeological potential of the site CCCHES advised that the applicant should provide information on the significance of any archaeological remains surviving on the site and how that significance would be impacted upon by the proposed development.

In order to provide this information programmes of archaeological work, including evaluation trenching, a rapid desk-based assessment and a walkover survey, were requested, as described within a design Brief, issued by CCCHES (23-09-11). Patrick Reynolds, the land agent acting on behalf of Mr Young of Upknockworth Farm, subsequently commissioned Oxford Archaeology North (OA North) to undertake this work. The initial phase of work comprised a rapid desk-based assessment and walkover survey. Seven sites of archaeological interest were identified within the immediate vicinity of the proposed development area and the area was confirmed as featuring an extremely high density of significant sites. The potential for previously unrecognised sub-surface remains within the proposed development area is extremely high.

---

#### ACKNOWLEDGEMENTS

---

Oxford Archaeology North (OA North) would like to thank Mr Young for commissioning the project and Patrick Reynolds for his assistance and cooperation. Thanks are also due to the staff of the Cumbria Archive Service (CAS) in Carlisle and to Jo Mackintosh at Cumbria County Council's Historic Environment Service (CCCHES) Historic Environment Record (HER).

Paul Clark and Alastair Vannan compiled the historic research and Alastair Vannan undertook the walkover survey. Alastair Vannan, Paul Clark, and Fraser Brown produced the drawings. Fraser Brown managed the project and also edited the report.



---

## 1. INTRODUCTION

---

### 1.1 CIRCUMSTANCES OF THE PROJECT

- 1.1.1 Cumbria County Council's Historic Environment Service (CCCHES) was consulted by Carlisle City Council regarding a planning application for the relocation of Knockupworth Farm, near Burgh by Sands. The area affected by the planning application (no. 1/11/0610) covers approximately 1ha and centres on NGR NY 3680 5690.
- 1.1.2 The scheme affects an area of high archaeological potential close to Hadrian's Wall World Heritage Site and where important archaeological remains are known to survive. Because of the high archaeological potential of the site CCCHES advised that the applicant should provide information on the significance of any archaeological remains surviving on the site and how that significance would be impacted upon by the proposed development. In order to provide this information programmes of archaeological work, including evaluation trenching, a rapid desk-based assessment and a walkover survey, were requested, as described within a design Brief, issued by CCCHES (23-09-11). Patrick Reynolds, the land agent acting on behalf of Mr Young of Upknockworth Farm, subsequently commissioned Oxford Archaeology North (OA North) to undertake this work and a Project Specification was prepared (OA North 2011a). The following report summarises the results of the rapid desk-based assessment and walkover survey.

### 1.2 SITE LOCATION, TOPOGRAPHY AND GEOLOGY

- 1.2.1 The proposed development site is located to the north-west of the existing Knockupworth Farm, north-east of Burgh Road, to the west of Carlisle, centred on NGR NY 3680 5690. The site is located on the top of a small hill, overlooking the River Eden, at c 30m OD (Plate 1).
- 1.2.2 The underlying drift geology consists of Stanwix shales overlain by drift deposits of boulder clay (British Geological Survey 1982). The local soils are attributed to the Wick Association, coarse well-drained brown earths, which extend westwards to Burgh-by-Sands and Kirkbampton (Countryside Commission 1998).

---

## 2. METHODOLOGY

---

### 2.1 RAPID DESK-BASED RESEARCH

- 2.1.1 A study area (that consisted of the field within which the proposed development is situated) was used as the primary focus of the rapid desk-based assessment (Fig 2). Information relating to the wider historic environment was also incorporated in order to provide a broader context to understand the historic development of the study area and the likely potential for the presence of sites of archaeological interest (heritage assets). The sources consulted included the Cumbria Historic Environment Service (CHES) Historic Environment Record (HER), historic mapping, and published and unpublished materials held by the Cumbria Archive Service (CAS), in Carlisle, and the OA North library. The summarised results of the historic research were collated into a gazetteer of sites (*Section 4*). The methodology conformed to the *Standards and Guidance for Archaeological Desk-Based Assessment* compiled by the Institute for Archaeologists (IfA 2001). The sources consulted included:
- 2.1.2 **CHES Historic Environment Record HER, Carlisle:** the Historic Environment Record (HER) in Carlisle has an extensive database of all known sites of archaeological interest within Cumbria.
- 2.1.3 **Cumbria Archive Service (CAS), in Carlisle:** the archive service in Carlisle is the main source of primary information, including maps, plans, documents and aerial photographs, for the part of the historic county of Cumberland that lay to the north of the River Derwent.
- 2.1.4 **Oxford Archaeology North:** OA North has an extensive archive of secondary sources, as well as numerous unpublished client reports on work carried out both as OA North and in its former guise of Lancaster University Archaeological Unit (LUAU). These were consulted where necessary.

### 2.2 WALKOVER SURVEY

- 2.2.1 The field within which the proposed development is located was inspected to assess the extent and locations of known sites of archaeological interest and the potential for additional sites that had not been recognised previously. The results of the walkover survey are presented within *Section 4*. Additional information relating to sites of archaeological interest within the study area has been added to the site gazetteer (*Section 5*).

### 2.3 ARCHIVE

- 2.3.1 The results of all archaeological work carried out will form the basis for a full archive to professional standards, in accordance with current English Heritage guidelines (*Management of Research Projects in the Historic Environment*, 2006). The original record archive of the project will be deposited with the Cumbria Archive Service (CAS) in Carlisle.
- 2.3.2 The Arts and Humanities Data Service (AHDS) online database *Online Access to index of Archaeological Investigations* (OASIS) will be completed as part of the archiving phase of the project.

### 3. ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

#### 3.1 INTRODUCTION

- 3.1.1 The following section presents a summary of the archaeological and historical background in the vicinity of the site, presented by historical period, followed by a map regression, and a detailed description of recent archaeological work along the line of the Carlisle Northern Development Route (CNDR), immediately to the south-east of the site. This has been compiled in order to place the site into its wider archaeological context.

Period	Date Range
Palaeolithic	30,000 – 10,000 BC
Mesolithic	10,000 – 3,800 BC
Neolithic	4000 – 2,500 BC
Bronze Age	2,500 – 700 BC
Iron Age	700 BC – AD 43
Romano-British	AD 43 – AD 410
Early Medieval	AD 410 – AD 1066
Medieval	AD 1066 – AD 1540
Post-medieval	AD 1540 – c1750
Industrial Period	cAD1750 – 1901
Modern	Post-1901

Table 1: Summary of British archaeological periods and date ranges

#### 3.2 THE PREHISTORIC PERIOD

The recolonisation by humans of the Cumbrian landscape, following the last deglaciation, is not presently archaeologically well attested or understood, although some evidence for activity dating to the Late Upper Palaeolithic/Early Mesolithic (Hodgson and Brennand 2006), Later Mesolithic (*eg* Bonsall *et al* 1994) and Neolithic (*eg* Darbishire 1873) periods is known from sites near to the western coast, and from the site at Stainton West (OA North 2011b), 750m east of the study area, excavated as part of the mitigation for CNDR.

- 3.2.1 During the Bronze Age and Iron Age periods, the evidence for prehistoric settlement in the Carlisle area has increased considerably in recent years (McCarthy 2002, 33-50; OA North 2011b and c), but remains fairly sparse. Whilst this may, to a degree, genuinely reflect a comparatively low density of settlement, it is probably due principally to the difficulties inherent in identifying prehistoric sites in a region that is largely under pasture (which is generally far less conducive to aerial photography than most types of arable agriculture), and where prehistoric cultures appear to have produced relatively few artefacts durable enough to have survived to the present day. In the Iron Age, for example, the region appears to have been almost entirely aceramic (Hodgson and Brennand 2006, 56), vessels and containers presumably being fashioned from perishable materials such as wood, leather and horn.
- 3.2.2 Aerial photography in the immediate vicinity of the proposed development site has revealed a number of cropmarks (Site 06; Fig 2), with more identified in the wider area, particularly north of the Eden; these include circular, semi-circular, linear and rectilinear features and appear to represent both the Prehistoric and later periods (OA North 2011c).
- 3.2.3 Prehistoric features identified during the works associated with CNDR (*Section 3.6*), and the presence of Grinsdale Camp (HER 399), a fairly large, multivallate enclosure of presumed prehistoric date at Cargo on the north bank of the Eden, 1.7km to the north of the proposed development (McCarthy 2002, 46-7), provide a strong indication that this area was settled in prehistory. An entry in the Directory of Cumberland in 1847 described impressions of human footprints within stone close to the river's edge (Mannix and Whellan 1847). Whether these were simply natural formations or prehistoric impressions cast in earlier mud levels, as have been recorded at Formby Point (Hodgson and Brennand 2006) is not known.

### 3.3 THE ROMANO-BRITISH PERIOD

- 3.3.1 Whilst some of the rectilinear features traced by aerial photography in the area could conceivably be of Roman date (Site **06**; Fig 2), the archaeology of the Roman period within the vicinity of the site is dominated by Hadrian's Wall and Vallum (Site **01**; Fig 2), which at this point ran on a roughly north-west to south-east alignment, on the steep escarpment forming the south bank of the Eden, 300m north of the proposed development site. The Wall itself, which was initially constructed of turf and rebuilt in stone some time later, was only one element of the frontier system; to the south, situated at widely varying distances from the Wall, lay the Vallum, a substantial but enigmatic earthwork comprising a flat-bottomed ditch flanked by mounds, the purpose of which continues to excite debate (Breeze 2006, 86-7). The Vallum is located less than a hundred metres to the north of the development site. A hoard of Roman coins (Site **03**; Fig 2) was also found within Beaumont or St Andrews during the cutting of the canal, although the exact whereabouts is not known.
- 3.3.2 To the north of the proposed development area, probable camps are visible from the air to the south of the Vallum and within 4-500m to the west of the proposed development site. None of these features has been excavated and their date is unknown, but some at least are potentially pre-Hadrianic in date. In 1847 the Directory of Cumberland (Mannix and Whellan 1847) described two large square entrenchments that had formerly been present within Grinsdale close to Hadrian's Wall, but which had been levelled to the extent that no visible traces remained. It is likely that these entrenchments were two of the rectilinear enclosures visible on aerial photographs. In addition to those enclosures previously identified by the English Heritage National Mapping Programme (NMP), an enclosure (Site **07**) was identified during the present study from current aerial photographs. This site lies within 400m to the west of the proposed development area.

### 3.4 POST-ROMAN PERIOD

- 3.4.1 *The early medieval and medieval periods:* the immediate study area lies within Knockupworth, which lay within the former parish of Grinsdale. Grinsdale was a formerly a manor lay within the Barony of Burgh (Lysons and Lysons 1816, 101-9; Mannix and Whellan 1847) and was first recorded in *c* 1180 as *Grennesdal* (Armstrong *et al.*, 1943, 140-1). The place-name of Grinsdale might have derived from the location of a town field within a green dale, or might relate to a personal nickname from the old Norse *Grennir*, meaning 'grinner' (*ibid*). This place-name could, therefore, have been associated with Norse populations in local area during the early-medieval period, although linguistic continuity means that such names can be assigned long after the initial migrant settlement of an area. Knockupworth may have been recorded as early as 1290, as *cnochubert*, and could derive from the old Irish *cnocc*, meaning hillock, and the Germanic personal name of Hubert (*ibid*). The topographic nature of the area, which features a very conspicuous rise, is certainly consistent with *cnocc* as a descriptive term.
- 3.4.2 *The post-medieval and industrial periods:* one of the earliest direct descriptions of Knockupworth is from 1618 (YDX 103/27) and comes from a conveyance of arable land, meadows, grounds, and grassings, which provides an image of the area that is not significantly different to the current local character. Grinsdale was incorporated into the Lowther estate in 1685 (DLons/49) and the common fields had been enclosed by 1808 (DLonsL/16/1/1). The immediate environs of the study area, however, lay just beyond the extent of the common land, as shown on the Grinsdale enclosure award map of 1798 (DX 1388/1).
- 3.4.3 The line of the former Carlisle Navigation Canal (Site **04**; Fig 2), completed in 1823 (Ramshaw 1997, 25), runs to the north and east of the site of the proposed development. In the 1850s, the now dismantled Carlisle and Silloth Railway (Site **05**; Fig 2) was built along the line of the disused canal (*op cit*, 136-7). Excavations across these features during the course of the works for CNDR revealed almost no structural remains (OA North 2011c).
- 3.4.4 Since 1865, when the first OS maps of the area were surveyed, the number of field sub-divisions in the study area has decreased and the single field within which the development is proposed was formerly sub-divided into seven units. Little indication of these former boundaries is visible at ground level, with the exception of a prominent lynchet (Site **02**; Fig 2) associated with the most recently removed boundary, at the eastern side of the area. Knockupworth now falls within Beaumont County Parish.

### 3.5 MAP REGRESSION

- 3.5.1 **Introduction:** numerous maps were consulted spanning 1868 to the present day, most of which depicted very little change in the landscape of the study area and immediate environs. The most significant changes in the landscape comprise the westward expansion of Newtown, as a suburb of Carlisle, and the recent construction of the Carlisle Northern Development Route roadway, both of which occupy land to the south-east of the current study area. In order to avoid repetition, therefore, the OS editions subsequent to the first editions will not be detailed.
- 3.5.2 Commonly, the earliest detailed historic maps for rural areas are those that were surveyed during the mid-eighteenth century to facilitate the commutation of tithes. However, Cumbria Archive Service (CAS) does not hold a copy of the tithe map for the Parish of Grinsdale and this could not, therefore, be consulted. Although enclosure plans for Grinsdale were produced during the eighteenth and early-nineteenth centuries (eg DLonsL/53/3/1/52/1 and DX 1388/1), as Knockupworth lay just beyond the limits of Grinsdale Common it was not included on these depictions. Although Grisdale formed part of the Lowther estate from 1685 (DLons/49), the Lowther archive does not appear to contain estate plans relating to this specific area. Therefore, the OS maps comprise the key historic cartographic sources for the study area.
- 3.5.3 **Antiquarian maps:** one of the earliest comprehensive maps to of the area was that produced by Saxton in 1576. This was, however a large-scale and general map, although the course of Hadrian's wall was depicted. The detail of this map was amended and embellished by Lea in 1689 and the course of the wall close to the study area was clearly visible (Plate 2). Walker's map of 1830 (Plate 3) showed the study area with a little more detail and a greater degree of survey accuracy. This showed the course of the ship canal, prior to its replacement by the railway.
- 3.5.4 **OS First Edition map of 1868 at 6" to 1 mile (Plate 4):** this map was surveyed in 1865-7 and was the first available map or plan to show the study area in detail and depicted an agricultural landscape of field systems and dispersed farmsteads very similar to the current appearance of the area. There were, however, a greater number of field sub-divisions shown on this map than are currently extant. The field within which the proposed development is situated lay between a curve in the course of the Carlisle and Silloth Railway and the road running north-westwards from Knockupworth, although more field sub-divisions were present. The course of the Vallum (Site 01) was shown running north-west/south-east across the north-eastern part of this area. The presence of the hillock that defines this field was emphasised with the inclusion of the 100 foot contour line and a summit marked as 111 feet.
- 3.5.5 **OS First Edition map of 1874 at 25" to 1 mile (Plate 5):** this map was surveyed in 1865, although it was not published until nine years later. This map provided a more detailed, but essentially identical, depiction of the study area as the OS map of 1868.
- 3.5.6 **OS maps of 1901, 1925, 1937, and 1966:** with the exception of the gradual expansion of the urban area associated with Newtown, and the construction of a house called West View to the west of the study area, there were no significant differences between the depictions of the study area on these maps and that produced in 1874.

### 3.6 PREVIOUS ARCHAEOLOGICAL WORK

- 3.6.1 The recent construction of CNDR, immediately to the south-east of the proposed development area, was preceded by a number of phases of archaeological investigation. Twelve evaluation trenches were excavated by Carlisle Archaeological Unit (CAU) in 1997 in the field immediately to the south-east of the site (Fig 1; McCarthy *et al* 1997), which identified a concentration of archaeological features, comprising ditches, gullies, pits, postholes and stakeholes. A Roman bead and a fragment of Bronze Age pottery were recovered from the evaluation trenches.
- 3.6.2 Further evaluation trenching was undertaken along the route (CFA 2005), but this was superceded by the open-area excavation (OA North 2011c) undertaken along the route of the new road between Burgh Road and the

River Eden in 2008 (Fig 1). This revealed a pair of prehistoric ditches, one of which may well have been the continuation of a ditch originally identified in the CAU evaluation, which could extend up to the large rectilinear cropmark to the east of the proposed development site (Fig 1). An isolated pit, which contained carbonised cereal grains that have been radiocarbon-dated to the Middle Bronze Age, was also identified, as well as a group of undated postholes that may have formed a roundhouse. Post-medieval field boundary ditches and possible quarry pits were also identified during the excavation.

- 3.6.3 The work undertaken in advance of construction along the rest of the route of CNDR, also revealed highly significant archaeology in the vicinity of the proposed development site; at Stainton West, 750m to the north-east, a Mesolithic, Neolithic and Bronze Age site was excavated, recovering a large lithic scatter and waterlogged organic remains (OA North 2011b).

---

## 4. WALKOVER SURVEY

---

### 4.1 INTRODUCTION

- 4.1.1 The walkover survey was undertaken on 29th of September 2011 in clear, bright, and dry conditions. The footprint of the proposed development was inspected and the remainder of the field that contains it was also examined in order to ascertain the general physical character of the local area. The field was in use as a hay meadow and the grass had been cut on the morning prior to the walkover survey in order to facilitate the inspection. The area slopes to form a conspicuous uniformly rounded hillock with a slightly flattened summit (Plates 6 and 7). The summit of this hillock occupies the central portion of the field and the difference in height between the edges of the field and the hillock summit, which exceeds 9m, results in the area lying within the field far exceeding the size of the area as it appears in plan. The proposed development is situated on the south-western slope of the hill (Plate 1).
- 4.1.2 All features of archaeological interest encountered during the survey were incorporated within the gazetteer of sites (*Section 5*) and any observations pertinent to previously identified sites were also added to the gazetteer.

### 4.2 RESULTS

- 4.2.1 Although numerous extensive features are identifiable within the general area on aerial photography (Site **06**; Fig 2), very few of these are visible as earthworks at ground level. This is because many of these features are represented on the photographs only by changes in vegetation colour, as a result of water retention in subsurface depressions, rather than being exposed ditches or banks.
- 4.2.2 The most conspicuous feature within the field was the Vallum (Site **01**; Fig 2), which occurs as a wide linear hollow across the northern part of this area (Plate 8) but is sometimes only represented by linear terracing into the northern slope of the hill, but without a corresponding northern bank (Plate 9). The only other visible feature was a lynchet (Site **02**; Fig 2) measuring approximately 2.5m wide and 0.5m high that ran across the full length of the eastern part of the field in a south-west-north-east direction (Plate 10). This represented the line of a former field boundary that was shown on recent aerial photographs and must have only been removed within the last few years. This boundary was present as early as the OS map of 1865 but it is not known at what date it was first established.
- 4.2.3 Although a high density of prehistoric and Roman sites are known from the surrounding area, no additional sites likely to date to these periods were encountered.

---

## 5. SITE GAZETTEER

---

### 5.1 INTRODUCTION

5.1.1 Seven sites of archaeological interest were identified within a 250m radius of the proposed development area. These include Hadrian's Wall and Vallum (Site **01**; Fig 2), which is a Scheduled Monument, and a complex of cropmarks (Site **06**; Fig 2) that is likely to represent late prehistoric or Romano-British activity. A lynchet (Site **02**; Fig 2), resulting from a former field boundary, was visible within the field where the proposed development will occur and the remaining sites lie outside this area. In addition to these sites, there is an extremely high probability that previously unrecognised sub-surface remains associated with prehistoric or Romano-British activity will be present within the proposed development area.

<b>Site</b>	Hadrian's Wall and Vallum
<b>Site number</b>	<b>01</b>
<b>NGR</b>	NY 22100 62600
<b>HER number</b>	5782
<b>Statutory Designation</b>	Listed Building (no 78076); Scheduled Monument (various nos); also a World Heritage Site and falls within Conservation Area and Area of Outstanding Natural Beauty (AONB)
<b>Period</b>	Roman
<b>Source</b>	CHER
<b>Description</b>	This is a group number for Hadrian's Wall. Hadrian's Wall marks one of the frontiers of the Roman Empire. The international importance of the surviving remains has been recognised through designation as a World Heritage Site. The military importance of the Tyne-Solway route across the Pennines was recognised by the Romans during their early campaigns through northern England and into Scotland in the second half of the first century AD. At this time a military road, the Stanegate, was constructed along with a series of forts. Subsequently the Romans largely withdrew from Scotland and there is evidence that the Tyne-Solway route was being recognised as a frontier by the start of the second century AD. This position was consolidated in the early second century by the construction of a substantial frontier work, Hadrian's Wall, under the orders of the Emperor Hadrian.  Stretching over 70 miles from coast to coast, Hadrian's Wall was a continuous barrier built of stone in the east and, initially, of turf in the west. For most of its length a substantial ditch on the northern side provided additional defence. Where the Wall crossed rivers, bridges were constructed to carry it across. At regularly spaced intervals of about a mile along its length lay small walled fortlets known as milecastles. These were attached to the southern side of the Wall and most had a gateway through the Wall to the north. Hence they controlled crossing points through the Wall as well as affording space for a small stable garrison. Between the milecastles were two equally spaced towers known as turrets. At the western end of the Wall a system of towers, small fortlets and palisade fences extended the frontier system another 30 miles or so down the Cumbrian coast.  Another linear element, the vallum, was also added to the defensive system to the south of the Wall. This was a broad flat-bottomed ditch flanked by a pair of linear banks. It shadows the course of the Wall for almost all its length, sometimes lying very close to it but sometimes up to a kilometre away from it. The vallum's main function was to act as a barrier to restrict access to the Wall from the south. It also had a function in linking the forts along the Wall with a method of lateral communication.
<b>Assessment</b>	The vallum lies close to the proposed development area, but is not likely to be affected by the associated works.

---

<b>Site</b>	Lynchet
<b>Site number</b>	<b>02</b>
<b>NGR</b>	NY 37012 56880
<b>HER number</b>	-
<b>Statutory</b>	



---

<b>Designation</b>	-
<b>Period</b>	?Post-medieval
<b>Source</b>	Walkover survey
<b>Description</b>	A lynchet measuring approximately 2.5m wide and 0.5m high and 378m long that runs in a south-west-north-east direction across the full length of the eastern part of the field in which the application area lies. This represented the line of a former field boundary that was shown on recent aerial photographs and must have only been removed within the last few years. This boundary was present as early as the OS map of 1865 but it is not known at what date it was first established.
<b>Assessment</b>	The lynchet lies close to the proposed development area, but is not likely to be affected by the associated works.

---

<b>Site</b>	Beaumont/Kirkandrews Coin Hoard
<b>Site number</b>	<b>03</b>
<b>NGR</b>	NY 3700 5700
<b>HER number</b>	458
<b>Statutory Designation</b>	-
<b>Period</b>	Roman
<b>Source</b>	CHER
<b>Description</b>	A large hoard of Roman coins found between 1819-1823 while cutting the canal (SMR 6296) either in the parish of Beaumont or Kirkandrews. The whereabouts of the hoard is unknown.
<b>Assessment</b>	The findspot of the hoard lies outside of the proposed development area, and will not be affected by the associated works.

---

<b>Site</b>	Port Carlisle Canal/Carlisle Navigation Canal
<b>Site number</b>	<b>04</b>
<b>NGR</b>	NY 24240 62130
<b>HER number</b>	6296
<b>Statutory Designation</b>	None, but within Conservation Area and Area of Outstanding Natural Beauty (AONB)
<b>Period</b>	Industrial (1818-23)
<b>Source</b>	CHER
<b>Description</b>	Port Carlisle Canal was built in 1818-23 and connected Carlisle with the coast. It originally contained eight locks and covered a distance of 11.5 miles. Most of the canal can still be followed, but within the city limits it has been mostly destroyed by railway tracks. Following the opening of the London and North West Railway, and the Caledonian Railway (HER 42019), trade on the canal reduced enormously. By 1850, income had been halved from its peak in 1846. Plans to convert the canal to a railway were drawn up in 1852, and the canal closed in 1853.
<b>Assessment</b>	The route of the canal lies outside of the proposed development area, and will not be affected by the associated works.

---

<b>Site</b>	North British Railway, Carlisle and Silloth Branch
<b>Site number</b>	<b>05</b>
<b>NGR</b>	NY 15000 51370
<b>HER number</b>	10036
<b>Statutory Designation</b>	None, but within Conservation Area and Area of Outstanding Natural Beauty (AONB)
<b>Period</b>	Industrial (1854-1964)
<b>Source</b>	CHER
<b>Description</b>	The railway opened in 1854, along the line of the former Carlisle Navigation Canal (Site <b>04</b> ). The rail way was first opened to goods traffic, followed by passengers one month later. The former canal basin became used as a coal store and a general railway yard. An extension of the line to Silloth opened in 1856, where a new dock was built and opened in 1859. The line was absorbed by the London and

---

**Assessment** North Eastern Railway in 1923. It was nationalised in 1948, and closed in 1964. The route of the railway lies outside of the proposed development area, and will not be affected by the associated works.

---

**Site** Knockupworth Cottage Cropmark Complex, Beaumont  
**Site number** 06  
**NGR** NY 36975 56875  
**HER number** 41111  
**Statutory Designation** -  
**Period** Prehistoric (Iron Age)/Romano-British  
**Source** CHER  
**Description** A complex of rectilinear parchmarks and cropmarks lying to the west of Knockupworth Cottage. These lie immediately to the south of the line of Hadrian's Wall and the parchmarks probably represent a late prehistoric settlement (approximately 50-60m in length). Evaluatory excavations immediately to the north and east, in advance of the Carlisle Northern Development Route, revealed ditches, pits, and postholes, and whilst no artefacts were found associated with these features they were considered to be of Iron Age or Romano-British date. In a field further to the west is a complex of cropmarks including rectilinear boundaries of small enclosures, probably representing a late prehistoric field system, and a larger very regular rectilinear enclosure, seemingly overlying the field system, and of probable Romano-British date. This latter enclosure may be a temporary military camp, and the visible features extend for a length of approximately 80m. There are two known temporary camps 640m and 880m to the west.

**Assessment** The cropmarks lie within and immediately adjacent to the proposed development area and, although the design scheme has been modified to avoid these features, associated features are likely to be affected by the associated works.

---

**Site** Enclosure, Knockupworth  
**Site number** 07  
**NGR** NY 36448 57115  
**HER number** -  
**Statutory Designation** -  
**Period** ?Prehistoric (Iron Age)/?Romano-British  
**Source** Current aerial photographs  
**Description** A sub-rectangular multi-vallate enclosure situated within 400m to the west of the proposed development area was identified as crop marks on aerial photographs during the current study. The site might comprise a sub-ovoid enclosure and a sub-rectangular enclosure that are superimposed, but this can not be demonstrated definitively from the photographic evidence alone.

**Assessment** The cropmarks lie beyond the proposed development area and will not be affected by the associated works.

---

## 6. BIBLIOGRAPHY

---

### 6.1 PRIMARY SOURCES

British Geological Survey, 1982 *Solid geology*, 1:250,000 map, sheet 54<sup>0</sup> N 04<sup>0</sup> W

Lea, P, 1689 Map of Cumberland

OS 1865, 6" : 1 Mile, *Cumberland sheet 23*, first edn

OS 1874, 25" : 1 Mile, *Cumberland sheet 23.2*, first edn

OS 1901, 25" : 1 Mile, *Cumberland sheet 23.2*

OS 1925, 25" : 1 Mile, *Cumberland sheet 23.2*

OS 1937, 25" : 1 Mile, *Cumberland sheet 23.2*

OS 1966, 6" : 1 Mile, *Cumberland sheet 23*

Saxton, C, 1576 Map of Cumberland

Walker, J and Walker, C 1830 Map of Cumberland

#### ***Cumbria Archive Service (CAS), Carlisle:***

Dlons/49 – Papers concerning the rights of the riparian owner at Knockupworth to fishing on the Eden

DlonsL/16/1/1 (box 1243) – Documents relating to Grinsdale Common, including enclosure and surveys, datable to between the seventeenth and nineteenth centuries.

DLonsL/53/3/1/52/1 – Maps and plans of Lowther estate, 1638-1950

DX 1388/1 – Grinsdale enclosure award, 1798

YDX 103/27 – Conveyance of arable, meadows, grounds, and grassings at Knockupworth, 1618

### 6.2 SECONDARY SOURCES

Bonsall C, Sutherland, D, and Payton, R, 1994 The Eskmeals coastal foreland: archaeology and shoreline development, in J Boardman and J Walden (eds), *Cumbria Field Guide*, Quat Res Assoc, Oxford, 90-103

Breeze, D J, 2006 *J Collingwood Bruce's Handbook to the Roman Wall*, 14th edn, Newcastle upon Tyne

CFA Archaeology (CFA), 2005 Carlisle Northern Development Route: Land affected at the crossing of Hadrian's Wall (Parcel 21); archaeological evaluation, unpubl rep

Countryside Commission, 1998 Countryside character Volume 2: North West. The character of England's natural and man-made landscape, Cheltenham

Darbishire, R D, 1873 Notes on discoveries in Ehenside Tarn, Cumberland, *Archaeologia*, **44**, 273-92

Armstrong, AM, Mawer, A, Stenton, FM, Dickins, B, 1943 *The place-names of Cumberland, Part I: Eskdale, Cumberland and Leath wards*, Cambridge

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

Hodgson, J and Brennan, M, 2006 The prehistoric period resource assessment, in M Brennan (ed) 2006 *The Archaeology of North West England: an archaeological research framework for North West England: volume 1, resource assessment*, Archaeol North West, **8**, Manchester, 23–58

Institute for Archaeologists (IfA), 2001 *Standards and Guidance for Archaeological Desk-Based Assessment*, London

Lysons, D, and Lysons, S, 1816 *Magna Britannia, volume 4: Cumberland*, London

Mannix, and Whellan, W, 1847 *History, Gazetteer and Directory of Cumberland*, Beverley

McCarthy, M R, Zant, J M, Hughes, V, and Robertson, D, 1997 Knockupworth Farm, Carlisle, Cumbria: report on an archaeological evaluation on the proposed line of the Carlisle Northern Relief Road, Carlisle Archaeological Unit, unpubl rep

McCarthy, M R, 2002 *Roman Carlisle and the lands of the Solway*, Stroud

OA North, 2011a Knockupworth Farm, Burgh by Sand, Carlisle, Cumbria, archaeological evaluation Project Specification, unpubl rep

OA North, 2011b Stainton West (Parcel 27 North) CNDR – Post-excavation Assessment, unpubl rep

OA North, 2011c Carlisle Northern Development Route – Post-excavation Assessment, unpubl rep

Ramshaw, D, 1997 *The Carlisle Navigation Canal 1821–1853*, Carlisle

---

## ILLUSTRATIONS

---

### 7.1 LIST OF FIGURES

Figure 1: Site location map

Figure 2: Gazetteer sites plan

### 7.2 LIST OF PLATES

Plate 1: General view of the proposed development site, looking south-west

Plate 2: Extract from Lea's map of 1689

Plate 3: Extract from Walker and Walker's map of 1830

Plate 4: Extract from the first edition OS map of 1868, at 6" to 1 mile

Plate 5: Extract from the first edition OS map of 1874, at 25" to 1 mile

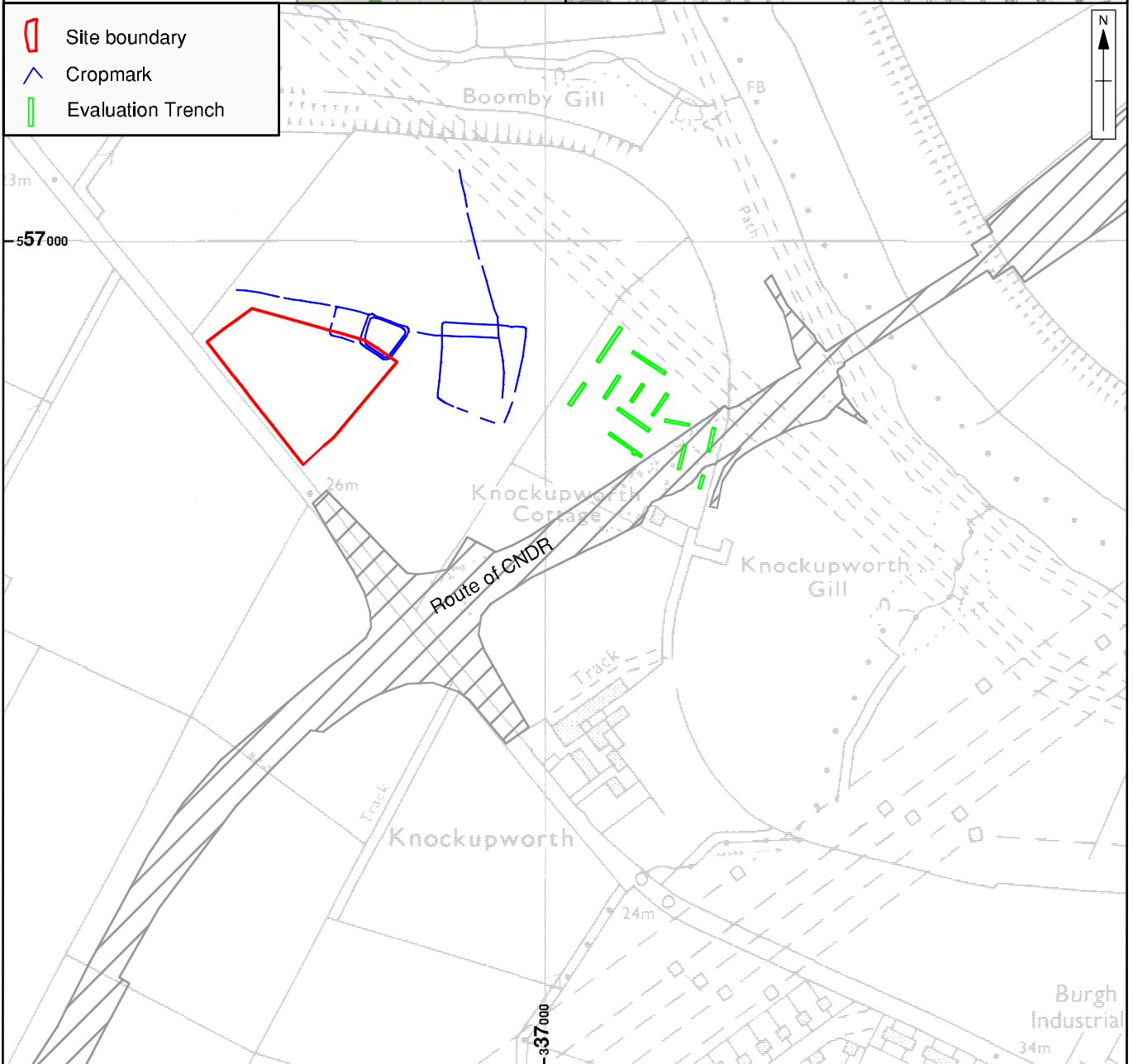
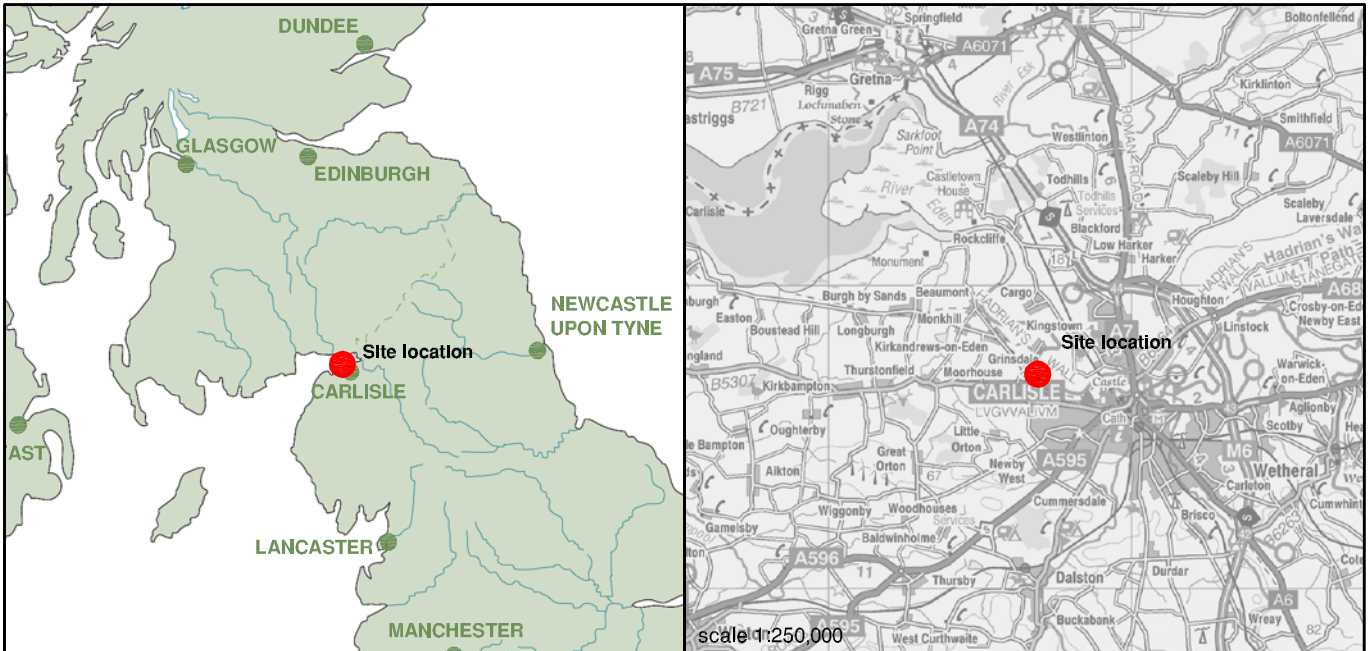
Plate 6: The profile of the hill, looking east

Plate 7: The profile of the hill, looking south-east

Plate 8: The profile of the Vallum ditch, looking south-east

Plate 9: The profile of the Vallum as a terrace, looking south

Plate 10: The lynchet (Site 02), looking south-west



Based upon the Ordnance Survey mapping with the permission of the Controller of Her Majesty's Stationery Office ©Crown copyright. Unauthorised reproduction infringes Crown copyright and may lead to prosecution or civil proceedings. Oxford Archaeology Licence No. AL 10005569 (2011).

0 100m  
1:5,000 @ A4

Figure 1: Site location

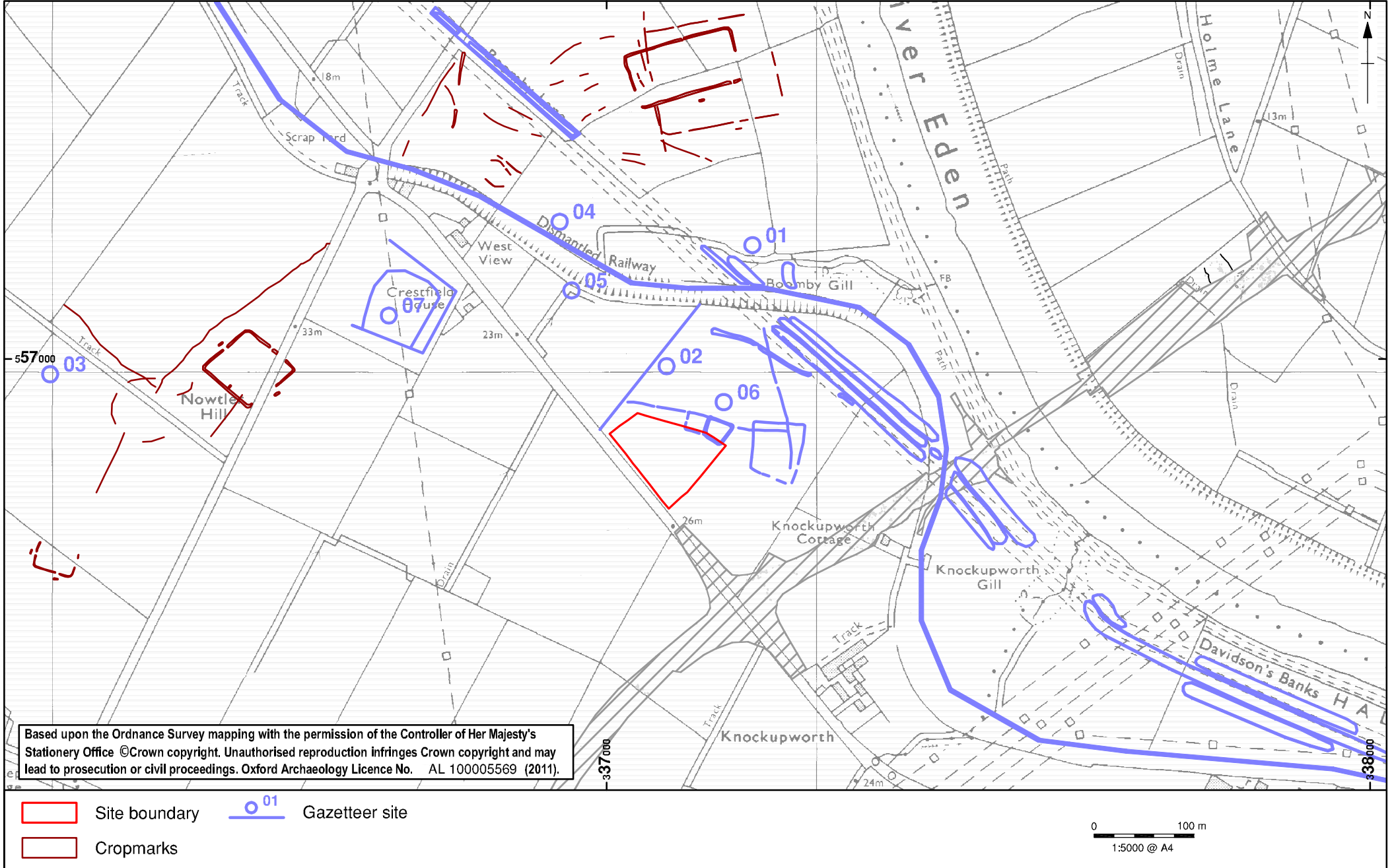


Figure 2: Gazetteer of sites

## PLATES



Plate 1: General view of the proposed development site, looking south-west



Plate 2: Extract from Lea's map of 1689





Plate 3: Extract from Walker and Walker's map of 1830



Plate 4: Extract from the first edition OS map of 1868, at 6" to 1 mile

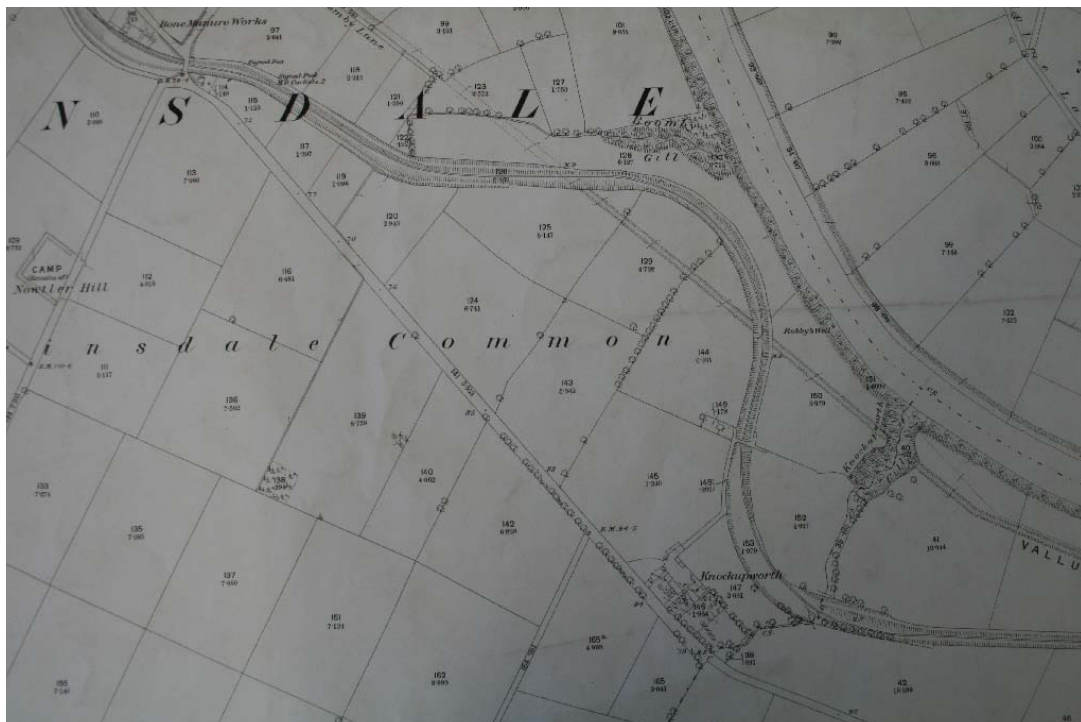


Plate 5: Extract from the first edition OS map of 1874, at 25" to 1 mile



Plate 6: The profile of the hill, looking east



*Plate 7: The profile of the hill, looking south-east*



*Plate 8: The profile of the Vallum ditch, looking south-east*



*Plate 9: The profile of the Vallum as a terrace, looking south*



*Plate 10: The lynchet (Site 02), looking south-west*