

# Hadrian's Wall

Archaeological Research by  
English Heritage 1976–2000

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*edited by Tony Wilmott*



ENGLISH HERITAGE

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## Periods

These dates are approximate ranges only. Dates represent calendar years, ie the equivalent of calibrated radiocarbon dates (source: Monarch Recording Guidelines Version 3.1 30 June 1998 English Heritage Internal Document).	Mesolithic 10 000 BC–4000 BC	Middle Iron Age 400 BC–100 BC
	Neolithic 4500 BC–2200 BC	Late Iron Age 100 BC–AD43
	Early Neolithic 4500 BC–3000 BC	Later Prehistoric 4000 BC–AD43
	Middle Neolithic 3500 BC–2700 BC	Roman AD 43–410
	Late Neolithic 3000 BC–2200 BC	Saxon AD 450–1066
	Bronze Age 2500 BC–700 BC	Early Saxon AD 450–649
	Early Bronze Age 2500 BC–1500 BC	Mid Saxon AD 649–870
	Middle Bronze Age 1600 BC–1000 BC	Late Saxon AD 870–1066
	Late Bronze Age 1000 BC–700 BC	early medieval AD 410–1066
	Iron Age 800 BC–AD43	medieval AD 1066–1540
	Early Iron Age 800 BC–400 BC	post-medieval AD 1540–1901

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## Summary

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From 1976 to 2000, English Heritage archaeologists undertook excavation and other research on Hadrian's Wall. In the early part of this period the excavations were related to rescue in advance of development, while later interventions included research excavation, responses to damage taking place outside the planning process, and work to inform the management of the World Heritage Site. A good deal of this work has been published elsewhere, and this volume completes the publication of all of these projects. A complete list of English Heritage interventions appears in Appendix 1. The next generation of work on the Wall will be undertaken in context with the recently produced Hadrian's Wall Research Framework.

Alan Whitworth's project of recording the standing fabric of the wall led to the discovery of the James Irwin Coates archive of drawings of Hadrian's Wall. Compiled between 1877 and 1896, these drawings, published in full here for the first time, provide a virtual condition survey of the Wall at the end of the 19th century. Alan Whitworth also gained an appreciation of the full scope of the work of exposing and consolidation of the Wall undertaken under the supervision of Charles Anderson for the Ministry of Public Building and Works and the Department of the Environment, 1936–1974. Anderson not only preserved a great quantity of the Wall through his work, but also made a comprehensive photographic record of what he did. His work is catalogued, and his career described in detail.

The most visible part of the Hadrian's Wall complex is the earthworks representing the Wall, its ditch and the Vallum to the south of the Wall line. Excavations on the earthworks have included three complete transactions at Black Carts, Appletree and Crosby on Eden. Evidence for the Roman-period natural environment of these locations was recovered, as well as new detail on the varied morphology of the works. At Black Carts the Vallum was built over ploughed land shortly after hoofed animals had traversed the

area. The counterscarp to the Wall ditch was here built up to compensate for a shallow ditch in an area of hard rock. At Appletree and Black Carts the marginal mound of the Vallum appears to be a primary feature, and a hitherto unrecorded primary track behind the Turf Wall was found at Appletree. Work on thirteen of the milecastles has added to knowledge of the dimensions, date and layout of several of them. New evidence for possible occupation outside milecastles, and for the order of their construction is cited.

At Birdoswald fort, previous work has been augmented by the excavation of the north-west *praetentura*. This area contained three barracks, each with eight *contubernia*. They were rebuilt during a general Severan re-modelling of the whole fort, possibly when *cohors I Aelia Dacorum* came into garrison, and were later re-modelled into small, free-standing structures. The dimensions of the partially excavated *basilica exercitatoria* were confirmed. One of the centurion's quarters contained a private latrine. This building may later have been converted into a small chapel. Outside the fort, to the south, excavation in advance of cliff erosion discovered a third fort ditch. Timber buildings on the spur were found to be 3rd century in date and associated with the Frisian-style Housesteads ware pottery. This ware does not occur within the fort, but only to the south. To east and west of the fort *vicus* development has been found through geophysical survey, mainly comprising stone-built structures. Evaluation on the west side showed that complex domestic structures were present, probably beginning at the earliest stage in the fort's development. Farther to the west, evaluation of the known cremation cemetery demonstrated that despite medieval ploughing, complete cremations could still be found. One of these produced grave goods in the form of decorated bone, probably for the adornment of biers. Excavation at the fort at Bowness-on-Solway confirmed the overall dimensions of the fort, and revealed part of the defences, including an interval tower.

## Résumé

Les fouilles et d’autres recherches exécutées au mur d’Hadrien par les archéologues d’English Heritage ont eu lieu de 1976 à 2000. Au début de cette période, il s’est agi de fouilles de sauvetage réalisées avant des travaux d’aménagement ; par la suite, les interventions ont porté sur des fouilles de recherche, des mesures destinées à réparer des dommages résultant d’autres facteurs que l’aménagement urbain et des travaux visant à élaborer les principes de la gestion de ce site du patrimoine mondial. Une bonne partie de ces travaux ont été publiés dans d’autres ouvrages, que le présent volume vient compléter. Une liste complète des interventions d’English Heritage figurent dans l’appendice 1. Les prochains travaux réalisés au mur seront exécutés dans le contexte du cadre établi récemment pour les recherches relatives au mur d’Hadrien.

Le projet d’Alan Whitworth portant sur le relevé des vestiges du mur ont conduit à la découverte de dessins d’archive du mur d’Hadrien exécutés par James Irwin Coates. Datant des années 1877 à 1896 et publiés pour la première fois dans leur intégralité dans le présent ouvrage, ces dessins offrent pratiquement un état des lieux du mur à la fin du XIXe siècle. Alan Whitworth a pu également se faire une idée de l’ampleur des travaux visant à mettre au jour et à consolider le mur, entrepris sous la direction de Charles Anderson pour le ministère des travaux publics et le ministère de l’environnement de 1936 à 1974. Anderson a non seulement préservé une bonne partie du mur par son travail, mais il a également photographié intégralement ses interventions. Son travail est catalogué, et sa carrière est décrite dans les détails.

La partie la plus visible du complexe du mur d’Hadrien se compose du mur, de son fossé et du Vallum longeant le mur au sud. Leurs fouilles se sont déroulées en trois interventions complètes menées à Black Carts, Appletree et Crosby on Eden. Elles ont permis de recueillir des données sur l’environnement naturel tel qu’il se présentait durant la période romaine à ces endroits, ainsi que de nouvelles informations sur la morphologie variée de l’ouvrage. À Black Carts, le Vallum a été construit sur un terrain labouré peu après avoir été traversé par des animaux à sabots. La contrescarpe du fossé du mur a été ici surélevée en raison de la faible profondeur du fossé, creusé à un endroit où la roche était dure. À Appletree et Black Carts, le remblai extérieur (*marginal mound*) du vallum semble être un

élément majeur, tandis qu’un sentier important, qui ne figurait jusqu’à présent sur aucun document, a été découvert derrière la levée de terre à Appletree. Des travaux menés sur 13 des tours milliaires ont permis de connaître les dimensions, la date et l’agencement de plusieurs d’entre elles. Des découvertes récentes indiquant la possibilité d’une occupation à l’extérieur de ces tours et permettant de déterminer l’ordre de leur construction sont mentionnées.

Au fort de Birdoswald, les travaux antérieurs ont été complétés par les fouilles de la *praetentura* nord-ouest. Cette zone abritait trois casernes, dotées chacune de huit *contubernia*. Elles ont été reconstruites durant le réaménagement général de l’ensemble du fort exécuté sous l’empereur Sévère, peut-être lorsque la *cohors I Aelia Dacorum* est arrivée en garnison, et ont été par la suite transformées en de petites structures séparées. Les dimensions de la *basilica exercitatoria* qui a fait l’objet de fouilles partielles ont été confirmées. L’un des quartiers des centurions contenait des latrines privées. Ce bâtiment a peut-être été par la suite transformé en une petite chapelle. À l’extérieur du fort, au sud, les fouilles réalisées pour devancer l’érosion de la falaise ont permis de mettre au jour un troisième fossé. On a pu établir que les bâtiments en bois situés sur l’éperon dataient du IIIe siècle et étaient liés à la poterie de style frison de Housesteads. Ces poteries n’ont pas été découvertes à l’intérieur du fort, mais seulement au sud. À l’est et à l’ouest du fort, un *vicus*, composé principalement de structures en pierre, a été découvert grâce à une étude géophysique. L’évaluation de la partie ouest a indiqué que des structures domestiques complexes se trouvaient à cet endroit, sans doute dès le début de l’aménagement du fort. Plus à l’ouest, l’évaluation du cimetière d’incinération déjà identifié a montré que malgré les labourages de l’époque médiévale, on pouvait encore y découvrir des incinérations complètes. L’une d’entre elles a permis de retrouver des objets funéraires, c’est-à-dire des os décorés qui avaient sans doute servi à agrémenter les bières. Les fouilles menées au fort de Bowness-on-Solway ont confirmé les dimensions d’ensemble du fort et permis de révéler une partie des défenses, y compris une tour intermédiaire.

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## Zusammenfassung

Von 1976 bis 2000 nahmen Archäologen des *English Heritage* Ausgrabungen und andere Forschungsarbeiten am Hadrianswall vor. In der ersten Phase dieses Zeitraums konzentrierten sich die Ausgrabungen auf Rettungsmaßnahmen vor der Erschließung der betroffenen Gebiete. Später kamen Ausgrabungen zu Forschungszwecken hinzu, Reaktionen auf Schäden, die außerhalb des Planungsprozesses auftraten und Arbeiten zur Information der Verwaltungsorgane dieses Weltkulturerbes. Ein großer Teil dieser Arbeiten wurde bereits an anderer Stelle veröffentlicht. Dieses Buch schließt die Publikation all dieser Projekte ab. Anhang I enthält eine vollständige Liste der Maßnahmen des *English Heritage*. Die nächste Generation der Arbeiten am Wall findet im Zuge des kürzlich ins Leben gerufenen Rahmenprogramms zur Erforschung des Hadrianswalls statt.

Alan Whitworths Projekt zu Aufzeichnungen über die Struktur des Walls führte zur Entdeckung von James Irwin Coates Archiv mit Zeichnungen vom Hadrianswall. Die Sammlung wurde zwischen 1877 und 1896 zusammengetragen, und die Zeichnungen, die an dieser Stelle erstmalig in vollem Umfang veröffentlicht werden, bieten eine virtuelle Studie vom Zustand des Walls Ende des 19. Jahrhunderts. Durch Alan Whitworth wurde auch verdeutlicht, welchen Umfang die Arbeiten zur Freilegung und Festigung der Anlage hatten, die unter Aufsicht von Charles Anderson für das *Ministry of Public Building and Works* und das *Department of the Environment* von 1936–1974 durchgeführt wurden. Anderson erhielt mit seiner Arbeit nicht nur einen großen Teil des Walls, sondern fertigte außerdem eine umfassende fotografische Dokumentation seiner Aktivitäten an. Seine Arbeit ist katalogisiert und sein beruflicher Werdegang detailliert beschrieben.

Der am besten sichtbare Teil der Wallanlage sind die Erdarbeiten, die den Hadrianswall darstellen, sein Graben und das Vallum am südlichen Teil des Wallverlaufs. Zu den Ausgrabungen an den Erdarbeiten gehören drei vollständige Transaktionen in Black Carts, Appletree und Crosby on Eden. Nachweise für die natürliche Umgebung zur Zeit der Römer an diesem Standort wurden geborgen, ebenso wie neue Einzelheiten zu der unterschiedlichen Morphologie der Anlage. In Black Carts war das Vallum auf gepflügtem Boden aufgestellt, kurz nachdem Huftiere das Gebiet überquert hatten. Die Gegenböschung des Wallgrabens wurde hier aufgebaut, um den flachen Graben in einem Gebiet mit hartem Gestein auszugleichen. In Appletree und Black Carts scheint

der Randhügel des Vallum ein Hauptmerkmal zu sein, und ein bis dahin unerwählter Pfad hinter dem Graswall wurde in Appletree gefunden. Die Arbeiten an dreizehn der *Milecastles* (Festungen) haben zu weiteren Erkenntnissen in Bezug auf die Größe, Datierung und den Aufbau einer ganzen Reihe dieser Anlagen geführt. Neue Nachweise einer möglichen Besiedlung außerhalb der *Milecastles* sowie Hinweise auf die Reihenfolge, in welcher diese Befestigungen gebaut wurden, werden angeführt.

In Birdoswald Fort wurden frühere Arbeiten durch die Ausgrabung der nordwestlichen *Praetentura* (vorderer Lagerteil) erweitert. Dieses Gebiet enthielt drei Baracken mit je acht *Contubernia* (Zeltgemeinschaften). Diese wurden im Rahmen eines allgemeinen Umbaus der gesamten Befestigung durch die Severer neu aufgebaut, möglicherweise als die *Cohors I Aelia Dacorum* in die Garnison kamen. Später wurden sie in kleine, freistehende Gebäude umgebaut. Die Abmessungen der teilweise ausgegrabenen *Basilica Exercitatoria* wurden bestätigt. Eine der Unterkünfte eines Zenturios enthielt eine private Latrine. Dieses Gebäude könnte später in eine kleine Kapelle umgewandelt worden sein. Außerhalb der Festung in südlicher Richtung wurde bei Ausgrabungen vor einer Erosion der Klippen ein dritter Festungsgraben entdeckt. Holzhäuser auf dem Felsvorsprung wurden auf das 3. Jahrhundert datiert und mit *Housesteads Ware*-Keramik in friesischem Stil in Verbindung gebracht. Diese Keramik kommt in der Festung nicht vor, sondern nur südlich davon. Östlich und westlich der Festung wurden römische *Vici* (Siedlungen) durch geophysische Forschungen gefunden. Diese bestanden hauptsächlich aus Steingebäuden. Bewertungen auf der westlichen Seite zeigen, dass es komplexe häusliche Strukturen gab, die wahrscheinlich in der frühesten Phase der Festungserrichtung entstanden. Weiter westlich zeigte die Untersuchung des bekannten Kremationsfriedhofs, dass trotz der Pflügearbeiten im Mittelalter immer noch vollständige Krematorien gefunden werden konnten. In einem davon wurden Grabbeigaben in Form von verzierten Knochen gefunden, wahrscheinlich zur Dekoration der Bahren. Ausgrabungen an der Festung in Bowness-on-Solway bestätigten die Gesamtabmessungen der Festung und legten einen Teil der Verteidigungsanlagen frei. Dazu gehörte auch ein Zwischenturm.

**Übersetzung: Tamara Benschaidt für First Edition Translations Ltd, Cambridge**

# 1

## Introduction:

### English Heritage research on Hadrian's Wall, 1976–2000

by Tony Wilmott

Research on Hadrian's Wall has a long pedigree reaching back to the late 16th century, its beginnings virtually coinciding with the Union of the Crowns and visits by such antiquaries as William Camden and Reginald Bainbrigg. The historiography of research from the beginnings (indeed from the first post-Roman literary reference to the Wall in Bede's *Ecclesiastical History*) to the 1960s has been written by Eric Birley (1961, 1–69), although an authoritative update of this work, covering the following 40 years, is yet to be written.

The work undertaken by English Heritage over the last quarter of the 20th century has its origin in responses to the attrition of the monument, owing to both large- and small-scale development work. Most of this work, as discussed later, covers the period prior to the introduction of the Planning Policy Guidance Note on *Archaeology and Planning* (PPG16), when responsibility for addressing the archaeological impact of development rested largely with central government, but also covers the response of English Heritage to threats that fall outside the planning system.

Hadrian's Wall has been subject to threats of destruction virtually from the beginning of the period of antiquarian interest. Perhaps the starkest example is the building by General Wade of the Military Road (now the B6318) from Newcastle to Carlisle in the mid-18th century using the stone (and course) of the Wall, a project that caused the antiquary William Stukeley to write a letter of protest to the Princess of Wales, which has a very modern ring (Lukis 1887, 140–43; Lawson 1973, 186–90). At the same time, the robbing of Wall stone for building continued apace, and was railed against by William Hutton (1801). Stone robbing in the central sector was halted when John Clayton of Chesters inherited the

Chesters estate in 1843, and proceeded to acquire large stretches of the Wall and several forts, a process that continued until his death in 1890. Clayton excavated a number of sites on the Wall, and also replaced facing stones, in parts virtually rebuilding stretches of Wall. Clayton's work was publicised and popularised by John Collingwood Bruce, author of the magisterial volume *The Roman Wall* (Bruce 1853) and founder, in 1849, of the institution of the Pilgrimage of the Roman Wall. Elsewhere, however, attrition, principally due to the robbing of stone, continued. This was exacerbated by the growth and spread of the urban areas of Carlisle and Newcastle, characterised by the destruction of the northern third of the fort of Benwell by the construction of a reservoir in 1863–4.

In the 1930s and 1940s the Wall was threatened by the quarrying of whinstone (dolerite) in the central sector. This led to the passage of the 1931 Ancient Monuments Act and a long struggle to save the Wall, which has been described in detail by one of the chief campaigners against the threat, John Charlton (2004). The threat was not finally defeated until a public enquiry finally put an end to proposals for quarrying in 1960.

The increasing pace of development nationwide in the 1960s and 1970s, and the consequent threat to archaeological monuments and remains, led to the formation of the pressure group RESCUE, and to the establishment of a series of archaeological units across the UK (Rahtz 1974; Jones 1984). The largely rural nature of the Hadrian's Wall zone meant that the area was largely free of the kind of large-scale threat experienced by much of the rest of the country during this period. One survey of 'crisis areas' (St Joseph 1974, 174) identified only the danger of dolerite quarrying, which,



Fig 1  
Statue of a genius found in 1976 during the first CEU watching brief on the Wall at Burgh-by-Sands.

as we have seen, had been averted. The area was not wholly immune, however, and in 1974 work on the A69 Hexham-Corbridge by-pass revealed the Agricolan supply base at Red House, which was excavated by Newcastle University (Hanson *et al* 1979; Jones 1984, 70). Infrastructure projects that required north-south routes, such as the North Sea gas pipeline through north Cumbria, necessitated rescue observations (Richardson 1978). At the same time, development within the urban areas of Carlisle and Newcastle upon Tyne led to large-scale rescue excavations, notably at Annetwell Street, Carlisle and at Wallsend. In the absence of dedicated

archaeological units for the Wall zone, archaeological responses to development were carried out by other bodies, often funded by the Department of the Environment (DoE); thus the work at Annetwell Street was directed by Dorothy Charlesworth in her role as DoE Inspector of Ancient Monuments and that at Wallsend by Charles Daniels for the University of Newcastle upon Tyne. Shortly after the Annetwell Street excavation the Carlisle Archaeological Unit was formed, and took on all rescue work within the extensive city boundaries, which include the whole of the Turf Wall sector.

The archaeological units that were set up at this time were generally committed to work within a particular territorial area: a city or county. It was due to the recognition that there were gaps in coverage and that the units had limited flexibility that the Central Excavation Unit (CEU) was set up by the DoE in 1975. The primary roles of the Unit were to undertake rescue excavation where no local archaeological organisation existed to carry out the work, or where such an organisation's resources were fully committed, and to undertake excavations on sites of special national importance. The 1979 Ancient Monuments and Archaeological Areas Act strengthened the protection afforded to Scheduled Ancient Monuments by introducing the concept of Scheduled Monument Consent (SMC), under which the prior permission of the Secretary of State was made compulsory for any works on monuments under statutory protection. In many cases archaeological conditions were laid upon the granting of SMC, such that excavations and watching briefs would take place before and/or during the work. This stipulation led to the CEU experiencing an increase in work related to the granting of SMC (Hinchliffe 1986, 2–3). The CEU also began to undertake evaluation exercises designed to assess the state of preservation and archaeological potential of sites, and thus to inform decisions on management.

From the outset, Hadrian's Wall was a major consideration for the CEU, as the linearity, complexity and extent of the Wall meant that it was constantly affected by a wide variety of development proposals, often simultaneously. Proposals ranged from drainage schemes and the erection of telegraph poles to housing development, road works and pipeline schemes (Hinchliffe 1986).

From 1976, Paul Austen was designated CEU officer for Hadrian's Wall, based permanently in Carlisle. His brief was to monitor developments and advise on their archaeological implications, negotiating with farmers and developers, and undertaking watching briefs, evaluations and, where required, rescue excavations. Much of the work was comparatively mundane, involving watching briefs that often produced negative results, although the very first watching brief in 1976 outside Burgh-by-Sands unearthed a limestone statue of a *genius* (Austen 1986) (Fig 1). In cases where large- or medium-scale threats existed, CEU teams were set up in order to undertake excavations.

The earliest of these larger works was undertaken at Tarraby, east of Carlisle in 1978 (Smith 1978), where a pre-Roman cultivation system was found beneath the Vallum and Wall. Evidence of a similar nature was found at T10a in Throckley (Fig 2), where the Roman structure sealed pre-Wall ard-marks (Bennett 1983). Excavations on two sites were necessitated by the laying of major gas pipe-lines. At Crosby-on-Eden in 1981 (this volume, pp 120–8) (Fig 3) a complete cross-section of the linear elements of the Wall was recorded, while at Wallhouses in the same year (Bennett and Turner 1983) a Vallum crossing was located.

The construction of a pipe-line across the Wall at Burgh-by-Sands in 1986 resulted in the first discovery of a substantial cobble foundation beneath the Turf Wall, a finding that was confirmed when the nearby Mc72 (Fauld Farm) was excavated three years later in advance of development (Austen 1994). Two of the most important rescue excavations were conducted off the line of the Wall (Austen 1991), on the outpost fort at Bewcastle and at the hinterland fort of Old Penrith during 1977–8. At Bewcastle excavations in advance of a new farm building provided an opportunity to examine a stratigraphic and structural sequence from the Hadrianic period to the 3rd century, promoting reconsideration of the accepted history of the site, particularly of the date of abandonment, which was earlier than previously thought (Fig 4).

At Old Penrith the contrasting histories of fort and *vicus* were established. A rescue excavation in 1988 was undertaken in advance of house building at Bowness-on-Solway. Prior to the excavation, a radical re-evaluation of the extent of the fort took place. This concluded that the east wall of the fort lay to the west of its presumed position, and that the defences would lie within the threatened area. Excavation confirmed this hypothesis, and further vindication was provided in a watching brief near the south-east angle of the fort (Austen 1990; this volume, pp 396–409).



Fig 2  
Excavation of T10a at Throckley in advance of renewal of services.



Fig 3  
Excavation of the Wall ditch at Crosby-on-Eden in 1981, viewed from the scaffold erected to assist in spoil removal.



Fig 4  
Excavation of fort buildings at Bewcastle, 1978.



In 1983, the National Heritage Act had set up English Heritage, "and transferred to it many of the responsibilities of the Secretary of State (for the Environment),

including the power to fund the repair, management and recording of important sites, and to provide advice on the scheduling of monuments and application

for consent to carry out works to them." (English Heritage 1991, 3). The general duties of the new body were to:

- a) secure the preservation of ancient monuments and historic buildings situated in England;
- b) promote the preservation and enhancement of the character and appearance of conservation areas situated in England;
- c) and promote the public's enjoyment of, and advance their knowledge of, ancient monuments and historic buildings situated in England and their preservation.

It was in the light of the last-mentioned of these duties that 1987 marked a new departure for the CEU. The unit worked as contractor to Cumbria County Council on a major, 'non-rescue' excavation at Birdoswald (Fig 5), designed to improve understanding of the fort, and also to reveal major structures for public display (Hinchliffe 1989; Wainwright 1989, 17). This author was employed as Project Director for this work, which lasted until 1992 (Wilmott 1997a).

By 1990 the role of the Unit was changing from that of an 'alternative rescue unit' to an organisation that would play a more integrated role in English Heritage's strategies for archaeology. While the short notice response role was retained, the unit's

major projects became more strategic in character, with a strong emphasis on methodological and technical development. At the same time the experience of the Unit's staff became increasingly exploited to provide professional advice to colleagues across the range of English Heritage's archaeological activities (Hinchliffe 1990; Wainwright 1990, 13). By 1991, under the title the Central Archaeology Service (CAS), the role of the organisation had expanded to include the assessment, monitoring and provision of advice on archaeological projects funded by English Heritage (Wainwright 1991, 8).

At the same time, the promulgation by the Department of the Environment of *Archaeology and Planning* (PPG16) meant that archaeology was now a material consideration within the planning process. The costs of archaeological recording were brought within development budgets. The impact of PPG16 on archaeological practice in England was immediate (Lawson 1994; Darvill 1994). The first preference in any development was hereafter for preservation *in situ*. Where damage cannot be avoided the developer has the responsibility to ensure proper records are made of the archaeology that will be destroyed. Professional standards are ensured through the provision to developers of briefs for work, normally compiled by the archaeological curator, usually the archaeological adviser to the planning authority. The actual work is then



Fig 5  
Excavation in progress on the south horreum at Birdoswald in the first season in 1987.



undertaken by a recognised archaeological contractor following a tendering process.

The effect of PPG16 on Hadrian's Wall meant that the role of the CAS in providing rescue cover for development in the Wall zone was effectively over, as the presumption in every development was in favour of preservation *in situ*. The last of their traditional interventions took place at Whittledean Reservoir in 1990–91, and at Mc20 (Halton Shields) in 1992 (Appendix 1). At the same time the first of the new generation of PPG16-related works began. This had been foreshadowed in 1987 when Tyne and Wear Museums Service were funded through the Department of Transport to excavate the Wall and Vallum during the construction of the Newcastle Western By-pass at Denton (Bidwell and Watson 1996; pers comm P Bidwell), and began in earnest when, in 1991, the Lancaster University Archaeology Unit (LUAU) were contracted to undertake archaeological works associated with the North West Ethylene pipeline (Drury 1996). Since this time virtually all development related work on the frontier has been undertaken by three principal contracting organizations: Tyne and Wear Museum Service, Carlisle Archaeology Unit and LUAU (now Oxford Archaeology North – OAN). In recent years this work has included the archaeological works related to the creation of the Hadrian's Wall National Trail, which have been undertaken by OAN.

Hadrian's Wall was inscribed as a World Heritage Site in 1987. In 1996 the first Management Plan for the World Heritage Site was published, enshrining both guiding

principles and five-year objectives for the management of the Wall. A Hadrian's Wall Co-ordination Unit was set up to champion the World Heritage Site, to co-ordinate relevant activities, to carry out English Heritage casework on Hadrian's Wall, and to take forward specific projects in partnership with other English Heritage departments as well as other bodies (Olivier 1997, 18). CAS (and its last incarnation (1999–2004), the Centre for Archaeology (CfA)) continued to undertake work on the Wall that fell outside the planning process, and did so within the framework of the Management Plan. Thus in 1996 work on the spur at Birdoswald was a response to the perceived threat of river erosion (this volume, pp 250–74). It also established the state of survival of archaeological deposits following the numerous and varied interventions of the 1930s in order to inform future mitigation and management. The following year work at Black Carts (this volume, pp 78–102) examined the damage caused to the Wall and Vallum by stock (Fig 6) and rabbits, and gathered information on preservation and survival in order to inform the preparation of a management agreement with the landowner. Similar management objectives underpinned the Hadrian's Wall Milecastles Project in 1999–2000 (this volume, pp 137–202), which was designed to assess the threat to selected milecastles from active ploughing. Also in 1999, the decennial Pilgrimage of Hadrian's Wall afforded the opportunity to examine a full section though the frontier at Appletree (this volume, pp 103–20) (Fig 7). This was the traditional site of the opening of a section of the Turf Wall for examination by the Pilgrims, a practice that may now be ended on conservation grounds. The work at Appletree was used as a training excavation for students from the University of Bradford.

In 1997–8 CAS were retained by Cumbria County Council to undertake works associated with the development of the farm buildings as a residential study centre. This was due to the previous and very detailed knowledge that the Service had of the site following earlier work, and reflected its continuing role with respect to sites of particular national importance.

At the same time as the work described above was taking place, work was continuing on the consolidation of exposed areas of the fabric of Hadrian's Wall. During the 1980s the DoE realised that the historic policy of

consolidation without record (below, p 70) could not continue, and it was decided to produce a full, detailed record of all Wall fabric that was in State guardianship. This basic tool would be used to provide the reference material upon which contract specifications could be based for damage repair and/or for the continual process of repair and reconsolidation. It would also facilitate the annotation of copies by contractors, who would thus build up an archive of the conservation treatments used.

The project began in 1983, when a full photogrammetric survey was carried out by Plowman Craven Associates. From 1985 to 2001, a painstaking process of field enhancement and recording was carried out, led by Alan Whitworth (1994b). In those places where inaccessibility precluded rectified photography, the Wall face was drawn by hand, in some cases for more than 1km. Close examination of every inch of the curtain wall led to new discoveries relating to differences in building material, tooling marks, construction techniques and masons' marks. Research leading from this included the appreciation of the consolidation work undertaken, and privately recorded, by Charles Anderson (this volume, pp 50–71). In addition, newspaper coverage of the project led to the discovery of the James Irwin Coates archive of illustrations of the Wall; an invaluable source, published in full here for the first time (this volume, pp 8–49).

This brief summary places the work of English Heritage in research on the Wall into its context within the recent history of the archaeology of England. The volume that it prefaces spans two distinct periods of work: the rescue era, and that of



archaeological work within the framework of the Hadrian's Wall Management Plan, completing the publication of both to date (Appendix 1 presents a database-derived list of all interventions on the Wall undertaken by CEU/ CAS/CfA). Current work towards the establishment of an agreed Research Framework for the Wall will usher in a new phase of research on Hadrian's Wall, and is a fitting context for the publication of these papers.

*Fig 7  
The excavation of a section through the frontier works at Appletree, for the 1999 Pilgrimage of Hadrian's Wall, was used as a training opportunity for Bradford University undergraduates in archaeology.*

*Fig 6  
Cattle poaching on the Vallum south Mound at Black Carts was one of the factors that led to excavation in 1997.*



## 2

## A 19th-century condition survey of Hadrian's Wall: the James Irwin Coates Archive, 1877–1896

by Alan Whitworth

In 1997 newspaper coverage of the English Heritage project to record Hadrian's Wall prompted Lorna Warren, the librarian of Ackworth School in West Yorkshire, to contact the author in order to bring to his attention a previously unknown collection of 165 19th-century drawings of Hadrian's Wall. The drawings, the work of the Reverend James Irwin Coates, had been donated to the school in 1948 by the sons of the artist. They were stored in the school library office and have never been published or put on public display since they were first drawn more than 100 years ago.

James Irwin Coates (1848–1925) entered the Quaker school at Ackworth, near Pontefract, West Yorkshire as a pupil in 1858. He left in 1863 to become an apprentice or student teacher, and studied for some time at the Flounders Institute, a training college for Quaker teachers. He returned to Ackworth School in 1869 to take up an appointment as a form master lecturing in chemistry and astronomy, a post he held until 1872. A photograph, probably taken sometime between 1869 and 1872, shows him among others of the Ackworth staff (Fig 8). On leaving Ackworth he had his own school built at Headingley Hill, Leeds, which carried on, chiefly as a day school, for 11 years. During this time he took an MA degree in Dublin and was subsequently ordained in the Episcopal Church, in which he held unbroken office for the rest of his life. Of his various curacies, his longest was at St Pauls, Haringay, which he held for 15 years, and the last that of Holy Trinity at Winchmore, where he was greatly appreciated. He married an Ackworth teacher, Hannah Gouch.

As an amateur archaeologist, his great compilation of drawings of the then visible remains of Hadrian's Wall shows a remarkable capacity for detailed and

accurate observation. Numerous portions of the Wall and Vallum that he illustrated no longer exist, especially in those places where modern housing has been built over the remains of the monument or where agricultural activity has destroyed it. The scenes are therefore a valuable source of information of how the Wall looked towards the end of the 19th century. Besides drawing the Wall, Coates also sketched excavation finds that were being unearthed, including altars, burial urns, vases and statues, as well as making several ground plans of various sites and cross-sections of the Vallum. This work is the largest series of drawings made by one person of the entirety of the Wall and forms a unique and historically valuable archive.

Each of the 165 drawings (two are missing) measures 235mm × 150mm, and is mounted on drawing board. The depictions are in a sepia colour wash, the sketches first having been outlined in pencil. The drawings, made over a period of 19 years between 1877 and 1896 required nine separate visits to the length of the Roman Wall from Wallsend to Bowness. Also included in the collection is a copy of the map of the Roman Wall (in five separate foldout sheets), which was surveyed and drawn by Henry MacLauchlan between 1852 and 1854 for the Duke of Northumberland (MacLauchlan, 1858). The map has been annotated, presumably by the artist. The drawings are catalogued numerically in geographical order along the Wall from Wallsend in the east to Bowness in the west.

The 19th century was one in which antiquarian interest and archaeological study was further stimulated by new discoveries and a deepening realisation of the importance of the preservation of the surviving remains of the northern frontier of the Roman Empire. This was the

era in which John Hodgson, John Collingwood Bruce, John Clayton and others began to open up and excavate various forts, milecastles and turrets as well as sections of the Wall. From the late 1840s onwards a number of artists such as the brothers Henry, Charles and Thomas Richardson, David Mossman, William Collard, John Storey, Robert Blair and John Bell began to make paintings and drawings of sections of the Wall and associated structures as the monument was being uncovered by archaeological excavations. The private undertaking of James Irwin Coates to create such an outstanding collection of drawings should be remembered alongside such important names. Although a large amount of research and comment was being published at the time, and may have stimulated Coates to undertake his enterprise, it is possible that he had first travelled to the Wall in a personal capacity to view for himself these new discoveries. If so he may well have met both John Collingwood Bruce and John Clayton and discussed his work with them. In the course of this undertaking Coates made nine visits to the Wall between 1877 and 1896, each of which entailed travelling (presumably by train) from Yorkshire until 1883, and thereafter from London, to either Newcastle or Carlisle before travelling to the various sites that he wished to sketch. Unfortunately there is no record of where he stayed or with whom. His careful preparation for his visits, and his seriousness of purpose is illustrated by the fact that he was careful to be guided by and to annotate MacLauchlan's survey map.

Coates' first visit, or at least the first year of his drawing campaign, took place in 1877, during which he travelled virtually the entire length of the Wall, excepting only the area east of Newcastle. He completed an extraordinary 51 drawings. Most sites were sketched once, but at the forts and at the recently excavated Cawfields milecastle he made more. Coates drew at Newcastle, Chesters (13 drawings), Coventina's Well, Black Carts, Walwick, Housesteads (6 drawings), Vindolanda, Cawfields (2 drawings), Great Chesters, Cockmount Hill, Thirlwall, Gap, Gilsland, Birdoswald (2 drawings), Stanwix, Grinsdale to Kirkandrews and Bowness.

Two years later, in 1879, his second journey was even more productive than his first, resulting in no fewer than 60



Fig 8  
James Irwin Coates  
(centre) at Ackworth  
School.

drawings, the highest number made in a single trip. This time he travelled to Wallsend and began a sequence of drawings that took him across the line of the Wall to Bowness, visiting 40 locations. Five more sketches were made at Chesters and another three at Housesteads. Another year's gap followed, but between 1881 and 1883 Coates visited each year.

In 1881 he visited the western end of the Wall, where five drawings were made – at Kirkandrews, Monkhill, Burgh-by-Sands, Dykesfield and Port Carlisle. In the following year a more extensive trip was made, with a total of 26 drawings being completed. Eleven more drawings were made at Chesters fort, three at Carraburgh, eight at Housesteads, including milecastle 37 to the west of the fort, two at Burgh-by-Sands, and one each at Tepper Moor Hill (Limestone Corner) and Shield-on-the-Wall. In 1883 Coates once more concentrated on the western half of the Wall; seven drawings were made – two at Housesteads, four at Thirlwall and Carvoran and one at Monkhill. In 1885 Coates made a single drawing, that of



an urn found at Burgh-by-Sands, in the same year when the foundations of the new vicarage were being dug (Ferguson 1887–8, 295–6).

A six-year gap followed, after which, in 1891, Coates visited Cawfields, Great Chesters, Walton and Thirlwall, and completed eight drawings. Coates' final journeys took place in 1895 and 1896, resulting in two drawings of Great Chesters and one of the vaulted strong-room within Great Chesters fort. This was the year of the Third Pilgrimage, but it is not known if Coates was a participant.

After Coates' death in 1925 the drawings remained in his family, but in 1948 one of his sons, Benjamin Gooch Coates, wrote to Ackworth School wishing to bequeath the drawings to them, as it was the centenary of his father's birth:

"I have in my possession what I believe to be a unique collection of original sketches of the Roman Wall across the counties of Northumberland and Cumberland. These water colour sketches (in sepia) were drawn by my father on the spot and form a complete record of Hadrian's Wall, as then existing."

He says that the drawings were arranged in geographical order from East to West, although in closer examination it is evident that some are slightly out of sequence. He continues:

"If, in your opinion, this illustrated record of the historical Wall would be of value to the school library, and could be exhibited from time to time ..., it will give me great pleasure to present it to Ackworth School. I should like to perpetuate my father's name as a worthy Ackworthian and would suggest that the exhibit be known as the James Irwin Coates collection."

The drawings and accompanying maps are filed in a wooden box with an inscribed metal plaque on top, which reads:

*Pictorial record of the Roman Wall drawn by James Irwin Coates MA, scholar, apprentice and master at Ackworth School 1858–1872 Presented to the library by his sons A I and B G Coates on the centenary of his birth 26th June 1848.*

Because of the importance of this collection, English Heritage, with the approval of Ackworth School, has made a full set of photographic prints and slides for archive purposes. These are located at the Hadrian's Wall Co-ordination Unit at Carlisle Castle, Cumbria. A set of the photographs are to be deposited with the National Monuments Record. The original drawings have been returned to Ackworth School. The photographs are reproduced in the following catalogue.

## Catalogue

### 1 S.E. angle of Segedunum. 1879 (Fig 9)

The drawing shows a number of buildings, perhaps associated with the Wallsend colliery, within the confines of the fort. One is a two-storey structure with chimneys at both gable ends and a centrally placed arched doorway, above which are three upper floor windows. This may be the house at one time occupied by Mr Reay (Bruce 1863, 39). Another building appears to be four storeys high. The ditch at the south-east angle of the fort is well defined.



### 2 Course of Wall and N. Fosse E. of Carville. 1879 (Fig 10)

A three-storey house with an associated outbuilding is depicted adjacent to the south side of the Wall. A tree-lined path or bridle way lies on top of the Wall and the north Ditch is defined. This building is part of Carville Hall (previously known as Cousins House and rebuilt c1750) and is shown on the 1st edition of the Ordnance Survey map within the boundary of the Hall.



### 3 Site of First Mile Castle. W. of Wallsend. 1879 (Fig 11)

A footpath is shown following the line of the Wall with a small footbridge over a stream called Stotts Pow, between Stotts House and Old Walker. The outline of the north Ditch is shown. Mc1 was located just west of the stream (Bruce 1863, 42). The church of St Francis now covers the site.



### 4 Fosse and Course of Wall, 'Stote's House'. 1879 (Fig 12)

A footpath runs adjacent to the Wall towards the Stote's Houses buildings, called the Beehouses by Horsley in 1732 (Bruce 1863, 42). The north Ditch is partially filled with water and forms two ponds. A hedgerow grows on the north lip of the Ditch. North of the Wall is the Walker corn mill, which is powered with four sails and in the distance is the village of Old Walker.



### 5 Vallum in Front of Workhouse, Newcastle. 1879 (Fig 13)

The shallow outline of the Vallum and its associated mounds is visible with the buildings of the Union Workhouse adjacent to or covering the Wall on the line of the Westgate Road on the east side of Elswick Grange. It is marked as the Poor House on MacLauchlan's map of 1852–4. Bruce (1863, 52) also says that the Vallum is well seen opposite the Union Work-house.







**6** First view of N. Fosse W. of Newcastle. Opposite Gloucester Arms. 1879 (Fig 14)

The view, looking west, shows the north Ditch of the Wall in a field on the north side of the Westgate turnpike. A single gas lamp stands opposite the Gloucester Arms. The public house was situated close to where the present Gloucester Road joins the Westgate Road. According to Bruce (1863, 52), the mounds and Ditch appeared the moment the last row of houses in the town, Gloucester Road, was passed.



**7** S.E. Angle of Rampart and Fosse. Condercum. 1879 (Fig 15)

The fort ditch is visible, as well as a stone wall (presumably of re-used Roman material) and footpath running parallel to the ditch. A two-storey house (Benwell Hills?) is depicted close to the north-east corner of the fort on the first edition OS map of 1854. A stand of mature trees grows along the line of the east ditch. A map of Benwell in 1790–1808 shows a similar line of trees along the east side of the fort (Graham 1984). Bruce (1863, 52) says that the east rampart and south-east angle stood in the grounds of G W Rendel Esq, who had recently excavated one of the suburban buildings on the east side of the fort.



**8** Temple E. of Condercum (S. End). 1879 (Fig 16)

The depiction, looking south towards the apse, shows the surviving low walls of the Temple of Antenociticus, located in 1862, standing at least four courses high above the offset. The two original altars (RIB 1327, 1328) are in place and the statue base of Antenociticus (RIB 1329), together with several pieces of sculpture, lies on top of the apse end. The door threshold block in the east wall is visible. No other buildings are visible and small trees or scrub on top of a small mound surrounds the south end. Grass capping covers most of the tops of the temple walls.



**9** Temple E. of Condercum (N. End). 1879 (Fig 17)

A large stone plinth is at the north end of the temple flanked by several pieces of moulded masonry. The grass-capped walls stand at least four courses high. The wall at the north end of the temple is only partially exposed.



**10** N. face of Wall. E. Denton. 1879 (Fig 18)

Up to three courses of wall facing stones are exposed with an earth mound covering the surviving core. A depiction in the mid-19th century (Bruce 1863, 54) shows the trunk of an apple tree on top of the west mound of the Wall. Two houses are depicted south of the Wall. The rock face of the Denton Burn is shown on the south-west side of the Wall.

**11** Core of the Wall opposite Denton Hall. 1879 (Fig 19)

The view, looking east, shows the site of the, as then undiscovered, T7b. The raised mound covering the Wall shows no visible stonework. The Westgate turnpike is depicted together with a stone boundary wall, probably that of Denton Hall. A line of trees is growing on the north side of the Wall and within the north Ditch. The houses of East Denton are depicted and another house is situated farther east. The surrounding fields south of the Wall are divided by hedgerows and a line of trees.



**12** In Wall just E. of Heddon. Diameter at bottom 6' 4". 1879 (Fig 20)

The depiction is of a circular-shaped medieval kiln (excavated by Clayton in the mid/late 1870s) built into the south face and core of the Wall at Heddon-on-the-Wall. The mound of the Wall was covered in trees and bushes with three courses of the kiln stonework surviving above the flagged-stone floor.



**13** Fosse of Wall. Heddon. Looking E. 1879 (Fig 21)

The view shows the well defined cut of the Fosse (north Ditch). Two buildings, one of which appears to be a row of terraced cottages, are depicted in the distance. A hedgerow forms a fence line on the south side of the Ditch. Bruce commented on the depth of the Ditch at this point (Bruce 1863, 57).



**14** The Works E. of Heddon-on-the-Wall. 1879 (Fig 22)

The Newcastle–Carlisle turnpike is shown, as is the well defined Vallum coming down Great Hill. The south face of the Wall is at least seven courses high, with a small trench (possibly Clayton's) against the face of the Wall exposing several courses of Wall below ground level. Bushes and a large tree grow on top of the Wall.



**15** The Wall: E. of Heddon. 1879 (Fig 23)

A detail of the previous drawing (Fig 21), showing the trench against the south face of the Wall. Seven courses are depicted, three of which are below ground level. The length of Wall sketched is approximately 9.5m.







**16 Fosse of Vallum, E. of Heddon.** 1879 (Fig 24)  
The south side of the Vallum is sharply scarp-ed and rock faced, the north face is sloping and covered in vegetation. A building in the distance in line with the Vallum appears to be the church of St Philip and St James in Heddon.



**17 Stones in Hedge and increased thickness where Vallum crosses brook W. of Heddon.** 1879 (Fig 25)  
The view shows the Vallum at a point where the present A69 (Carlisle–Newcastle) road crosses the line of the Wall, slightly east of Mc13. A wood railing fence crosses the Vallum at right angles. The Rudchester Burn flows across the line of the Wall and Vallum. The stonework exposed in the banks of the Burn is most likely the remains of the Roman culvert built to channel the water through the Vallum. A similar culvert through the Wall is shown in Bruce (1863, 55). The Newcastle–Carlisle turnpike road is depicted flanked by a stone wall.



**18 Vallum between Heddon and Vindobala.** 1879 (Fig 26)  
The view, looking east, shows the slope of the Vallum Ditch and its two mounds. A stone boundary wall north of the Vallum, probably containing re-used Roman stone, is situated on the south side of the Military road. The depiction is in Wall-mile 12, probably close to T12b.



**19 S.W. Angle: Vindobala.** 1879 (Fig 27)  
The outline of Rudchester (*Vindobala*) fort Ditch is clearly indicated, including a pool of standing water. Adjacent to the south edge of the Ditch are some of the buildings of Rudchester Farm. A line of trees is shown at the east end of the site and a hedgerow, including several trees, is depicted in an east–west direction, bisecting the southern half of the fort.



**20 N. portion of Vindobala.** 1879 (Fig 28)  
The view, north from the Military road, shows the slope of the west Ditch of the fort to where it turns for the north-west corner. A stone field wall has been built on the north side and parallel to the turnpike road. On the east side of the fort is a hedge line indicating the line of the road running north from the Rudchester junction.

**21 Trough near Vindobala.** 1879 (Fig 29)  
The top is turf-covered. The masonry partition in the trough, when it was discovered, has been removed. A quantity of irregular-shaped stones is lying adjacent to the cistern.



**22 Vallum, Carr Hill, W. from Down Hill.** 1879 (Fig 30)  
The view, looking east, shows the well defined Vallum and associated mounds in wall mile 20/21. Carr Hill Farm is on the east horizon. A similar view from the same position was made in 1848 by H B Richardson (Birley 1961, pl iv). The outline of the north Ditch is visible on the north side of the Military Road. A (19th century?) field wall bisects the line of the Wall and Vallum. A clump of trees is on the north side of the Military Road.



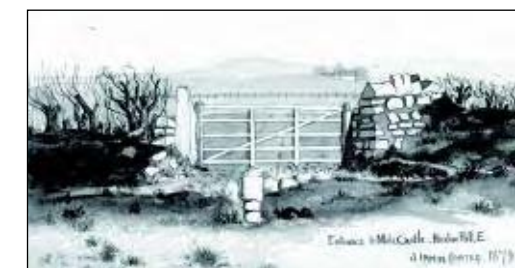
**23 Foundations of Wall, Carr Hill, E.** 1879 (Fig 31)  
The line of the north face of the Wall is visible in the road surface. A stone boundary wall, probably incorporating Roman material, runs parallel to Hadrian's Wall and to the road. The slope of the north Ditch is discernable. The view is close to the position of T20a.



**24 Mile Castle, Halton Shields.** 1879 (Fig 32)  
The view, from the Military Road shows the entrance to Halton Shields Farm (the site of Mc20). Within the road surface are several large stone blocks, two of which appear to be the pivot stones for the milecastle gateway, together with two threshold blocks. The field wall appears to be built of re-used Roman stone.



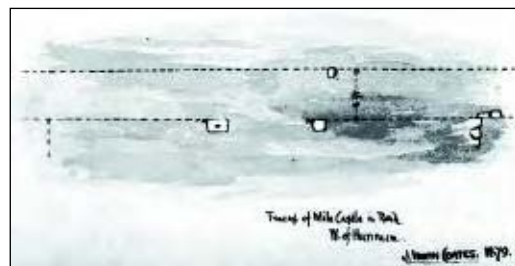
**25 Entrance to Mile Castle, Harlow Hill, E.** 1879 (Fig 33)  
This is the site of Mc15 (Whitchester), situated on the south side of the Military Road east of Harlow Hill. A raised mound, topped with vegetation, indicates the line of the Wall with the wooden gate leading into the field indicating the position of the milecastle gateway. In the middle of the entrance is a line of stonework that may be original Roman material relating to the gateway entrance.







**26 S.E. Angle: Hunnum.** 1879 (Fig 34)  
The Ditch and mound of the east wall of Halton Chesters fort are discernable, as well as the tree-lined road through the middle of the fort leading from the Newcastle-Carlisle turnpike to Halton. This road presumably lies above the original Roman road within the fort. A stone(?) wall crosses the fort on the south side of the Newcastle-Carlisle turnpike road. Numerous humps and bumps in the south-east quadrant of the fort indicate the extent of buried buildings within the fort.



**27 Traces of Mile Castle in Road. W. of Hunnum.** 1879 (Fig 35)  
This is the site of Mc22, known as Portgate or Errington Arms. The junction of the east wall of the milecastle wall and the Roman Wall is indicated as well as the position of the north gate, the west side of which contains a block with a pivot slot. The milecastle west wall is shown by a dotted line. One facing stone indicates the width of Hadrian's Wall (eight feet).



**28 Vallum. XVIIth Mile Stone. W. of Newcastle (looking E.).** 1879 (Fig 36)  
Probably close to Mc23, west of Dere Street. The north, south and marginal mounds of the Vallum and the Vallum Ditch are all well defined.



**29 IVth Mile Castle E. of N. Tyne.** 1879 (Fig 37)  
This is Mc24 (Wall Fell) opposite Errington Hill Head farm. The grass covered sides and platform of the milecastle are distinct and the Vallum appears to be water filled. A farmhouse is depicted to the south-west of the Vallum.



**30 Turret. Brunton.** 1879 (Fig 38)  
This turret (T26b) had been excavated by Clayton in 1873. The drawing shows the emptied turret, with three small altars against the north wall and a larger block with diamond broaching against the east wall. The threshold block shows the pivot slot and door jamb. The east wall stands 11 courses above the offset.

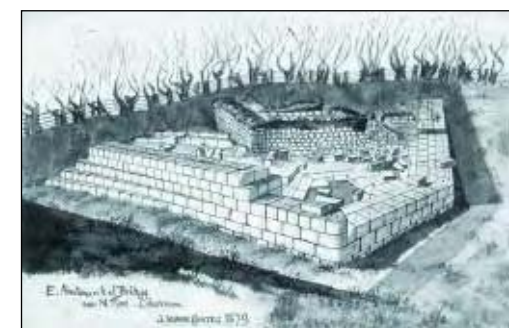
**31 N. face of Wall. Brunton.** 1879 (Fig 39)  
The sketch is of the uncovered north face of the Wall. Lying against the Wall are two altars, part of a window head and a circular stone block. Trees are growing out of the Wall face and on top of the Wall. The large altar appears to be the one (Coulson and Phillips 1988, no. 279) that was removed from outside St Oswald-in-Lee church (Heavenfields) and placed here by the owners of Brunton House in the early/mid-19th century. The altar was placed back in the nave of the church by the Ministry of Works c1948. The location of the second altar is unknown.



**32 The Wall. Brunton. E.** 1879 (Fig 40)  
This length of the exposed (north?) face of the Wall, up to six courses high, is at Planetrees situated to the east of T26b. A number of large trees grow adjacent to and on top of the Wall.



**33 E. Abutment of Bridge over N. Tyne. Cilurnum.** 1879 (Fig 41)  
The drawing shows the turret, millrace and bridge abutment, which had been uncovered between 1860-63 by John Clayton. The pier of the first bridge is clearly defined within the abutment of the later bridge. The crowbar slots and Roman setting out lines on the large abutment blocks are clearly shown. Six courses of masonry of the north wing of the abutment are depicted and a stone column is shown positioned at the south wing. The walls of the turret are turf capped and the site is surrounded by a wooden fence and a line of bushes.



**34 Pier of Original Bridge over N. Tyne, Cilurnum.** 1879 (Fig 42)  
The drawing is of a detail of the pier of the first bridge enclosed by the masonry of bridge two. Lying within the pier is a socketed counterweight stone.







**35 Part of S. Face of E. Pier of Bridge. Cilurnum.** no date (Fig 43)  
Presumably made at the same time as Figs 41 and 42, the sketch depicts a cylindrical column, with an oval boss at one end and a square base at the other, lying on the masonry of bridge two. The lower blocks of the abutment have been laid at an angle of 45 degrees to those above to form a series of dogtooth courses. A number of blocks forming the stone millrace are in the background.



**36 S. Portal of N.W. Gate. Cilurnum.** 1882 (Fig 44)  
The view, from the west, shows the south portal, gate threshold and central *spina* of the West gate. Hadrian's Wall is bonded with the south guard chamber, which stands three courses above the offset course. Several mature trees grow adjacent to the gate.



**37 N. Guardchamber, N.W. Gateway. Cilurnum.** 1882 (Fig 45)  
The sketch, looking north, shows the internal view of the guardroom, including the pivot block and slot for the gate. At the north end is a stone water channel and a stone platform to support a tank for the water supply. The west wall of the guard chamber is seven courses above the offset course. The guard chamber door threshold is in place. A clump of mature trees, north of the chamber, extends across the Ditch and fort wall.



**38 Iron Socket for Gate. S. Portal. N.W. Gateway. Cilurnum.** 1882 (Fig 46)  
This shows a detail of the surviving iron collar in the pivot block to hold the door as well as the south portal threshold block.

**39 S. Gateway. Cilurnum.** 1879 (Fig 47)  
The drawing, looking north, shows the east and west guard chambers, central *spina* and gate portals. The sill and threshold of the east portal have been uncovered, while the east portal retains the large blocks of a later road. Within the fort are a large number of mature trees.



**40 S.E. Gateway. Cilurnum.** 1879 (Fig 48)  
The first gate to have been excavated, perhaps in 1854, but before 1863 (Bidwell and Snape 1993, 13); the sketch shows the two guard chambers and the paving slabs of the single passage portal in the east wall. The outer face of the fort wall is partially excavated. The north pivot block is in place and a large block with a pivot hole rests against the north wall of the south guard chamber. Irwin Coates clearly depicts guard chambers on either side of the gate. These are not evident on the ground or indicated on any of the site plans, and no doors are visible in the side walls of the portal, the entrance perhaps being at the back of the guardrooms. Mature trees are growing within the fort.



**41 N.E. Gateway. Cilurnum.** 1877 (Fig 49)  
The view of the main East gate shows the north and south guardrooms, the central *spina* and portals as well as the gate thresholds. The pivot slots for the gates are visible as is the section of Hadrian's Wall and its junction with the south guardroom. The impost-mould of the south rear pier is depicted.



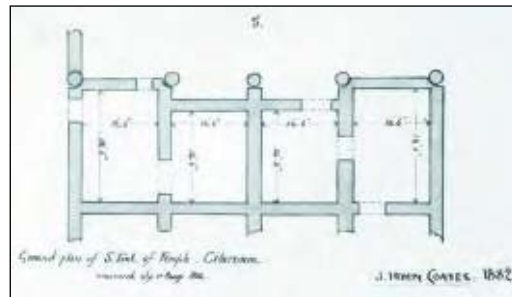
**42 S. Guardchamber, N.E. Gateway. Cilurnum. Showing junction with Wall.** 1877 (Fig 50)  
The view, from the east, shows the excavated south guard chamber, the gate portal and threshold, central *spina* and north face of Hadrian's Wall at its junction with the east face of the south guardroom. The impost block at the rear of the gate is in place. Four mature trees are inside the fort.



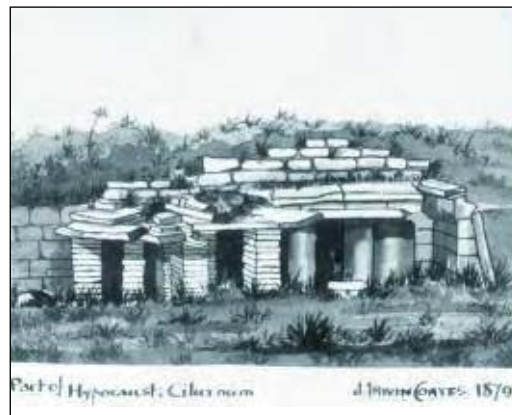




**43 Cilurnum. 1879 (Fig 51)**  
The drawing depicts a section of the hypocaust system within the central part of the Commander's House. Three large stone slabs rest upon raised stone pillars with another slab in the background resting against five courses of walling.



**44 Ground-plan of S. End of Temple. Cilurnum. Uncovered Jy & Aug. 1882 (Fig 52)**  
The drawing shows four adjoining but partially interlinked rooms with entrance ways. A central partition wall separates the two rooms on the left from the two rooms on the right. On the south side of the partially excavated building are five equally spaced columns. The rooms at either end of the building measure 5.66m x 3.84m while the two central rooms measure 4.45m x 3.84m. No mention is made in any text of a temple within the fort. The building is part of a barrack block in the south-east corner of the fort and shown in the 13th edition of the *Handbook to the Wall* (Daniels 1978, 110).



**45 Part of Hypocaust, Cilurnum. 1879 (Fig 53)**  
This shows the hypocaust of the Commanding Officer's Bathhouse at the east end of the range. The stone floor slabs are supported by both circular stone and square brick pillars. Four courses of masonry are depicted above the floor level, the rest of the masonry being covered in turf.

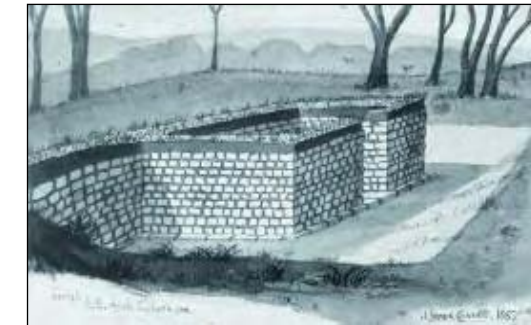


**46 Part of Hypocaust. Cilurnum. 1882 (Fig 54)**  
This is the east wall of the Commanding Officer's House at the south-east corner showing the brick arch of the furnace through the wall. A string course extends the length of the east wall. Large foundation blocks and the north wall of eight courses (above a moulded plinth) of a small room abut the east wall. The top of the east wall is turf capped and a clump of a dozen mature trees is situated within the fort.

**47 Part of Hypocaust Cilurnum. 1882 (Fig 55)**  
The view shows the raised floor and hypocaust of the Commanding Officer's House together with the apsidal ends of the hot room and the moulded base course on the external face of the east wall. A squared-topped column rests against the wall close to the hypocaust. All of the walls are turf capped. A clump of eleven mature trees is depicted within the fort.



**48 Turret. S.E. Angle. Cilurnum. 1882 (Fig 56)**  
Excavated between 188-82, the angle tower stands ten courses high above the offsets as does the inner face of the fort wall. The wall and turret top is turf capped.



**49 Chamber and Bath. Cilurnum. 1877 (Fig 57)**  
The view is of the north-east corner of the Commanding Officer's House, showing the area of the cold baths, including the wall of brick tiles up to six courses high and a door threshold slab leading into the dressing room. The surviving walls stand to 11 courses high.



**50 Cilurnum. 1879 (Fig 58)**  
The internal view of the underground strong room in the *principia* shows the arch-ribbed vaulting and entrance with its monolithic door jam and a stone slab over the passage steps. The walls of the vault are built on a stone plinth. On one of the floor slabs is what appears to be a circular drain hole.

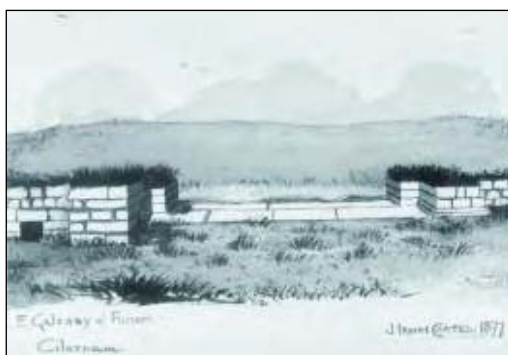






51 Entrance to Vault in *Aeararium* ~ *Cilurnum*. 1879 (Fig 59)

An external view of the entrance to the underground strong room. The top is still covered in turf. A stone slab is laying above the passage steps. The wall on the south side of the steps contains eight courses of masonry.



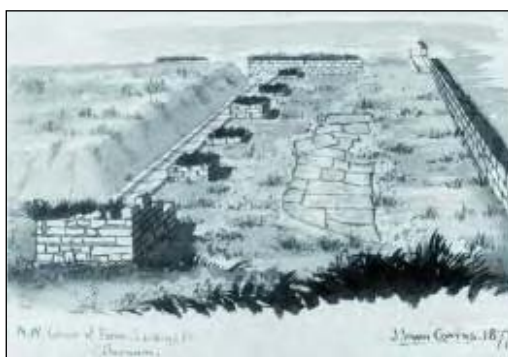
52 E. Gateway of Forum. *Cilurnum*. 1877 (Fig 60)

The drawing shows part of the east wall of the *principia* together with the threshold and some paving slabs of the entrance. What appears to be a drain through the east wall, north of the entrance is depicted. The grass-covered mound in the background is the west end of the *praetorium*, not exposed until 1892–5.



53 Bases of Columns. E. side of Covered Market. Forum. *Cilurnum*. 1877 (Fig 61)

The *principia* was exposed between 1870 and 1875. The view depicts the east portico of the *principia* courtyard with a line of column bases on plinths, the east entrance to the *principia* and the mound of earth covering the as yet unexcavated underground strongroom. The interior of the courtyard area had also not yet been uncovered.



54 N.W. Corner of Forum. Looking S. *Cilurnum*. 1877 (Fig 62)

The view along the west portico of the *principia* shows a row of column plinths, behind which is a stone gutter which runs parallel to the line of plinths. The west wall of the *principia* stands three courses high, at the end of which is the west entrance into the *principia*. A section of paving is visible between the column bases and the west wall.

55 Centre of Forum. *Cilurnum*. Looking East. 1877 (Fig 63)

The view shows the cross-passage of the basilica looking towards the east entrance. Four column plinths, with between two and three courses above, occupy the south side while the north side has the courtyard gutter and three arch supports. The eastern support arch for the entrance from the courtyard to the basilica passage has been robbed out and only a pivot stone is in place. A small section of cross-passage paving is at the west end of the passage. The central area of the courtyard and the basilica is unexcavated.



56 End of Forum. North. *Cilurnum*. 1877 (Fig 64)

Four arch supports and associated masonry (which are still capped with turf) are exposed as are the west and north portico walls. The north entrance into the courtyard is exposed. The courtyard and the area north of the *principia* entrance are unexcavated.



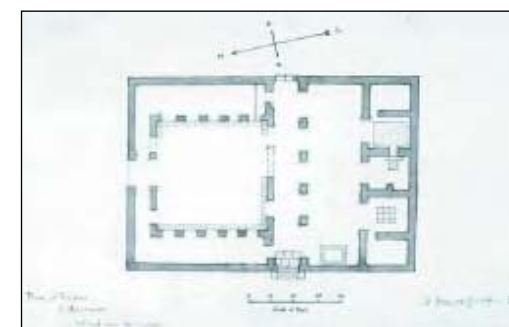
57 S. End of Forum. *Cilurnum*. 1877 (Fig 65)

The drawing, from the south-east, shows the southern end of the *principia* including the chapel (*aedes*), regimental records room and pay room with the earth mound covering the vault of the underground strongroom. The tribunal foundations are at the west end of the hall. Up to six courses of masonry are surviving in some of the walls. Two mature trees with foliage are shown to the west.



58 Plan of Forum. *Cilurnum*. (reduced from Mr Clayton's). 1877 (Fig 66)

The plan of the *principia* was published in 1875. Coates made a copy of this for his drawing, acknowledging his source. A scale (0–40ft) is indicated at the bottom.







**59 N. Portal. N.E. Gate (outside). Cilurnum. 1877 (Fig 67)**

The gate was excavated in 1867. The depiction shows the central *spina*, the north portal and threshold as well as the north guard chamber standing to at least seven courses. Turf covers the tops of the guard chamber walls.



**60 Part of N.E. Gateway. Cilurnum. 1879 (Fig 68)**

The depiction shows a detail of the south guard chamber of the east gate including the impost on the rear south pier and nine courses of the fort walls inner face, the guardroom entrance, the pivot block on the south side of the gate and a section of the gate threshold. The pivot block shown is probably the one from the upper part of the gate superstructure.



**61 Additional Ramparts. Busy Gap. 1879 (Fig 69)**

A stone field wall of re-used Roman stone, built on top of the line of Hadrian's Wall stretches eastwards towards Sewingshields. A wooden gate, attached to stone pillars is built into the west end of the field wall. The outline of the north Ditch (east of Mc36) is shown crossing the level ground in front of Busy Gap. The Ditch and banks of a post-Roman enclosure on the north side of the Wall is depicted.



**62 Vallum E. of Shield on the Wall. (looking towards Sewingshields.). 1882 (Fig 70)**

Shield-on-the-Wall is situated close to and south of Mc33. The mounds and Vallum Ditch are clearly outlined. South of the Vallum is a reservoir now known as Shield-on-the-Wall Dam. Shield-on-the-Wall cottage (previously known as Tipplehall) is depicted on the Vallum mound and Sewingshields Farm is shown farther westwards.

**63 Part of Building with Buttresses. Procolitia. 1882 (Fig 71)**

Two buttress or walls join a length of wall at least six courses high. Although the location is uncertain, this building may be related to either the west wall of the fort, the external bathhouse or, within or close to, the central range of buildings in the fort as these were the only places excavated by Clayton by this time. It may also possibly be a section of wall of a granary (Snape 1994, 17).



**64 Vases found at PROCOLITIA. 1879 (Fig 72)**

The depictions are of clay incense-burners or thuribles found in 1876 in Coventina's Well situated on the west side of Carrawburgh fort (*Brocolitia*). The left-hand depiction is RIB 1530 and the other 1531 (Allason-Jones and McKay 1985, 41-7). Both are now on display in Chesters Museum.



**65 Sculptured Stone from Well of COVENTINA: PROCOLITIA. 1882 (Fig 73)**

The sculpture is of three water nymphs, each within a separate niche beneath an arch supported on columns. Located in 1879 in Coventina's Well and now on display in Chesters Museum (Coulson and Phillips 1988, no. 93).



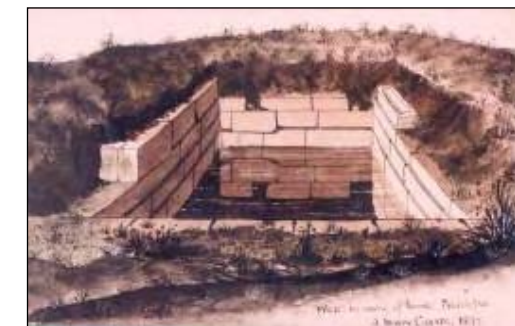
**66 Turret: W Wall. Procolitia. 1882 (Fig 74)**

This must be the interval tower south of the west gate of the fort excavated by Clayton in 1871 (Snape 1994, 17). Eight courses of the inner face are depicted built on top of two offset courses. All of the walls have a turf capping.

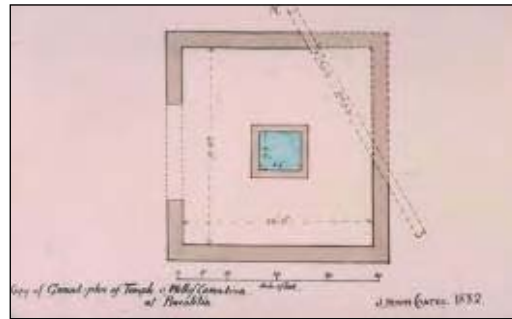


**67 Well: in centre of Temple - Procolitia. 1877 (Fig 75)**

Coventina's Well, discovered in the early 18th century, was excavated in 1876 by Clayton. The square shaped pool is encased by large well worked masonry blocks at least four courses high above the then water line. On one side of the well is a trough-like block. Within the well were found 13,487 coins, together with altars, carved stones, jars and a variety of other votive objects. A watercolour of the well by F Mossman in 1878 is published by Allason-Jones and McKay (1985, 93, pl iii).







**68** Copy of Ground-plan of Temple & Well of Coventina at Procolitia. 1882 (Fig 76)  
The depiction shows the basin of the spring (coloured blue) enclosed by a masonry wall surrounded by a rectangular enclosure wall. An entrance is on the west side and a field wall crosses part of the north and east perimeter walls. The drawing includes a scale (0–40ft). This is a copy of a plan of the well published by John Clayton (1880a; 1880b).



**69** N. Fosse cut through Basaltic Dyke. Limestone Corner. Teppermoor. 1877 (Fig 77)  
The drawing, looking west, shows the jumbled mass of stonework left lying in the north Ditch.



**70** Fosse of Vallum. Teppermoor. 1882 (Fig 78)  
The view depicts the top of Limestone Corner looking west towards Carrawburgh fort with the distinct shape of the Vallum cut through the outcrop of basalt rock. In the distance is the faint outline of a building (Carrawburgh Farm) on the south mound of the Vallum.



**71** Wall near Turret (near Black Carts) recently uncovered – S. side. 1877 (Fig 79)  
Excavated in 1873 by Clayton, the Wall stands at least six courses high. Vegetation and trees are on top of and adjacent to the Wall.



**72** Part of Wall near Turret recently uncovered. 1877 (Fig 80)  
Seven courses of the Wall are visible. Small bushes and a tree grow on top of the Wall.

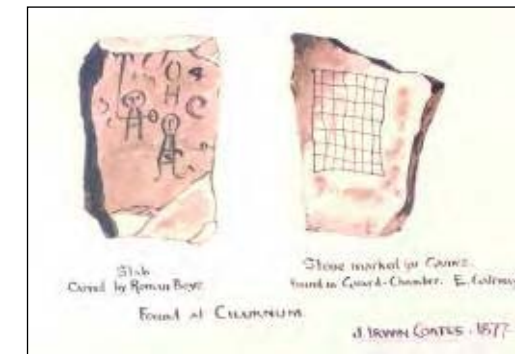
**73** Turret near Walwick. 1877 (Fig 81)  
The turret (T29b, Black Carts) had been excavated four years earlier by John Clayton. The drawing shows the view from the south-east. Fifteen courses survive above ground level in the internal north wall of the turret. The Broad gauge wing-walls are evident. A small ground plan is added giving the internal dimensions as 16ft each way whereas the actual dimensions are 11ft 4in × 11ft 2in (3.45m × 3.4m).



**74** Stone cut by Roman Boys. Cilurnum. 1882 (Fig 82)  
The depiction on the stone is of an incised figure wearing a tunic and holding a trident in his right hand. A boar is on the upper right corner (Coulston and Phillips, 1988, no. 402). This is now on display in Chesters Museum.



**75** Found at Cilurnum. Slab: Carved by Roman Boys. Stone marked for Games. Found in Guard-Chamber. E. Gateway. 1877 (Fig 83)  
The drawing on the left shows the frontal view of two incised figures, the upper one of whom holds a trident and shield. A series of letters or symbols appears to surround the figures (Coulston and Phillips 1988, no. 401). The right-hand drawing is of a gaming board with 49 squares. Both are now on display in Chesters Museum.



**76** Figure found at CILURNUM. 1882 (Fig 84)  
The figure is the Statue of a River God (Coulston and Phillips 1988, no. 94) found in 1843 in the Commanding Officer's Bathhouse and now in Chesters Museum.



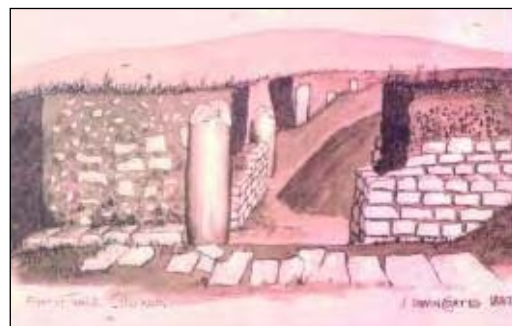




77 *Figure of Cybele, found at Cilurnum. 1882 (Fig 85)*  
The figure is the Statue of Juno Regina (Coulston and Phillips 1988, no. 117) and now on display in Chesters Museum.



78 *N.E. Corner of Public Buildings, Cilurnum. 1877 (Fig 86)*  
The drawing is of the north-east corner of the Commanding Officer's House showing the moulded plinth, the buttress and the curve of the apse end of the bathhouse. The east wall has an outlet at plinth course level. The walls survive up to eight courses above the plinth.



79 *Front of Temple, Cilurnum. 1882 (Fig 87)*  
This is a view of the so-called 'Temple' in the south-east corner of the fort excavated in 1882. The view, looking east, shows a line of five columns with broken tops with a six-course wall built between one pair of columns. Another wall, nine courses high is on the opposite side. The stratigraphy of one of the excavation sections shows large pieces of masonry. The masonry of the walls was removed and the trenches backfilled (Bidwell 1993, 15) although the columns are still in place. A flagstone surface is at the west end of the building.



80 *N.W. Corner & Junction with Wall showing repairs, Borcovicus. 1883 (Fig 88)*  
Five courses of the south face of Hadrian's Wall are depicted at the north-west corner of Housesteads fort. The fort wall itself is built on top of the offset course. A number of large blocks in the external face of the north wall of the fort indicate Roman repairs. Within the fort some of the west wall of the north-west angle tower is visible. Both the fort wall and the Curtain Wall are turf capped. Three large pieces of masonry lay outside the fort.

81 *S.E. angle of Station Wall (Repaired), Borcovicus. 1882 (Fig 89)*

This external view shows the turf capped fort wall standing ten courses high with large blocks, indicating repair work, at the position of the south-east angle tower.



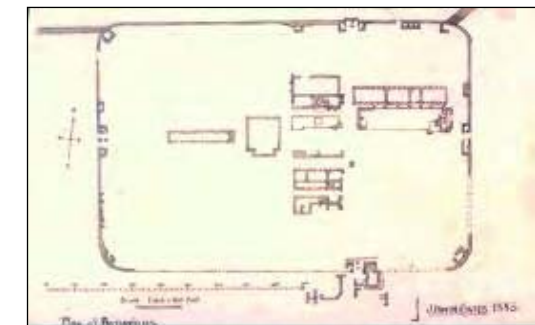
82 *S.W. angle of Station Wall (Repaired), Borcovicus. 1877 (Fig 90)*

The turf-capped external face of the fort wall stands ten courses high. Larger stones denote the position of the internal angle tower and areas of repair work and rebuilding. The late-18th-century farmhouse situated near the south-west corner of the fort (Bruce, 1863, 126) had been demolished by this time.



83 *Plan of Borcovicus. 1883 (Fig 91)*

The plan, at a scale of 1in = 1ft, shows all four gateways and the east, west and north walls together with the associated angle-towers. The line of the south wall is indicated. Several vicus buildings outside the south gate are shown including the medieval bastle. Within the fort is the Commanding Officer's House, part of the headquarters building, hospital, granaries, the building and barrack block on the north side of the *via praetoria* as well as a barrack block on the south side of the *via decumana*. A farm track leads out of the fort through the north wall, east of the north gate. Hadrian's Wall is shown joining the fort at the north-west and north-east angles.



84 *Junction of Station Wall, N.E. corner with main Wall, Borcovicus. 1877 (Fig 92)*

Nine courses of fort wall are depicted at the junction of the north-east corner and the south face of the Wall, which slopes eastwards to the Knag Burn. Both the fort wall and curtain wall are turf-capped.

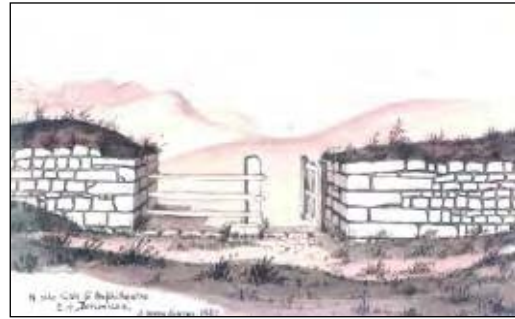


85 *Amphitheatre ~ Borcovicus. 1877 (Fig 93)*

The view, from the north side of the Wall looking towards the fort, shows the circular depression in the foreground referred to by Bruce (1863, 116) as an amphitheatre but now known to be a Roman quarry (Crow 1994, 16). At least six courses of the north face of the Wall adjacent to the quarry are depicted. The east and north walls of the fort are shown as is the gap in the north wall used as a farm entrance/exit. Housesteads crags and the woods to the west of the fort are depicted. The outlines of the walls of buildings are shown inside the fort.







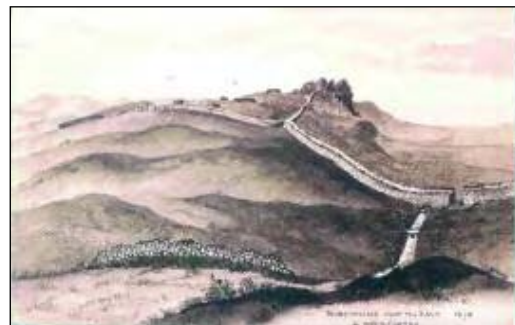
**86** *N. side Gate to Amphitheatre E. of Borcovicus.* 1882 (Fig 94)  
The view, from the north side of the Knag Burn gateway, shows the large blocks of the Knag Burn gate entrance with the gate threshold and stop block in position. The gate had been opened up by Clayton in 1856. A wooden three rail fence is in the east portal and a three-bar gate in the west portal. The north face of the Wall stands up to eight courses high. For the Housesteads 'amphitheatre' see Wilmott (forthcoming)



**87** *Gate to Amphitheatre ~ Borcovicus.* 1877 (Fig 95)  
The depiction of the south face of the Wall at Knag Burn shows the Wall to be standing up to seven courses high. The outline of the gateway is depicted showing the partially exposed walls of the two guard chambers. The gate stop block and threshold are visible as is the pivot block of the west guard chamber. A slab with a pivot hole is on the ground surface in the centre of the passage way.



**88** *Passage of Wall over Knag Burn E. of Borcovicus.* 1882 (Fig 96)  
A detail of the south face of the Knag Burn culvert with eight courses of Wall visible. A large stone slab covers the culvert, the east side of which has three courses of large blocks above an offset course. The top of the Wall is turf-covered.



**89** *Borcovicus from the EAST.* 1879 (Fig 97)  
The view is from the rising ground to the south of the Knag Burn gateway and on the east side of the Burn looking west towards the fort. The Roman Wall is shown at the Knag Burn gateway running up the slope to its junction at the north-east corner of the fort. The east wall of the fort and its excavated gate are depicted and within the fort is the outline of several masonry walls of buildings. A stone slab is placed across the Knag Burn and on the east bank is a length of masonry wall in the vicinity of the Roman well.



**90** *Building near E. Gate. Borcovicus.* 1877 (Fig 98)  
This drawing, from the south, is of the east end of Building XV opened by Hodgson in 1831 and identified as a bath suite. At the south-east corner of the building are two massive stone blocks with 'diamond broaching' and the internal face of the east wall standing eight courses high. A section of the internal face of the east wall of the fort, north of the east gate, is shown.

**91** *Foundations of N. Gate. Borcovicus. (outside).* 1877 (Fig 99)

The north gate including a section of the external face of the north wall of the fort had been exposed in 1852. The drawing shows both portals of the gate and the large foundation blocks below, the north-west corner of the east guard chamber, the central *spina* and the east wall of the west guard chamber. At the base of the gate are a number of partially exposed fallen blocks containing a (moulded?) border and one block, which appears to be the upper part of an arched window head.



**92** *N. of W. Gateway. Borcovicus.* 1882 (Fig 100)

The view from outside the north portal of the west gate, shows the junction of the fort wall with the piers of the north portal. Five courses of masonry above an offset are standing on the foundation slab. The door and south wall of the north guard chamber is visible as are the north portal threshold blocks.



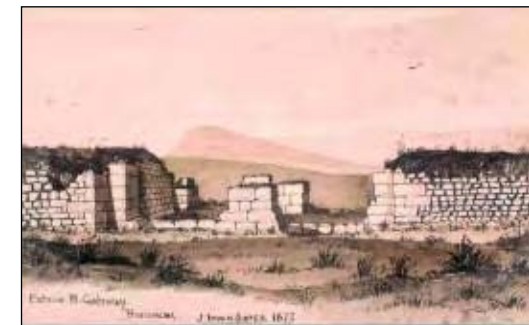
**93** *INTERIOR N. Gateway. Borcovicus.* 1877 (Fig 101)

This interior view of the north gate shows both guard chambers, the central *spina*, the inner face of the fort wall and the water tank on the south side of the west guard chamber, all of which had been cleared prior to 1857 (Crow and Rushworth 1994, 30). Several large blocks are close to the south wall of the east chamber and in the foreground a number of blocks are protruding through the ground surface.



**94** *Exterior W. Gateway. Borcovicus.* 1877 (Fig 102)

The drawing is of the west gate, which had been excavated in 1850–51 by Clayton. The fort wall stands up to ten courses above the offset course and the bonding with the gate piers is clearly seen. The central *spina* and gate portal thresholds are depicted as well as the south wall and door of the north guard chamber. The fort wall is capped with turf.



**95** *INTERIOR W. Gateway ~ Borcovicus.* 1879 (Fig 103)

The view of inside of the west gate shows both guard chambers, the central *spina* and portal thresholds as well as the inner face of the west wall of the fort. The south face of the north guard chamber stands seventeen courses high. A number of blocks protrude through the ground surface in the foreground. The top of the gate and fort walls are turf capped.







**96 S. Part of E. Gateway. Borcovicus. Blocked up. 1882 (Fig 104)**

The view, from the exterior of the fort, shows the blocked south portal of the gateway with the adjoining piers and central *spina* as well as the exterior face of the east wall of the fort south of the gate. Two sections of window arch, one of which has a moulding, rest against the portal blocking. The gateway blocking and wall top is turf-capped.



**97 S. Gateway ~ Borcovicus. 1882 (Fig 105)**

By 1852 Hodgson and Clayton had fully excavated the gateway. The drawing, from the south, shows the two gateway portals and thresholds, both of which show wear marks from the passage of wagons. In the east portal the stop-block is in position. Outside the gate passage are a number of stone slabs forming the Roman road and in the foreground are more slabs. Above these, but separated by a layer of material, is another set of stone slabs. The west wall of the medieval bastle is partially seen, resting against which are several large flag stones. The west wall of the east guard chamber retains its blocked door while the west guard chamber has a column and base resting on it and a window arch together with what appears to be a column are on the south side of the chamber. The blocking of the inner end of the east portal (Bruce 1863, 125) seems still to have been in place at this date. Within the fort is a wall belonging to the east wing of the Commanding Officer's House, exposed in 1858, (Crow and Rushworth 1994, 30) and to the east, on the *via principalis*, is what appears to be either a partially buried altar or column base.



**98 Base of Column. Borcovicus. 1877 (Fig 106)**

The detail shows a broken column shaft, square in outline with the edges tapering at the bottom, sitting on top of a square base. On the left side of the drawing are the edges of three rows of stones protruding from the earth, possibly relating to the granary. This depiction appears to be of the column base still *in situ* on the *via principalis* at the south end of the *principia*.



**99 Entrance to Building near N. Gate – Borcovicus. 1877 (Fig 107)**

Three rows of stone steps lead to the unexcavated entrance of the east door of the south granary. A moulded column plinth is situated on the third step up on the south side.

**100 N.E. Corner of Building: near E. Gate. Borcovicus. 1882 (Fig 108)**

This is the north-east corner of Building XV, the south end of which has a bath suite inserted. Some of the walls of the bath suite are visible within the building. The remains of a buttress on the north wall of the building can be seen, the wall of which stands up to six courses. The barrack block (XIV) and its associated alleyway to the north of the building are still covered in overburden.



**101 S. Gateway. Mile Castle W. of Borcovicus. 1882 (Fig 109)**

The view, from outside the south gate of Mc37, shows the visible internal and external walls and the south face of the Wall east of the milecastle. Within the south gate are the two lower pivot blocks as well as a pivot slab from the top of the gate. Part of the gate threshold as well as the stop block is visible. The west side of the south gate has been robbed down to the foundation slab. An arch voussoir is visible on the west side of the north gate although the voussoir shown in Fig 109 (1879) on the east side is no longer there. The later blocking of the north gateway is exposed and a wooden fence had been erected since Coates was there in 1879. The Wall and milecastle tops are covered in turf.



**102 Mile Castle. W. of Borcovicus. 1879 (Fig 110)**

The milecastle was excavated in 1853. The view is of the internal face of the north gate and the later blocking in the entrance passage. A single voussoir is on top of both of the gate piers. The string course within the internal face of the north wall is visible, above which are seven courses of masonry and seven below. The internal building in the north-east corner is not uncovered.



**103 Castle Nick Mile Castle. 1879 (Fig 111)**

The view is of Mc39 from the west. The Curtain Wall had been exposed as had the walls, gates and internal building of the milecastle. The rounded external corners and square internal corners of the milecastle are evident. In the distance is Hotbank Farmhouse with Highshield Crags overlooking Crag Lough. The line of the Wall continues eastwards over Hotbank Crags. The outlines of field boundaries and drainage ditches are visible on the ground north of the Wall. A similar view is depicted in Bruce, (1863, 152).







**104** *Above Hot Bank. Overlooking Craig Lough.* 1879 (Fig 112)

Looking west towards Craig Lough and beyond, the view shows Hotbank Farmhouse built on the north side of the Wall together with the south face of the Wall standing up to eight courses high.



**105** *N.E. portion of Wall of Vindolanda.* 1877 (Fig 113)

The partial remains of the east wall of the fort, north of the east gate, are depicted and the sloping ground to the east. A tree grows in the north-east corner of the fort and an arch or culvert of a small bridge to the north indicates the course of Brackies Burn as it crosses the Stanegate. The roof outline of an unidentified building can be seen behind the arched culvert.



**106** *Roman Mile Stone. Near Vindolanda.* 1879 (Fig 114)

The milestone is situated on the Stanegate to the north-east of the fort, the wall of which is visible. A stone wall lines the road as it passes Codley Gate Farm. The building has a chimney at the east end and appears to have a thatched roof.



**107** *View from Above Cawfields Mile Castle. Looking E.* 1877 (Fig 115)

The view from on top of Cawfields, looking east, shows a line of stone in the foreground, which appears to be a demolished field wall on top of the line of Hadrian's Wall. This section has now been quarried away. Mc42 (Cawfields) and the Wall eastwards is shown as is the line of the Vallum south of the Wall with Shield-on-the-Wall Farm in the distance. The excavated north gate of the milecastle is not shown, neither is the field wall in the northern quarter of the site, yet both are depicted in drawings made by Coates in the same year.



**108** *N. Fosse & Crags between Aesica & Cawfields.* 1877 (Fig 116)

The north slope of the Wall Ditch and its southern lip is shown with the crags of Cawfields and Winshields in the distance. The drawing appears to have been made slightly west of Burnhead Farm and east of T42b.

**109** *Cawfields Mile Castle.* 1891 (Fig 117)

This was the first of the milecastles on the Wall to be excavated, the work being done by Clayton in 1848 (Clayton 1848, 54–9). The view shows the rounded south-east corner, the south gate with its massive piers and the external face of the milecastle west of the south gate. Hadrian's Wall joins the north-east and north-west corners. The depiction appears to show a stone wall running through the northern end of the milecastle. This field wall, presumably made with re-used Roman material blocks the view of the north gate while the passage of the south gate also appears to be partially(?) blocked with a stone wall. Both of these were probably erected after the Clayton excavations. The face of the quarry at Cawfields is seen to the west of the site.



**110** *Gateway: (South). Cawfields Mile Castle.* 1877 (Fig 118)

The view shows the excavated entrance of the south gate of the milecastle (Mc42) showing the large blocks forming the gate piers and a section of the external face of the south wall. Within the gateway portal is the stop block and stone threshold. A field wall of reused Roman stone standing up to seven courses high is in the northern quarter of the milecastle crossing in front of the north gate. Several large blocks in this wall appear to be reused north gate piers.



**111** *N. Gateway, Cawfields Mile Castle.* 1877 (Fig 119)

The view of the excavated north gate shows the stone piers and foundations as well as five courses of external Wall face east of the gate. Within the milecastle is the previously noted 'No 109' (Fig 117) field wall of reused Roman material. The date of the removal of this wall is not known.



**112** *Wall between Caw Burn & Aesica.* 1891 (Fig 120)

Looking east towards Cawfield Crags, the drawing shows the south face of the Wall standing at least four courses high with the remains of a field wall on top. This section of Wall is probably close to T42b.







**113 Mile Castle W. of Æsica. 1891 (Fig 121)**  
This is Mc44 (Allolee). The outline of the walls and ditches are distinct and this was noted by Bruce (1863, 162). A gap in the south wall indicates the position of the gateway, while a field wall built of Roman stone lies on top of the line of the north wall.



**114 W. Gate Æsica. 1891 (Fig 122)**  
The drawing depicts the external face of the west wall of the fort covered in earth and turf. The outline of the inner ditch outside the west gate is discernable. A slight gap in the wall indicates the position of the gateway. The inner face of the west wall was not cleared until 1895. The fort wall continues northwards to where it meets the Roman Wall at the north-west corner. The line of the Wall west of the fort appears to be indicated by a covered mound.



**115 W. Gateway. Æsica. 1885 (Fig 123)**  
The internal view from the south-east shows the blocking in the north portal of the west gate, the *spina* blocks and the north guard chamber with its doorway (seven courses high), all of which had been uncovered in June of that year by J P Gibson (1903, 26). Within the blocking of the north portal are the two pivot blocks for a later raised Roman road surface. The north pivot block of the south portal is in place including three of the pier blocks above the portal blocking. In the internal north wall of the guard chamber there are five courses below the string course and five courses above. The gateway blocking and the walls of the guard chambers are turf-covered.



**116 N. Rampart; Æsica. 1891 (Fig 124)**  
Looking westwards, the view shows the turf-covered north rampart of the fort with the position of the north gate indicated by an arrow and exposed masonry. The mound of the west wall leads to a gap, indicated by an arrow showing the position of the west gate. The outline of the Ditch on the north side of the fort is clearly indicated leading towards Cockmount Hill Farmhouse and Cockmount Wood. A number of fallen blocks of masonry are on the mounds of the north Ditch. A field wall crosses the line of the Roman Wall and Ditch west of the fort.

**117 What looks like Foundations of a Turret on N. side of Wall. W. of Æsica. 1891 (Fig 125)**

This drawing is approximately 250m west of Great Chesters fort (*Æsica*). The farmhouse and buildings of Great Chesters in the north-east corner of the fort are depicted. The distinct outline of the north Ditch has a field wall crossing it with a wooden gate situated on the Wall berm. A mound of stonework consisting of a field wall built on top of Roman material indicates the line of the Wall. On the north side of the line of the Wall is an oblong platform with slightly raised sides indicating buried walls on the east, north and west sides. This is likely to be the site of a medieval shieling or shelter rather than a turret. To the south is the outline of a road, which is straddled by a wooden gate attached to stone uprights. This road may either be the one still situated on the south mound of the Vallum or perhaps be a track laying on top of the Military Road, which exited from the west gateway of the fort.



**118 Workshop. Æsica 1895 (Fig 126)**

The position of this building within the fort is uncertain. It may relate to either one of the barrack buildings excavated in 1894 (Gibson 1903, 22) or one of the buildings erected against the inner face of the west wall north of the west gate excavated in 1895 (Gibson 1903, 33). The view is from inside the building showing a doorway and stone threshold on the right side. The walls of the building survive up to five courses. The line of what appears to be a stone-capped drain leads from the middle of the room towards the door. A large stone slab, which may be a threshold block, is resting in the left-hand corner of the building. Close to this is a small semicircular structure three or four courses high, which may be the smithy referred to by Gibson. Another stone slab lies against the right hand side wall of the building.



**119 Æsica. 1896 (Fig 127)**

The drawing is of the east end of the vaulted underground chamber, first opened by Dr Lingard in 1800 (Hodgson 1840, 203) and re-examined in 1894 (Northumberland Excav Comm 1895). The vault had been fully emptied by this time and 23 of the voussoirs are visible as are several large blocks in the entrance. The top of the chamber is covered in turf.



**120 Æsica. 1877 (Fig 128)**

This view of the west end of the chamber was made prior to the clearance of the rubble and earth filling in the chamber. The arch is clearly visible with 18 of the voussoirs depicted. Earth, turf and loose stones partially block the entrance and cover the top of the chamber.







**121 Wall on Cockmount Hill. (looking E.). 1877 (Fig 129)**

The view, looking eastwards, is of the north side of the Wall, close to Mc44, showing an extensive length of Wall standing up to eleven courses high with a turf capping. On the north side of the Wall the ground slopes steeply away.



**122 Turret Above Walton. Nine Nicks of Thirkwall. no date (Fig 130)**

The drawing must have been made during either the 1895 or 1896 trip as the site was not excavated until 1892 (Gibson 1902, 13) although it had been discovered in 1883. The view, from the east side of T44b (Mucklebank), shows the right-angled turn of the Wall, the turret with the door in the southwest corner and a length of Wall on the east side. A line of stone south of the turret indicates the line of the Wall towards Walltown Nick. The line of the Wall heading west along Walltown Crags is outlined. On the south-facing slope is a field wall and a small stand of trees close to the line of the Military Way as it passes near Mc45.



**123 Mile Castle above Walton. 1891 (Fig 131)**

This is Mc45 (Walltown) viewed from the west. The mounds outlining the walls are visible as is the Wall itself, which contains exposed rubble and facing stones. The line of the Wall is indicated following the Crag edge eastwards.



**124 Wall on the Nicks of Thirkwall. 1877 (Fig 132)**

This view of the south face of the Wall west of T45a shows up to 16 courses of facing stones surviving. Horsley commented on it (Birley 1961, 82) and a depiction of an adjacent section of Wall appears in Bruce (1863, 165).

**125 Turret on Nine Nicks. W. of Walton. 1891 (Fig 133)**

This is T45a, partly exposed in 1886 by Clayton in advance of the second Pilgrimage, cleared and planned in 1912 and re-examined in 1959 prior to consolidation. The view is of the exposed north and west walls with collapsed rubble and facing stones to the east. Up to nine courses are visible in both the north wall and west walls of the turret with facing stones and core lying on the surface within. To the west are several blocks forming the south face of the Wall. The tops of the turret walls are turf-covered.



**126 Turret Uncovered on Westernmost of Nine Nicks of Thirkwall. 1883 (Fig 134)**

T45b was located in 1883 by Clayton, but was subsequently destroyed soon after by the operations of the Greenhead quarry (Birley 1961, 28). The view, from the west, shows the turret perched on the crag edge showing the exposed external west face and the internal north and east faces. A mound of earth indicates the position of the south wall, of which two courses of the east jamb of the door are visible. Within the turret is a mass of fallen material and outside the south wall sits a pivot block. The outline of the course of the Wall eastwards towards T45a is visible. A similar view is published by Bruce (1885, 57).



**127 Plan of Turret on Crags West of Thirkwall.**

This drawing has gone missing at some time between 1948 and 1997, as it is listed as part of the archive when the drawings were presented to the school.

**128 North Fosse ~ Magna. 1883 (Fig 135)**

The view is of the north Ditch of the fort looking east towards Carvoran Farmhouse, which is surrounded by trees. Bruce (1863, 167) noted the distinct profile of the north fosse. A stone field wall is built on top of the line of the north-west angle of the fort, which was uncovered three years later (1886) by Clayton in time for the second Pilgrimage in 1886 (Birley 1998, 80). Fallen fort material has been exposed on the slope below the north-west corner.



**129 Altars found at Magna. 1883 (Fig 136)**

The depiction is of three altars found at Carvoran. The left-hand one is RIB 1776, the middle is RIB 1785 and that on the right is RIB 1784. The text under the depiction of RIB 1785 says 'Taken from Wall of Byre Sept 1883', whereas the Roman Inscriptions in Britain (Collingwood 1965, 556) says that it was re-discovered in 1886 built into the farmhouse. RIB 1776 and RIB 1784 are now in the Museum of Antiquities, Newcastle and RIB 1785 is in Chesters Museum.







**130 North Fosse of Wall at GAP.** 1877 (Fig 137)  
The drawing, looking east, shows the profile of the steep sided north Ditch with a sharp drop on the north side. Two buildings of Gap Farm are seen straddling the line of the Ditch and in front of these is a stone wall crossing the line of the Ditch. A stone built field wall and two mature trees are seen on the south side of the Ditch. In the background is the outline of Walltown Crag. The drawing is just west of T47b.



**131 Foundations of Wall. Vicarage Garden. Gilsland. N. Side.** 1877 (Fig 138)  
Up to five courses of Wall face are visible, the top of the Wall being covered in turf with two trees growing from the mound. Three cuttings have been made across the width of the Wall and in front are four small piles of Wall core. This section of Wall had been exposed not long prior to this by the vicar of Gilsland, Rev A Wright (Ferguson 1877-8, 24).



**132 Wall on Cliff over the Irthing E. of Amboglanna.** 1879 (Fig 139)  
This shows the section of Wall east of Mc49 (Harrow's Scar) overlooking the steep west bank of the Irthing river. At least nine courses of facing stones are visible above two courses of foundations, the rest of the Wall having been taken away by land slips. The bare slope above the curve of the river has a wooden fence and a line of five trees. An 1848 watercolour by H B Richardson (Bidwell 1989, pl 6) shows the Wall perched on top of the river escarpment and evidence of the river undermining the Wall.



**133 S.W. Gateway. Amboglanna.** 1877 (Fig 140)  
This single portal gate had been exposed in 1850 (Birley 1961, 199) The drawing, from the west, shows the pier blocks on both sides of the gateway with up to eight courses of facing stones in place as well as the portal threshold within which are blocks of fallen masonry. The top of the fort wall is turf covered. Several mature trees are depicted inside of the fort.

**134 Exterior S.E. Gateway. Amboglanna.** 1877 (Fig 141)

This gate, excavated in 1852, shows both of the gate portals, central pier and a short section of the external face of the east wall of the fort flanking the gateway. On the north side of the south portal is a pivot block and on the south side are two arched window heads. A possible voussoir for the gate arch is lying within the north portal. An engraving of the gateway in 1852 (Wilmott 1997a, 5) shows the portals fully excavated and the window heads lying outside the gateway. By 1877 vegetation is growing within the portals and the window heads moved to the position shown in the drawing. The window heads have now been incorporated in the new visitor and education centre. A mature tree is growing in the fort close to the east wall and a large mass of trees grows on the west side of the fort.



**135 E. Gateway ~ Amboglanna (interior).** 1877 (Fig 142)

The view from inside the east gateway shows the two portals, the central pier as well as the walls of the guard chambers, the southern one having been excavated, the northern one seemingly only partly exposed. Two arched window heads are depicted partly buried within the southern portal. The wall tops of the guard chambers are turf covered.



**136 Guardchamber. S. Gateway Amboglanna.** 1877 (Fig 143)

This was excavated in 1851 by H G and W S Potter when Henry Norman was owner of the site. This is a detailed view of the west portal of the south gate showing the gate pier blocks and the impost block to carry the arch. The door of the west guard chamber and the internal face of the west wall are depicted. A voussoir is exposed within the gate portal and the threshold at the rear of the gate is partially visible.



**137 Buildings with Buttresses. Amboglanna.** 1877 (Fig 144)

This view is of the south wall of the south granary, excavated in 1859, and used as a ha-ha (retaining wall) for the garden in front of the farmhouse. The granary was subsequently excavated between 1987-91 (Wilmott 1997a, 8). Eight of the buttresses are depicted with the walls standing seven courses high. A line of partially covered stone slabs indicates the flooring level of an adjacent building south of the granary.







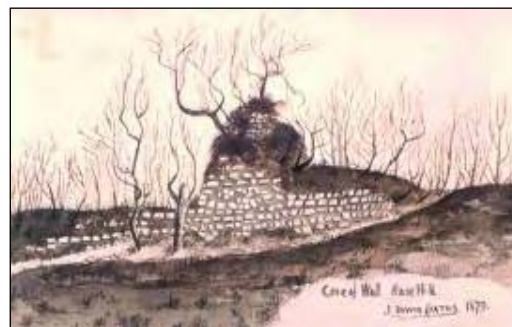
**138 Amboglanna. 1877 (Fig 145)**  
This drawing shows the eastern *porta quintana* of the fort, which was excavated by WG Potter in 1850 (Potter 1855a). The excavation has clearly been left open for the 27 years between excavation and Coates' visit (Compare images of the gate from 1855 and the 1992 re-excavation in Wilmott 1997a, fig 40).



**139 N.W. angle of Camp Wall. Amboglanna. 1877 (Fig 146)**  
The angle tower wall was exposed in 1831 by the proprietor Thomas Crawhall (Hodgson 1840, 207). The drawing shows the turf-topped north-west angle of the fort wall standing ten courses above two foundation courses. A two-part gate is erected on the line of the Wall. The three large gate pillars are each topped with a chamfered capstone. The pedestrian entrance, on the east side, has a six-bar gate and the carriage entrance a five-bar gate. A line of bushes grows on the north side of the road outside the fort. Bruce (1863, 177) depicts the gateway with a section of Wall joining on to the angle of the fort but comments that this portion of the Wall had recently been removed to allow for a new entrance to the house.



**140 Wall W. of Amboglanna. Looking N. 1877 (Fig 147)**  
The south face of the Wall west of Birdoswald stands at least seven courses high, the earth capping containing core work. Sections of the Wall face show evidence of either collapse or robbing of the stone work. Three mature trees are shown on the north side of the Wall. In the distance to the north-west is the outline of the only remaining wall of Triermain Castle, which had been built with re-used Roman Wall stone.



**141 Core of Wall. Hare Hill. 1879 (Fig 148)**  
This depiction, possibly of the north face, shows the original core work laid horizontally and a large amount of scrub and small bushes cover the surviving Wall. The north face of the Wall, including a centurial stone found to the west of T53a (RIB 1958) was re-built in the 19th century by Mr Marshall, the Earl of Carlisle's architect (Bruce 1933, 182).

**142 Course of Wall. E. of Stanwix. Looking E. towards Tarraby. 1877 (Fig 149)**

This drawing, made from close to the crest of Wall Knowe and east of Mc65, shows Tarraby Lane on the line of the Wall with a shallow depression, partially water-filled, indicating the position of the Ditch. A hedgerow grows along the north edge of the Ditch and another is on the south side of the Wall enclosing a field system. Two hedgerows in the middle distance cross the line of the Wall. In the distance are several buildings in the village of Tarraby.



**143 Fosse of Wall. Stanwix. 1877 (Fig 150)**

The position of this drawing appears to be looking eastwards between the river Eden and the fort of *Petriana*. Well defined slopes indicate the line of the partially filled north Ditch which has a pool of water in the bottom. A mature tree grows on the north slope, behind which is a wooden fence and a hedge-line parallel to the Ditch. In the background the Ditch has been filled in and a wooden building with vertical planking erected across it. Behind this is a two-storey house with three upper windows and centrally placed chimney stack. On the north side of the Ditch is a two-storey building with two windows at one end and a chimney stack at the other. In the area of the berm between the south side of the Ditch and the Wall is an upright stone possibly used as a sheep or cattle rub.



**144 Core of Wall. W. of Newtown ~ (Carlisle.) 1879 (Fig 151)**

The drawing is east of Knockupworth Gill in the vicinity of T67a. A low covered mound marks the line of the Wall, south of which is the outline of the Vallum at Davidson's Bank. The ground to the north of the Wall slopes down to the River Eden. The drawing depicts the distant view of Stanwix, in Carlisle, with its church, the two chimney stacks of the Bone Manure and the Varnish Works at Primrose Bank as well as the engine shed of the North British Railway on the Carlisle-Silloth line (Ordnance Survey map, 1865, sheets 23/2&3). A tall railway signal is evident and south of the Vallum are five houses surrounded by trees in the vicinity of the Newtown area.



**145 Course of Wall between Newtown and Grinsdale. 1879 (Fig 152)**

The Wall, situated on the steeply sloping south bank above the River Eden, is shown as a raised mound surmounted by a hedgerow in front of which is a footpath. The Wall makes a dogleg turn at this point. In the distance is the outline of several large chimneys and Carlisle Cathedral.







**146** *Course of Wall between Grinsdale & Kirk Andrews, looking East.* 1877 (Fig 153)  
The depiction is of Long Bank between Ladylands Lane and Kirkandrews. The earth-covered mound of the Wall has a hedgerow growing on top as well as a group of mature trees. A footpath is on the berm with the ground sloping away to the north Ditch.



**147** *Course of Wall between Grinsdale & Kirk Andrews, looking West.* 1877 (Fig 154)  
The drawing is in a similar position to Fig 153. Although there is no discernable trace of the Wall itself the drawing shows a path on the position of the Wall berm. The ground slopes away to the north.



**148** *Mile Castle, Kirkandrews.* 1879 (Fig 155)  
The view shows the graveyard of (the now demolished) Kirkandrews-upon-Eden church. An earlier 12th century church, dedicated to St Andrew, had been built on the line of the Wall (Whitworth 2000, 55). Mc70 (Brae Lees) is now thought to be further north (p 181) but Coates was following the information supplied by Bruce who said there was a milecastle here (Bruce 1863, 210). Two buildings are depicted adjacent to the graveyard, one of which is probably related to Eden Farm. A stone pile, perhaps of re-used Wall material from the earlier church, lies next to a tree within the graveyard.



**149** *Vallum, Kirkandrews by Dolly Bank.* 1881 (Fig 156)  
The view, looking west, shows the Vallum mound surmounted by a number of trees with the road from Carlisle to Bowness on the left. Several buildings in Kirkandrews are depicted. The drawing seems to be on the east side of the Carlisle-Silloth section of the North British Railway as it passes through Kirkandrews.

**150** *N. Fosse E. of Beaumont.* 1879 (Fig 157)  
The view shows the low mound of the Wall, the well defined north Ditch and the bank of the Eden river. The drawing is west of Mc70 and overlooks the Monkhill Beck. At least eight buildings in the village of Beaumont are depicted as well as the church of St Mary



**151** *Fosse of Vallum between Kirk Andrews and Monkhill.* 1881 (Fig 158)  
Looking west, the drawing shows the hedge-lined Carlisle to Bowness road as it approaches Monkhill with the line of the Vallum on the south side. A number of fields are outlined by hedgerows and trees. Three buildings at Monkhill are depicted one of which is on the north mound of the Vallum. The building adjacent to the road may be the Drovers Rest Public House.

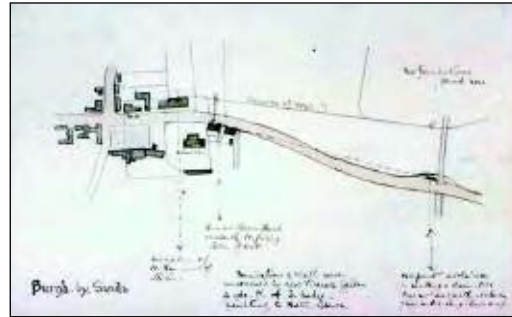


**152** *Vallum opposite Monkhill Mill.* 1881 (Fig 159)  
The depiction, looking west, is of the Vallum at the west end of Monkhill, on the west side of the crossroads and the Mill Race. The outline of the Vallum and mounds on both sides are distinct and the bottom of the cutting is water-filled. Several large trees grow within the Vallum and a line of five mature trees and a hedgerow cross the line of the Vallum. In the foreground the south face of the Vallum has been partially removed. A stone wall follows the line of the Carlisle-Bowness road. A cross section of the Vallum showing the road, mounds and Ditch has been included. In the background is a building with a chimney stack on the north gable.



**153** *Stones in Road near Church, Burgh.* 1879 (Fig 160)  
The drawing, looking west from the east end of the village, shows the corner of the old vicarage with a lattice window, on the south side of the road leading into Burgh-by-Sands. A line of seven stones on the south shoulder of the road is depicted which is most likely the north face of the Wall (see comments on Fig 161), which had also been noted in 1877 (Daniels 1978, 247). A row of cottages with a haystack at the east end is on the north side of the road adjacent to the two storey Lowther Arms Inn (now the farmhouse of Demesne Farm). A hedgerow on an earth bank is on the north side of the road ending in a gate post with an associated short section of stone walling.





**154 Burgh-by-Sands [plan].** no date (Fig 161)  
 This must have been drawn no later than 1885, the last date of his visit to this section of the Wall. The depiction is a plan of Burgh-by-Sands as far east as the Powburgh Beck showing the main road, various buildings in the village, the outline of the fort and the course of the Wall north of the road, which he marks with a question mark and notes “no foundations found here”. The actual course of the Wall is marked by a broken line to which he has added several comments and observations. Adjacent to the Powburgh Beck he notes “Wall foundations cut thro’ here in making a drain, 1881. Was not met with at place given in MacLaughlan’s map”. Opposite the vicarage he notes “Here are stones in Road evidently North facing stones of Wall”. He made a drawing (Fig 160) of these stones. North of the fort he shows a broken line which he notes as “here are traces of north rampart of Station”. A note on the drawing says “Foundations of Wall were uncovered in new Vicarage garden 4 yards North of South hedge – pointing to Hall Stones”.



**155 Head: probably from Burgh: now over House Door at Monkhill Hall.** 1883 (Fig 162)  
 The head is that of a woman and may come from a funerary monument. The hair flows down over the shoulders and she is wearing some form of head covering or decoration. Still at Monkhill Hall, but now on the external west wall at first floor level. Within recent memory the figure has been painted in various colours by the owner of Monkhill Hall.

**156 Altar found in field near HALLSTONES BRIDGE: BURGH.** full Size. 1882 (Fig 163)  
 This altar (RIB 2039), dedicated to the god Belatocadrus Antronius Aufidianus, was found in 1792. A depiction of it is in Bruce (1863, 213). Collingwood gives the location of the altar as Rindle House, Burgh-by-Sands. Its present location is not known to the author.



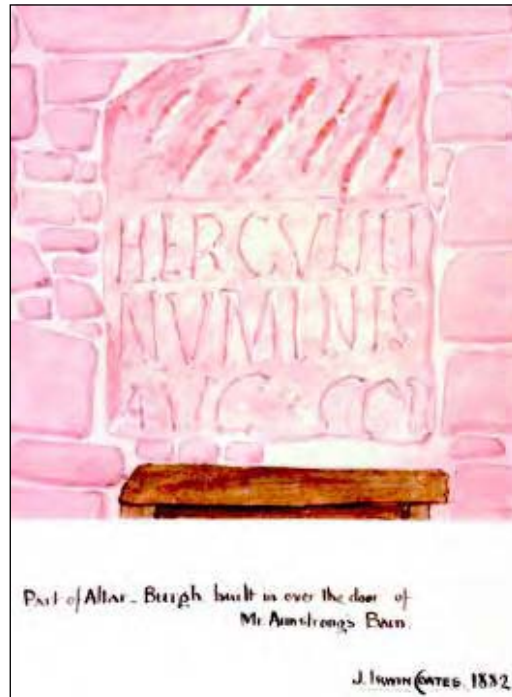
**157 Altar found in Window of Church: Burgh.** 1881 (Half Size). 1881 (Fig 164)  
 The sandstone altar, 6in × 9in (152.4mm × 228.6mm) (RIB 2044), was found in 1881. It is dedicated to Mars Belatucadrus, and now in Tullie House Museum, Carlisle.



**158 Mouth of Urn: Burgh.** Found when digging Foundations of new Vicarage. 1885 (About Half-Size). 1885 (Fig 165)  
 The drawing depicts a female face and neck forming the top of a pottery urn. The figure has hair in ringlets and the forehead is decorated with a stippling which may be some form of body decoration. Of Roman origin it dates to the 3rd–4th century. This urn was shown to the members of the 1886 pilgrimage on 3rd July (CWAAS 1880, 150) and is now on public display in Tullie House Museum, Carlisle.







**159 Part of Altar – Burgh:** built in over the door of Mr. Armstrong's Barn. 1882 (Fig 166)  
This altar, 14in × 16in (335.6mm × 406.4mm) (RIB 2040), was found in or before 1801 close to Burgh fort and is now built into the west wall of a stable at Cross Farm, Burgh-by-Sands. It was dedicated by a cohort to Hercules and the deity of the emperor.

**160 N. Fosse of Wall. Dykesfield.** 1881 (Fig 167)  
The depiction, looking west, is in the vicinity of T72b and Mc73, on the west slope of Watch Hill. The line of the north Ditch is distinct with some stonework exposed within it and on the north side. The Wall itself is discernable as a slight raise. A line of trees and a hedgerow with a wooden gate entrance cross the line of the Wall at right-angles indicating the line of the road north from Dykesfield. A small cottage is close to the road on the north side of the Wall. In the background Ridding Sough flows across Burgh Marsh towards the Solway.



**161 Drumburgh N.W.** 1879 (Fig 168)  
The depiction shows a water-filled, tree-lined ditch, which must be that of the right-angled medieval grange enclosure which crossed the north-west angle of the fort (Daniels 1978, 251). The top of a farm building can be seen which must be situated in the south-west quadrant of the fort. Coates must have mistaken the medieval ditch and banks for those of the fort, as there are no surface traces and excavations did not begin until 1899 (Haverfield 1900–1, 81).



**162 Foundations of Bridge in Stream between Port Carlisle and Bowness.** 1879 (Fig 169)  
The depiction shows three large wedge-shaped blocks, which must have been associated with a Roman culvert through the Wall, partly exposed in the bank of a watercourse, which flows in a northerly direction into the Solway Firth. The Wall crosses the stream close to the estimated position of T79a. The nearest block seems to have a recessed hole in the top. A number of blocks and stones are in the bottom of the stream. A small sketch gives the measurements between the blocks: 3ft (0.9m) between the north and central blocks and 6ft (1.8m) between the central and southern blocks. The sketch shows a similar shaped block in the east bank of the stream. No discernable traces of the Wall or Ditch remain but a path or track follows the line of the stream and this indicates the line of the Wall. In the distance are the roofs of two buildings and a four-sailed windmill in Bowness village.



**163 Core of Wall ~ near Bowness: S. side.** 4ft. 1877 (Fig 170)  
The mound of the Wall is covered in small trees and bushes, with little evidence of the facing stones which have been robbed out. Horsley (1732, 157) had reported it to be 10ft (3.05m) high half a mile east of Bowness, and that gunpowder was used to bring it down (Daniels 1978, 253).



**164 Core of Wall ~ 1/4 mile W. of Port Carlisle.** 1881 (Fig 171)  
The site is west of Mc79. The view, looking east, shows the line of the Wall although it is covered in trees and bushes and a wooden fence has been erected on top. Three courses of the south face of the Wall are visible at the west end but much has been robbed (Jenkinson 1875, 187). In the background several houses in Port Carlisle are depicted.



**165 Bowness N.W.** 1879 (Fig 172)  
The depiction shows a windmill with four sails or 'sweeps' and wooden cantilevered gantry situated in the north-west corner of the fort together with the kiln and associated buildings (Hughes 1973, 355). The windmill, owned by Sarah Lawson, was demolished between 1880–85 (Hughes 1972, 126). A section of the water-filled west Ditch of the fort is outlined. Ridge and furrow are evident in the field in the north-west corner of the fort. Mill Cottages are seen on the south side of the Bowness-Silloth road.



**166 Bowness.** 1879 (Fig 173)  
The view is of the shore of the Solway Firth at low tide with the ground rising towards Bowness. Four small boats are depicted on the shoreline. The Bowness windmill is situated in the north-west corner of the fort, as are several other buildings associated with the mill. A hedgerow on the headland indicates the line of the north wall of the fort. Running towards the shore at right angles from the fort are a number of hedgerows.



## 3

## Charles Anderson and the consolidation of Hadrian's Wall

by Alan Whitworth

“No more suitable person than Charlie Anderson could be called upon to perform this ceremony. Every section of Hadrian's Wall now to be seen owes much to his labours and supervision, and he has just retired after a lifetime of service with the DOE's department in charge of Wall conservation. Hadrian may have ordered the construction of the Wall, but it is thanks to Charlie that we are able to enjoy so much of it today.”

These words were spoken by Robin Birley in 1974 during the opening ceremony of the replicas of a timber milecastle gateway and a stone turret beside Vindolanda Fort. In the same year Charles Anderson was awarded the Imperial Service Medal in recognition of the meritorious services he had rendered during the course of his working life.

Charles Anderson was born in 1909, in the north Yorkshire village of Middleham. He began work with the Ministry of Works at Middleham Castle, North Yorkshire in 1927, before moving on to the ancient monuments of Pickering Castle, Roche Abbey and Mathersey Priory. Within about three years he had been promoted to a mason. During the course of his working life he also worked on Tynemouth Castle, Guisborough Priory, Lanercost Priory, Shap and Whitby Abbeys, and both Hylton and Norham Castles. In 1935 he was transferred to Corbridge Roman Station (as it was then known) to assist in the masonry consolidation of the site. Between 1933 and 1972 30 sites were given into the Care of the State, all of which required an ongoing programme of consolidation and maintenance (Whitworth 1994a, 75). Anderson was to play a major part in the exposure and consolidation of the Wall for nearly four decades (Fig 174). In the pre-war era Anderson worked on several sites in the eastern sector of the Wall.

Excavations at Corbridge had begun in

1906. The site came into State guardianship in 1933 as a gift from Mr David Cuthbert of Beaufront Castle and a programme of consolidation of the exposed sections of masonry, after their excavation, was undertaken by H M Office of Works to preserve the monument for future generations (Bishop and Dore 1988, 1). Anderson consolidated the granary walls and flagstone floor, as well as the columns and masonry at the south end of the building. Work was also carried out on the Fountain, the strong room and various walls within site XI. A photograph taken in 1936 shows him carrying out consolidation work on the columns in front of the granaries. During work on the granaries he found a number of coins between the sleeper walls, which had fallen through the joints in the flagstone floor. Anderson's pay while working here was 1s 6 1/2d per hour. On being transferred to Benwell temple he was paid an extra 2d an hour. It was anticipated that the work there would take approximately six weeks. When work was halted by bad weather the men received no pay, and they therefore normally worked even in heavy rain (R Birley, pers comm).

The following year, 1937, saw the commencement of clearance and consolidation of the temple at Benwell, which was dedicated to the local native god Antenociticus. This site had been given as a gift and taken into national guardianship in 1936. The temple, which had been discovered in 1862, was by now being used as a local tip, and yew trees were growing on the top. Without a labourer to assist him, Anderson cleared the accumulated rubbish from the site, using a horse and cart, before exposing and dismantling the walls. After reconsolidating the walls he re-turfed the site and erected a boundary fence of iron railings. He even took the trouble to plant some rambler roses, which died away long ago. Two replica casts of the altars were put in place – the originals are now in the Museum of Antiquities in Newcastle

(RIB 230-1). The iron railings were cut down during the War and melted down as part of the War effort.

Following a spell at Tynemouth Priory Mr Anderson was sent on loan to Newcastle Corporation to train a team of masons who were to work on the city walls and the castle. He explained the methods and techniques to be used on Ancient Monuments, including the use of lime pointing. They applied some of this new knowledge in 1939 by re-setting, under his supervision, the section of Wall at Denton Burn, which is owned by Newcastle City Council (Daniels 1978, 71).

Anderson, by now a foreman, together with two labourers began exposing and consolidating the 300m length of Wall at Heddon-on-the-Wall in 1938 completing the work in May of that year. At this time a line of trees was growing along the line of the Wall and a fence ran along the top as a boundary between two fields. At the west end of the Wall there was a medieval kiln, which had been exposed by 1879 (or possibly earlier). A drawing done in the same year shows the kiln (Fig 20) and some of the exposed facing stones on the south face of the Wall. Anderson said the tools used to carry out the work consisted of picks, shovels and wheelbarrows. The cement and lime mortar was mixed by hand shovels in the farmyard west of the site and delivered to the site in wheelbarrows. Water for the work was delivered in the same manner. Anderson notes that the east end of the site was flooded by water coming from the Vallum down the steep hill. The site was visited by Professor Sir Ian Richmond, who thought there was some evidence of puddled clay in the core of the Wall. Evidence is cited for a clay-bonded core at or near Heddon by Daniels (1978, 75) and also at Denton (Bidwell 1996, 32). Anderson says he found a short section of clay bonding of the core during the consolidation but that this was the only place that he saw it while re-building the Wall. This was probably because many of the sections of the Wall that he uncovered did not require dismantling to below the offset level.

At the same time Anderson was also supervising the consolidation of the Vallum crossing at Benwell. This had been discovered in 1932 and examined in detail the following year by the North of England Excavation Committee under Eric Birley, Parker Brewis and John Charlton (Birley 1934). Following this work, it was placed



Fig 174  
Charles Anderson inspects  
the Wall east of Birdoswald.

under guardianship in 1934. In 1937, when archaeological work was complete, Anderson moved onto the site with a team of local labourers. He says that the excavations had been carried out by a student, a Mr George. They cleaned out the Vallum ditch on either side of the causeway, for public display, exposed and consolidated both the roadway leading from the fort to the causeway and the causeway walls, built a retaining wall along the north side of the site and fixed a boundary fence. Various methods were tried to hold the steep sides of the Vallum but none were very successful, so a rough stone core was built down the Vallum slopes and covered with turf. The ditch bottom was then partially back-filled to a depth of three or four feet. In 1938 Anderson ordered two tons of cement for the site at a cost of £4 3s 10d.

After another six months' stint at Tynemouth Priory Anderson was transferred to the highest point along the Wall, at Winshield Crags (1230ft [375m] above sea level). This section of Wall, 370m long, had come into guardianship in 1937 and Anderson's consolidation work was carried out between 1938 and 1940.

A field wall that stood on top of the remains of the Roman Wall was dismantled by the workmen. Assisted by two labourers



Anderson built a 150m long stone field boundary wall aligned with the north side of the Wall, to Mc40, completing the work in November 1940. The lower courses of the new field wall were built of any facing stones that were available and completed with whinstone from the dismantled field wall (EH file no AM 10352/01). During the course of work Anderson's men dug a hole at Winshields so they could collect water to mix with the cement and sand. Mc40, which had been excavated by F G Simpson in 1908 (Simpson 1976, 86–98) is unconsolidated and buried under a covering of soil and turf. A photograph taken in 1938 shows workmen in the process of exposing and dismantling the north face of the Wall. More work was undertaken here in 1956.

In January 1942 Anderson enrolled as a Military Policeman attached to the headquarters of the 1st British Infantry Division. Posted to North Africa he saw some of the ancient ruins of Algeria and Tunisia before he was moved to Italy, where he took part in the Allied Forces landings at Anzio, finally reaching Rome. By May 1946 he was on his way back, via the Middle East, to the North of England and started work on the Wall again in December 1946. Here he remained, exposing and consolidating the monument of the Roman legionaries and auxiliary troops from across Europe, until he retired in March 1974.

On returning to civilian life Anderson's first task, with the Ministry of Works based at Corbridge, was to assemble and train a team of masons and labourers in methods of exposing and consolidating Rome's northern frontier. With a trained team he began to tackle the task before them.

The following account is not set out as a chronological sequence, rather site-by-site, moving westwards from Planetrees, on the east side of the North Tyne. All quotations are from transcripts of recorded interviews with Anderson.

#### Planetrees

Situated west of Mc26, Planetrees was taken into guardianship in 1945. The antiquarian William Hutton commented, when he visited the site in 1801, that the proprietor, Henry Tulip, was taking the stonework to build a farmhouse and that 95yd [86.9m] had already been destroyed (Hutton 1813). When work began here in 1948 Anderson says that the north face was already partly exposed and that his masons excavated the south face of the 53m stretch of Wall. In doing so they uncovered a junction on the south side of the Wall between the Broad Wall, to the

east, and a section of Wall only 6ft [1.8m] in width built on top of foundations that had been pre-laid for the Broad Wall. During the consolidation he noted that Roman mortar was visible in the fabric on the south face, west of the reduction point in the area of the drain through the Wall. He says that on the Narrow Wall very little work had to be done, except on the top course or two, to make it waterproof. Anderson noted that the core of the Broad Wall was of fairly big stones, but that there was no mortar found (Transcript, 3). This may be because the original mortar had disintegrated, if there was any, or because, if the Wall had been clay bonded here, none was found during consolidation work.

It is interesting to note that in 1948 the first motor vehicle, a Ford, was provided to the staff, so that they could be transported from Corbridge to various sites along the Wall. Before this time it was necessary for the workmen to either catch a bus from Corbridge, changing at Hexham, or to travel by bicycle.

#### Brunton

At Brunton another reduction point or junction between the Broad Wall and Narrow Wall, east of the T26b, was uncovered. The north face of the Wall was also exposed, revealing 11 courses of standing masonry. The turret itself had first been excavated by John Clayton in 1873 (Daniels 1978, 105) and the south face of the Wall from the turret westwards, originally bonded with clay, had also been exposed by him. The masons arrived in 1947, the site having been taken into guardianship in February of that year.

They began by cutting down one or two large trees on the north side and removed the roots. It is apparent that Anderson was observant about earlier work that had been carried out on the Wall, as he commented that "when consolidation of the south face of the Wall west of the turret began it was discovered that three or four courses of facing stones had been re-built dry", that is without mortar. The remaining two or three courses were still buried in their original positions. When this face was first excavated the facing stones were perhaps found fallen along the side of the Wall, and the masons returned them to the Wall. In this particular case the core must have been very solid, and the masons probably found it much easier to cut the tails of the facing stones than to try to remove sufficient core to enable them to return the stones to the Wall in their original state.

Clayton had used both methods. If the core was hard, he cut off the backs of the facing stones, and if the core was fairly loose and comprised small stones, he would remove the core and pack the facing stones into place with loose, dry stones down the back (Transcript, 2). Any original Roman mortar in the joints was left in place.

Anderson noted a Roman altar on the north side of the turret. The vicar of St Oswald's Church, the Reverend F G Westgarth, visited the site and said the altar had been removed from in front of the church to the grounds of Brunton House and then to its position on the north side of the Wall more than 100 years ago. After discussions among Mrs Selby Woods of Brunton House, Mr P Hedley of Corbridge, Mr Charlton (the assistant Inspector of Ancient Monuments) and Dr Richmond it was agreed that it would be better to have the altar placed back in the church (EH file AM 10348/01). The necessary Faculty was obtained and the altar is now in the nave of the church (Coulston and Phillips 1988, no 279). A drawing made in 1879 of the north face of the Wall at Brunton by James Irwin Coates (Fig 38) shows two altars on the north side of the Wall, the larger of which is presumably the one noted by Anderson and returned to the church.

#### Chesters bridge abutment

The abutment was given to the nation in 1946 by the owner of the Chesters estate, Captain A M Keith and subsequently placed in guardianship. F G Simpson then carried out a small excavation to locate the Hadrianic bridge abutment (Simpson 1976, 44–9). In 1955 the short section of the Wall running down to the bridge foundations, together with the tower and water mill race, was consolidated.

#### Chesters fort

The team of masons moved into Chesters fort to begin that consolidation campaign after the site had been placed in guardianship in 1954. Prior to consolidating the bathhouse, which had been excavated in 1884–5 (Bidwell 1993, 13), a small excavation of the complex was undertaken in 1957–8 by J P Gillam. During the course of consolidation the masons uncovered a short length of Roman lead piping leading from the earlier cold bath, as well as a number of T-shaped metal brackets fastening thin stone slabs to the hot room (*caldarium*) walls. The fort walls and gateways, as well as the *principia*, *praetorium* and barrack buildings were consolidated, as was the short length of Wall on the east side of the fort. When the strong room in the Headquarters building was being cleared out prior to consolidation in 1956, a dedicatory slab of the 1st Cohort of Dalmatians (Wright 1957, 229; Coulston and Phillips 1988, no. 237) was found, which is now on display in the museum at Chesters fort. There are 160 photographs by Charles Anderson in the Chesters album showing the site before, during and after consolidation. Consolidation was still ongoing in 1960, as at that time work was being carried out on the south gate. In January 1956 the first cement mixer was delivered to the team of masons.



Fig 175  
Consolidation team at  
Black Carts (T29a).

#### Black Carts

The site of Black Carts, taken into guardianship in 1970, was covered with a line of trees and scrub, although some of the south face of the Wall and T29a had been exposed by John Clayton in 1873. After removing the trees and scrub the masons exposed and consolidated the north face of the Wall as well as T29a (Fig 175). A series of photographs taken by Mr Anderson showed the Wall as left by Clayton and its subsequent re-building, as well as work in progress and the finished work. Anderson, in a taped transcript of the photographs he took of this section of Wall, made some comments and observations. "I think Clayton must have been a very thoughtful fellow; he also appears to have the public in mind, or visitors to the Wall. When he exposed any Wall section, it was always an easy section to reach."

He took a couple of photographs to show the difference between Clayton core packing and Roman core within the Wall, and also how the Roman core work and lime mortar was built in layers, making a tie across the Wall each time, for strength. He notes that there were "no chamfered stones at Black Carts but what we did find in position were three centurial stones (Charlesworth 1973, 97); one on the south face west of the turret, on the lower courses, and two in position on the north face, which is supposed to be unusual, as an expert told us they were only found on the south face." Another centurial stone was located fallen on the north side of the Wall 82m west of the turret (Wright and Hassall 1972, 354, 12).

Before the turret was consolidated, a re-excavation was carried out in 1971 by Dorothy Charlesworth (1973a). Quantities of facing stones with perhaps quarry batch marks on them have recently been located in the Black Carts section (Hassall and Tomlin 1989, 333).

### Carrowburgh temple

Carrowburgh Mithraic temple, discovered in 1949, was excavated in 1950 (Richmond and Gillam 1951). After being taken into guardianship in 1953 the Ministry of Works consolidated the structural remains for public viewing. Anderson said "This was an interesting little monument. I made the imitation concrete posts and altars inside the temple. They must have been fairly good as the visitors started to break pieces off. They thought it was proper stone, fossil timber at least."

The timber structural posts, and the wattlework around the benches, which had survived in the waterlogged conditions of the site, were actually cast in concrete, the concrete replicas being installed on site. Although the brown paint that was applied to the concrete is long gone, the imprint of the timber is very clear. A replica of the temple is on display in the Museum of Antiquities in Newcastle. Anderson made a smaller replica model of the temple for Richmond, who subsequently returned it to the family.

In 1957 when the workmen were landscaping the ground around the temple they uncovered an altar dedicated to the Nymphs and the Genius Loci (Wright 1961, 193; Coulston and Philips 1988, no. 92).

S T35b and was taken into guardianship in 1946. Coesike turret (33b), located in 1913 by F G Simpson, was examined in the same year and also in 1947, and completely excavated in 1970 (Miket and Maxfield 1972). During consolidation Anderson located two inscriptions, one within the blocking of the internal recess and another in the north face of the Wall (Wright and Hassall 1971, 291, 10–11).

T34a (West Grindon), also located by F G Simpson in 1913, was excavated in 1971 (Charlesworth 1973) and then consolidated by the Ministry of Works. The central section of Wall at Sewingshield Crag began to be exposed and consolidated in 1958. T35a (Sewingshields) was excavated in 1958 on the behalf of Durham University Excavation Committee (Woodfield 1965, 151) and was consolidated at the same time that the curtain Wall was being uncovered. Anderson said:

"When operations commenced at Sewingshields there was no exposed Wall to be seen at any point. I had a word with Mr Rawson, the architect at the time, and suggested that we just expose any short section existing, with face stones, for the benefit of hikers. This he agreed to do. I had no trouble with the management in those days, they would usually ask me where I was going next or how did I know it was Roman. So what I did first was put down a few trial trenches in at points where I thought we might find a nice piece of Wall, where the mounds or high mounds were on the

ground, or slacks on the hillside. With our luck we found a few reasonably nice pieces of Wall. This was carried out just from the milecastle area, west of the farm, to the point on the crags overlooking the lake. The trenches were made in 1958. This was a site where we discovered a lot of original mortar. At the time it was fairly sound and it was decided to retain as much as possible. This we did, but it was a mistake. The first frost that comes along soon destroys it."

After excavating and consolidating the best surviving sections along the top of Sewingshield Crag, a number of trial trenches were dug along the line of the field wall down to the extreme west boundary of Sewingshields Farm. The results were not encouraging and no further sections of Wall were exposed at the west end.

Anderson noted a variation in the core composition where there was a reduction point. He commented that where the Wall was narrower the core was smaller than seen in the wider sections of Wall and the original mortar was very hard. The then farmer at Sewingshields, Mr Tulley, told Anderson that there were three or four centurial stones north of the Wall, in the field somewhere beyond his farm. Unfortunately he was never shown their precise location and they appear never to have been recovered.

### Housesteads

Housesteads fort, which had been given to the National Trust in 1930 by Mr J M Clayton, was taken into the care and guardianship of the Ministry of Public Works in 1951, as it was felt that this body had greater expertise in the management of archaeological sites (Woodside 1995, 67). Excavations have been carried out within the fort since 1822 and consolidation of the remains was deemed necessary for their future preservation. Eric Birley was closely involved with the Trust regarding excavation and maintenance of the exposed walls as he was the Secretary of the local committee of the National Trust. He was concerned at the state of some of the walls and whether the Trust's employee, Mr Thompson, had the skill and expertise to carry out major works on the west wall north of the Westgate. He said that the Ministry of Works man at Corbridge, Anderson, was a first class man and they need have no anxiety at all if the job could be done by him and some of his men.

The method of consolidation was the same as that carried out by the Ministry of Works on all ancient monuments in its care and guardianship, and had the approval of the Ancient Monuments Board for England, as well as that of respected and eminent archaeologists who had been closely involved with the Wall for many years (*Hansard*, 2

April 1958, 1351). All of the fort walls, gates and towers, as well as the Headquarters building, the Commandants house, granaries, latrines, hospital and the civilian buildings to the south of the fort were treated. The three photograph albums of Housesteads show the sections of the fort walls and buildings before, during and after consolidation. Anderson took a number of photographs at the start of excavations in the Commandants House in 1967. There are also five photographs showing members of the 1959 Pilgrimage when they visited the site, including Dorothy Charlesworth, J P Gillam and Mr T Hepple.

In 1963 when the latrines, which had been excavated in 1898 and then backfilled, were opened up and prepared for consolidation Anderson took photographs of the work in progress (Fig 176). Since 1945 a number of excavations have been undertaken within the confines of the fort and it was Anderson, as Ministry of Works foreman, who oversaw the consolidation work being carried out as the walls and floors were exposed. He took numerous photographs of the Hospital and the Commandants House under excavation by Dorothy Charlesworth between 1967 and 1973.

### Vindolanda

The fort of Vindolanda, but not the *vicus*, came into guardianship in 1939. The fort walls, gates and the Headquarters building were consolidated prior to 1945. In 1970 the bathhouse was excavated by the Vindolanda Trust and then consolidated by the Ministry of Works (Fig 177) in 1972. When Anderson retired from the Department of the Environment he was appointed Consultant for Consolidation by the Vindolanda Trust and in that capacity gave invaluable advice during the consolidation of the *vicus* between 1974 and 1976 (R Birley, pers comm).

### Hotbank

By 1960 the Ministry of Works and the National Trust were beginning to co-operate on methods of consolidation along parts of the Wall that belonged to the Trust, following high level meetings between the two organisations. In November of that year Anderson wrote to the Superintendent of Works in York that work on the above section had finished and that treatment had been applied to 18yd (16.5m) of Wall. Four or five courses of dry wall had been removed from the top of the Roman Wall, which had then been secured, the core re-built and lime pointed, as well as the facing stones in the Roman wall. The dry wall was re-built above the Roman Wall and turf laid on the top of the Wall. Anderson supplied a sketch of a cross section of the Wall showing the original Roman wall with the later dry wall and turf capping on top. The National Trust supplied one mason as well as a part time



labourer, who was an old age pensioner. The cost of this work was £255 16s 10d, which was paid by the National Trust. In 1968 they carried out preservation work on a further 25ft (7.6m) of Hadrianic foundations, costing £60.

### Castle Nick Mc39

A length of Wall belonging to the National Trust to the east of Castle Nick received the attentions of the Ministry of Works with the help of a National Trust mason, of whom Anderson said, "they thought he would know all about consolidation of the Roman Wall when he had completed a short section, I don't think he has recovered from the shock yet."

Within the core there was very hard, original (Severan) Roman mortar, which was exposed. Anderson recalls that someone from the National Trust erected a sign saying Original Roman Mortar. However, this was quickly taken down when it was

Fig 176  
Team at work on the bathhouse at Vindolanda, 1972.

Fig 177  
Consolidation work on the north-west corner of the Housesteads latrines, 1963.

noticed that the mortar was disappearing rapidly, pieces being taken away as souvenirs by visitors.

Anderson said that he would like to see the Wall east of the milecastle all the way to Housesteads receive consolidation treatment, removing all National Trust and Clayton building work, or that carried out by anyone else. The Ministry of Works wanted to take responsibility for the entire length of Wall but the National Trust, having acquired the section from Housesteads to Steel Rigg, was not willing to relinquish control. In 1968, as part of the co-operation between the Ministry of Works and the National Trust, Anderson's masons consolidated 112ft (34.1m) of Wall at the west end of Castle Nick at a cost of £220, and carried out first aid treatment to a further 330ft (100.6m) by cleaning out and lime pointing cavities at a cost of £100 (National Trust File HW\EG 1969–73).

### Cawfields

The whinstone quarry at Cawfields, which had been operating since at least 1896, finally stopped production in 1952. Several photographs from the 'Picture Post', in the Anderson Cawfields album, show the quarry and Wall in 1943.

The Cawfields section of Wall stretches for a distance of 1.2km. Within this sector are T41a, T41b and Mc42 (Fig 178). The milecastle was exposed by Clayton in 1847–8 and the turrets located in 1912 by F G Simpson (Simpson 1976, 108). Consolidation work first began here in 1960, the year it came into guardianship, and continued through until 1973. Anderson noted that the milecastle had "become mostly covered again with soil and turf" and that the south face of the Wall had also been exposed, perhaps at the same time as the milecastle, from the field entrance gate west of the milecastle as far as Thorny Doors. He said that there were a few courses of original or undisturbed face work.

Fig 178  
Consolidation team at work  
at Mc42, Cawfields.



"I lime pointed the face joints of the original work, but Clayton work I left 'angry' with outline pointing. The north face of the Wall

was covered with soil and shrubbery and well hidden from view with the exception of the top course or so in the milecastle area. To the east of Thorny Doors the Wall was below ground level and for the majority of the distance there was a dry-stone wall built along top."

Part of this wall was dismantled and re-built about 30m south of the Wall (and T41a) and parallel to it to form a new field boundary for the benefit of the farmer. Speaking in 1980, he recalls visiting the Wall with Mr Gilyard-Ber, the Inspector of Ancient Monuments, and:

"seeing the National Trust excavating along the north side of the Wall at the same time re-building the face with the stones they were uncovering Clayton all over again. Mr GB soon put a stop to that ... unless of course they have made a move in the last year or two, like the Vallum mound in the car park at Twice Brewed, which was frozen for many years, but has disappeared in the last year or two."

The location of the incident given by Anderson in the transcript (page 8) is Cawfields but the photograph he refers to (PP7) shows the line of the Wall between Hotbank Farm and Rapishaw Gap looking eastwards. The Hotbank sector of Wall had come into the ownership of the National Trust in 1942. In a note dated 1 March 1967 Anderson reported that the owner of the Twice Brewed Hotel had removed a further 20yd (18.3m) of turf from the south side of the south mound of the Vallum. In 1962 Gilyard-Ber had said that they must not consolidate any masonry unless they were certain that it was not Clayton or other work. He also suggested that from the milecastle westwards to the field gate the wall should be reduced in height to three or four courses at most unless they were certain that the original Roman work went higher. The reduction work was not to be done in one operation, as it would attract attention, but by removing different areas every few days as inconspicuously as possible. This does not seem to have been carried out to judge from the height of the Wall as now consolidated.

Anderson was well aware that Clayton and others had been working on the Wall before him, repairing and re-building, and he could tell where the earlier interventions had occurred:

"Clayton made a good job of his coursing. If you get any alterations, anyone else following, the farmer or anyone else like that, the courses were not so good. They'd be up and down, little pieces of stone

packed in here and there to level up the courses. Clayton was very particular with his coursing of masonry. That's one way you can tell Clayton from the rest of the world."

Anderson was aware that where there was grass growing in the Wall joints that it was likely to be undisturbed Roman material. He was also keeping the Inspector of Ancient Monuments (Dorothy Charlesworth), who had taken over from Gilyard-Ber, informed of anything out of the ordinary that he found on the Wall, including the unusually large blocks in the north face of the Wall just east of Mc42 (Charlesworth 1963) and three possible parapet stones found in the fallen debris (Charlesworth 1968, 69–74).

Anderson noted the difference in weathering on the facing stones between the worn blocks in the top section and those in the lower courses, which had hardly been weathered at all. The facing stones at Thorny Doors showed the greatest amount of weathering that he had seen anywhere along the Wall. He thought this was because the gap in the hillside acted like a flue.

"The wind and storms would be blowing from the north very fiercely and nothing weathers the stone more than the wind and rain. You can see all the edges of the stone worn away, especially the top half. The bottom half must have been pretty well covered in Roman times, because there is hardly any weathering at all on the lower few courses. I haven't seen stone weathered so much on the Roman Wall anywhere as they are at Thorny Doors."

He also points out possible Roman putlog holes in the Wall face (for scaffolding poles) in a couple of the photographs taken at Thorny Doors. Certainly during the consolidation process the workmen had to use scaffolding, owing to the height of the Wall. Much of the north side of the Wall was original, while some areas of the south face had been added to by Clayton's workmen in the 19th century. He said that at the extreme west end of Cawfields there was also a lot of very hard mortar, but the frost got at it and it could not be saved from disintegration. Anderson noted that during the many years of uncovering and consolidating sections of Wall they had never found any discarded, broken or worn-out Roman tools. This is probably because any metal tools or implements would have been recycled.

### Great Chesters

First aid treatment was carried out at Great Chesters to the various walls of the fort, including the West gate, barracks and bathhouse. Parts of the site had been opened up as early as 1894 (Gibson

1903, 19–64) and although the site has never been taken into guardianship it was felt necessary that there should be some remedial works undertaken. A modern mortar pointing was applied between the exposed joints to protect the upstanding masonry from further frost and stock damage. In 1969 the repairs to the stonework of the strongroom and replacing and re-bedding loose and fallen stone was estimated at £200. Work started on 2 June of that year and was completed on 24 July at a final cost of £189 17s 9d.

### Walltown

The 400m of Wall were given into guardianship by a deed of gift in 1939 and operations at Walltown quarry ceased in 1943. T45a, which had been discovered by Claytons chief excavator Mr W Tailford in 1883, was examined in 1959 prior to consolidation (Woodfield 1965, 162). T45b, which had also been discovered in 1883, was destroyed by quarrying activity soon after, as predicted by Bruce in that year (Bruce 1883, 235). The consolidation of Walltown began in 1959 and continued into the

Fig 179  
Consolidation on the south  
face of the Wall at  
Walltown.







Fig 180  
Consolidation on the north face of the Wall at Thorny Doors, where the original Wall face was 10ft (3.05m) high.

Fig 181  
Chamfered stones found during consolidation at Walltown.

Fig 182  
Centurial stone (COH VI >CALEDO SECUNDI) found at Walltown.



early 1960s. Woodfield (1965, 164) noted that the junction of the north corners of T45a and the Wall had been mortared in the past and covered with bracken and netting to protect it. F G Simpson may have carried out this work after he had finished his investigations in 1913.

Of all of the sections of Wall that Anderson helped expose, his favourite was at Walltown Crags (Fig 179). He said:

“Walltown is one of the best and most interesting of all the sections of the Wall I have had the pleasure to expose. There had been no modern interference; even Clayton worked in the area, but for a change he failed to leave his trademark. All the curtain Wall we exposed was original and in an excellent state of preservation and in most cases, it was only necessary to remove the top course or two and the top layer of core for re-setting and waterproofing, and the remainder of the face joints were raked out, removing soil and perished mortar, washing out with water and re-pointed with new lime mortar.”

When this section of Wall was exposed Anderson was impressed with the quality and class of building work that had survived, standing up to 14 courses high (Fig 180). He also noted the fact that the original builders had constructed the Wall directly on top of the natural bedrock without the normal foundations found in other sections of the Wall. He photographed a section of the core, which had been buttressed as the Wall climbed the steep incline of the slope. Several drains run through the Wall and the north side of one of these has a curved top stone.

He noted a change of alignment of the Wall slightly to the north of its intended line, which is related to a stepped offset course. He thinks this is where it was decided to follow a slightly easier line rather than having to build over the tops of the crags. A similar change of alignment is seen on Cuddy's Crags 100m west of Mc37.

Anderson noted that beneath the collapsed Roman stonework that they uncovered from the face of the Wall there was a certain amount of soil build up, which must have happened prior to any Wall collapse. This may indicate that the base of the Wall was not kept clean of decaying vegetation growth during the Roman occupation of the Wall. He also comments that the chamfered stones, which are shown in a large pile in one of the photographs, must have come from the top of the Wall and that they were mainly, but not exclusively, found on the north side of the Wall (Fig 181). He noted that the original Roman mortar was in a bad state and that they did not find any that they could do anything with.

The photographs of this section of Wall show how much was visible prior to work commencing, and there are numerous photographs of the Wall as work progressed, uncovering and consolidating the remains. At least 11 centurial stones were found in material fallen from the Wall as well as one *in situ*

built upside down in the north face of the Wall and their locations noted in the *Journal of Roman Studies* for 1960, 1961 and 1962 (Fig 182).

In 1969 Anderson delivered 14 inscribed facing stones to the Museum of Antiquities in Newcastle. Twelve were from Walltown and two from Sewingshields. Eric Birley commented that the find spots had been noted with exemplary exactness by Mr Charles Anderson, the Ministry of Works' Charge-hand, and it is already evident that they will give considerable help in working out the exact lengths built by individual Roman army centuries (Birley 1961, 258).

While the consolidation was being carried out at Walltown, Anderson took a number of photographs of T45a after it was excavated and exposed, prior to consolidation. They show that the turret had been built directly on top of the underlying bedrock. During the consolidation of the Wall the adjacent ground surface was landscaped.

“On the north side we usually took a levelling straight out to the cliff face which is never very far away and on the south side we took a level or line from the bottom offset course out into the field as long as it was good to look at and suited the eye.”

### Long Byre

This is a short stretch of Wall on the west side of the road leading from Greenhead to Gilsland (NY656661). Anderson says that (in 1957):

“some road work was going on near this section one day as I passed, [and] the foreman in charge gave me permission to check if there could be any Wall. I was lucky it was passed on to the excavators, after which we carried out our treatment.”

It appears that he must have informed Mr J P Gillam, who reported the fact to the Inspectorate of Ancient Monuments, who then arranged an emergency excavation to be carried out in July 1957, under the direction of Peter Salway, to uncover and record the section of Wall. On completion of the excavation 8m of Wall were consolidated by the Ministry of Works. Had not been for the observations of Anderson, this section of Wall might have been lost in the road-widening scheme.

### Poltross Burn

Mc48 came into guardianship in 1938, having been first excavated in 1886 and then again in 1909–10 (Gibson and Simpson 1911). In 1960 the cutting close to the milecastle was filled with ballast because increased rail traffic made the shoring unsafe. The Ministry of Works re-opened the site, which had

been back filled, in 1965–6 and carried out their normal consolidation treatment of the whole site. At the east end of the Wall a reinforced concrete beam was placed below the ground surface adjacent to the foundations to stop the Wall from sliding down the slope into the Poltross Bum.

### Gilsland Vicarage

The section of Wall through the garden of Gilsland Vicarage was placed in guardianship in 1945. The south face had been cleared of soil in 1894 by Francis Haverfield, although a short piece of the Wall had already been cleared in June 1877 by the Rev A Wright, vicar of Gilsland, during an excursion of the Cumberland and Westmorland Antiquarian and Archaeological Society. A cross section through the Wall in the vicarage garden was dug in 1927 (Simpson 1928, 385).

In 1949 Anderson began clearing the soil from the top and sides of the Wall as well as dismantling the field wall built on top and exposed more than 200m of the monument for consolidation. There were several centurial stones around the front door (Collingwood 1933, 168) and Anderson was told he could take any of them – otherwise they would be used in the re-building. He removed them to the site at Corbridge Roman fort. These must be RIB 1856, 1857, and possibly 1858.

### Willowford and Milvain

The Willowford bridge abutment came into guardianship in 1939, and the rest of the Wall eastwards (Willowford Farm and Milvain) in 1946. Work on the length of Wall from the main road to Willowford bridge was carried out in three stages over a number of years. The dates given by Anderson on the back of one of the photographs (Willowford, Book 2, no. 179) for the work are: sector one (east) – from the main road to where the farm track crosses the Wall (1950–2); sector two (central) – from that point to Willowford Farm (June 1960–June 1963); and sector three (west) – from the farm to the Roman bridge abutment by the river Irthing (October 1962–September 1964). However, some of the photographs show that work was being carried out on the eastern sector up until 1954.

Within the east section of Wall is T48a, which had been excavated in 1923 and then back filled (Shaw 1926, 437–50). In a photograph taken by Anderson in 1954 the south wall of the turret is visible in the wheel ruts of the old cart road leading to the farm, and a field wall lay on top of the Roman Wall. The old cart road was removed and a new road laid out by the the Ministry of Works, the line of which is shown on one of the photographs.

In 1952 Anderson wrote to the Superintendent of Work (EH file AM 10048/01) saying he had put a few trenches along the line of the Wall towards



Fig 183 (top)  
The wall face excavated at Willowford, east of the farm.



Fig 184 (above)  
Clearance of debris and tree roots from the Wall at Willowford.



Fig 185 (below)  
Mechanical clearance of rubble near Willowford Bridge.

Willowford and found the Wall with ten courses of ashlar and standing in several places' 8ft or 9ft (2.4-2.7m) high and any amount of stone along the side of the Wall to raise it another course or two.

In 1955 several masons opened up a section of the Wall in the central sector at Willowford, so that a Ministry of Works photographer, Mr Broadrim, could make a record of their work for an exhibition held in London. These photographs are reproduced in Whitworth (1994, 69). By 1960 works had progressed to the central sector, including T48b, where the Wall was uncovered from Willowford Farm eastwards towards the farm track crossing (Fig 183). The turret had been excavated in 1923 (Shaw 1926, 429-7) when the turret to the east (T48a) was also being uncovered. The tree growth was removed, and although Anderson notes that there were a lot of trees to cut down, their roots did not penetrate the Wall to any large extent, as they tended to travel over the sides of the monument, thus more or less holding it together.

As the Wall was being opened up, by pick and shovel, the soil and rubble lying next to and covering the Wall was moved by small dumper trucks and scattered around the farm fields (Fig 184). In parts of the Wall there were more than seven courses of original Roman facing stones *in situ*. He noted the three offset courses at the bottom of the Wall on the north face and the 2in (50.8mm) offset above and related this to the Broad Wall foundations.

"This Broad Wall business puzzles me. You get three or four courses of masonry on the south face running along on the Broad foundation and then the Romans have built their Narrow Wall leaving these courses standing. I think if I'd been building the Roman Wall and changed my mind, I'd have used those stones instead of leaving them like that. Whether the mortar was too hard to remove them or whether they were used for some building purposes, it's a bit puzzling this Broad foundation business."

The central section provided a very good example of how the Wall was constructed by the legionary soldiers in this part of the Wall; a course of facing stones was put in place, which was then filled in with core from face to face and then a spread of lime mortar on the top. This was repeated course after course until the desired height was reached (Willowford/Harrow's Scar Bk 1, 100-2). The core here was in an excellent state and is probably evidence of Severan rebuilding.

"We cleaned it off, brushed it and washed it down but it didn't last very long when the frost came along. Apart from the section where the

excellent core was, we found very little lime mortar worth bothering about. Once the frost gets at it, it's better to get rid of it and do the necessary re-building at the time."

Anderson was also puzzled by the size of some of the blocks in the Wall, as he commented that when excavating at Willowford east (sector one), where they had two or three courses of original masonry, they found many fallen stones that were much larger than those actually in the Wall. He thought that it did away with the idea that there were big stones in the base and they got thinner as they get to the top of the Wall. These larger blocks may have been part of the superstructure of T48a.

One of the photographs is a close-up of several courses of facing stones showing original Roman mortar spread over the face of the blocks (Willowford/Harrow's Scar, Bk 1, 106). This has been observed in a number of other places along the Wall (Crow 1991, 59).

At the west end of the Willowford section, from the farm to the bridge abutment, a line of mature oak trees was growing on top of the Wall and a field wall had been constructed with re-used facing stones. Anderson said this was the worst section for trees. Once the trees had been felled, the removal of the stumps required the use of heavy machinery on the site so a bulldozer, supplied by Browns of Thursby, was used to ease the root remains free of the Wall and also to move the tree trunks away from the Wall face. A number of photographs show this operation taking place (Fig 185). This was the only time that such a large piece of equipment was used by the workmen along the Wall.

The bridge abutment at Willowford had been examined by Dr R C Shaw in 1923 and given to the nation in 1939 by Lord and Lady Henley, whereupon the Office of Works began to restore the visible remains (Simpson 1976, 49).

Mr Anderson recalled, in his transcript, that the consolidation of Willowford:

"was quite straightforward, there wasn't [sic] many snags. A lot of hard work and we hadn't much interference from these so called, you know..., as you get around. They seemed to be holding you back more than allowing you to go. We had a free hand. I could just carry on with the work, and everything went nice and smoothly. We just opened the Wall out as we went, preserved it as we went, and I think it turned out to be an excellent section."

The reference to being held back probably refers to the visits by the Inspector of Ancient Monuments and the Superintendent of Works.

At the river crossing the Ministry of Works constructed a temporary footbridge across the Irthing so that the members of the Roman Wall Pilgrimage in 1959 and 1969 could cross from Harrow's Scar to Willowford. The cost of erecting the temporary bridge for the 1969 Pilgrimage was £170. During the course of excavation and consolidation on this length of Wall a number of centurial stones were recovered from the fallen material (*see* Appendix 4, table 72).

#### Birdoswald and Harrows scar

The 400m section of Wall from Mc49 to T49b, including the walls and gates of the fort, had come into guardianship in 1946.

Anderson had first been introduced to the site at Birdoswald by the archaeologist F G Simpson who had excavated along the Wall for many years. Starting work on the fort in 1948, Anderson took a number of photographs of consolidation work being carried out on the east gate. Several of these photographs show a farm building, used by the farmer (Mr Hall) to house a pack of foxhounds, outside the east wall of the fort north of the gateway, and a field wall across the gate portals. The workmen removed both the farm building and the field wall. During this time the Ministry of Works located the interval towers north of the main gates on the west and east walls of the fort, and the north-west angle tower. Anderson says:

"after I'd been working some time I traced the inside face of the wall almost round its northern half exposing two interval towers and the north west angle tower. A man from the Ministry of Works came along and told me it wasn't part of the Wall, the towers, and we should not have exposed them. I suppose it would be one way of clearing himself in case anything developed, but I might say the owner and the agent at the time were very interested with what we were doing."

During May 1949 while in the course of removing part of the rampart backing of the east wall of the fort, north of the east gate, the workmen located a Roman bronze wrist-purse (Richmond 1951). It was preserved by the British Museum laboratory and found to contain 28 *denarii* ranging in date from 125 BC to AD 119. After the inquest the owner, Lord Henley, presented the finds to Tullie House Museum in Carlisle. A similar purse had been found at Birdoswald in 1930.

In 1949 Mr Macgregor and Colonel Shore, at the request of the National Trust visited a number of sites along the Wall to view the differing methods of consolidation. At Birdoswald Anderson was uncovering the east wall of the fort and they reported that they were re-laying and building the

upper courses in 5:1 cement and pointing in 3:1 lime. In 1950 the interval towers and the north guard chamber of the east gate were excavated by the Durham University Excavation Committee under the supervision of J P Gillam and Brenda Swinbank (Gillam 1952). Anderson noted that when they were “cleaning it out, it was filled with a black sooty soil.”

The north-west angle tower was uncovered and excavated soon afterwards, but there is no published record of the work (Gillam 1952). Initially a 25yd (22.8m) section of Wall top of the east wall of the fort was left with a turf capping, but in 1952 he was told to remove this and consolidate the top in cement.

West of Birdoswald fort a length of Wall and a turret were exposed and consolidated between 1953 and 1955. The turret, T49b (Birdoswald), had been excavated in 1911 and then backfilled. Anderson said:

“the north face was just a tumbled mess of thorns and trees and rubbish growing along the top. We excavated, cleaned it down and did the necessary preservation work on it. We had to bury one or two courses of masonry on its north side because they are down below the road level and it would have been dangerous to have left them exposed.”

A phallic symbol was located on the upper course of the south face of the Wall 12m west of the turret.

The length of Wall from the fort eastwards to Harrow's Scar was begun to be opened up in March 1956 and immediately a phallic symbol was found built *in situ* on the south face of the Wall. Six centurial stones were located *in situ* in the south face of the Wall, as was as another phallic symbol. Anderson fixed into the bottom courses of the Wall short pieces of non-rusting delta metal to locate the inscriptions and phallic symbols; however, very few of these metal tags now survive. At least 13 other centurial stones were recovered from the fallen facing stones of the Wall (*see* Appendix 4, table 72). These eventually went to Tullie House Museum in Carlisle and the Museum of Antiquities in Newcastle. Some of the inscriptions had been found lying on the north side of the Wall. Anderson, who thought they had come from the north face of the Wall, mentioned this to Professor Sir Ian Richmond who replied, “Well Charlie, we've not yet found any in position in the north face yet [sic]”. Anderson was to find, at a later date, two centurial stones at Black Carts built in the north face of the Wall. However, this seems to be the exception rather than the rule.

Some time later the Wall was opened up from the Harrow's Scar end and work commenced in a westerly direction so that the two sections would eventually meet half way along. When work

commenced the photographs show that the Wall was completely buried on the south face so that the Wall top was level with the field. The Ministry of Works' official photographer, Mr Broadrim, took a number of photographs of the Wall between 1956 and 1958, showing the state of the Wall while work was being undertaken, as part of the official archive. Anderson noted that stones upturned during ploughing in the past had been thrown into the thorn hedge that stood on the Wall top. There had also been a stone wall with posts and rails along the Wall mound.

Up to ten courses of original Roman facing stones survive in an excellent state of preservation in this section of Wall and Anderson says that it was only necessary to reset the top course or two. He remarked on the thin string or bonding course of stonework that stretched across the width of the Wall. A large number of chamfered stones were found during operations in the length of Wall east of the fort and these were stored in the south-west corner of Mc49. The author located these blocks in 1991 during the course of recording the fabric of the Wall. These chamfered stones have been recorded and are now housed at Birdoswald fort.

While working on this length of Wall in 1956, the Ministry of Works masons came across the remains of a cist burial adjacent to the Wall face. Although burials of this nature in such a specific location are very unusual, no record of this discovery was ever noted or published, although a photograph of the remains exists in the English Heritage Photographic Archive (Crow and Jackson 1997, 65). A similar cist was uncovered at Sewingshields during excavations in 1976–7 prior to consolidation by the Department of the Environment.

The farmer at Birdoswald, Mr Baxter, showed Anderson a cremation urn, which had been unearthed in one of the fields south-west of the fort and pointed out the red patches in the soil. The curator of Tullie House Museum, Mr Hogg, visited the site to see the find and another, complete urn, was found soon after (Wilmott 1993; this volume p 276).

On the north face of the Wall east of the fort Anderson photographed another section of Roman mortar spread, which had partly covered the outline of the individual blocks (Figs 186–7). This method of pointing the facing block joints was applied, as an experiment, to a section of the south wall of the south granary when consolidation was carried out at Birdoswald after the 1992 excavations (Wilmott 1997, 119). This method, as applied by the Romans, may have resulted in the idea that the Wall was white washed or plastered. Anderson notes that once the frost got at it the mortar did not survive very long and soon needed to be replaced with a modern mortar.



At the east end of the Wall is Mc49, which had been briefly examined in 1898, partly consolidated in 1941 and excavated in 1953 by Professor Sir Ian Richmond prior to full consolidation of the site (Richmond 1956). The cost of work at Harrows Scar in 1959, as supplied by Anderson, was as follows: road widening of the track through the milecastle – £150 1s 5d; excavating the cutting back under the east wall of the milecastle – £60 2s 3d; and the building of the retaining wall – £28 15s 0d.

The problem of the river undermining the steep slope of the west bank of the Irthing river had been recognised by F G Simpson and attempts were made to stabilise the bank. The work included tipping a large amount of soil over the cliff edge onto a grille of timber and brushwood, which was intended to stabilise the bank. In 1953 a proposal to inject subsoil grouting was turned down. Other solutions included revetting the scarp with a drystone wall construction and tar spraying the area. By 1955 the soil from the excavations at Birdoswald fort was being tipped down the slope in an effort to give it a more gradual gradient down to the riverbank.

When work commenced in 1956 on uncovering the Wall east of the fort, the soil that was removed was also tipped over the cliff face at Harrow's Scar to help alleviate the steep slope of the west bank of the river and save the milecastle from possibly sliding down the bank. Anderson says that in January 1959 they got it nicely built up and grassed over when it collapsed down the slope into the Irthing, partly blocking the river and bringing down trees in its wake. The Superintendent of Works considered there was the danger of a further collapse on the south east side of the milecastle, threatening to engulf the only access road to Underhaugh Farm, and was of the opinion that the saving of the milecastle was beyond human effort (EH file AM 10350/01).

During an inspection of the site in October 1967 it was noted that approximately 100 tons of

soil from the escarpment had fallen away and that the cliff face was within 3ft 9in (1.1m) of the masonry. Plans held by English Heritage include architects drawings made in 1961 to try and solve the problem of slippage at Harrow's Scar.

#### T51 a (Piper Sike)

Taken into guardianship in 1952 this turret was excavated in 1970 by Dorothy Charlesworth and members of the Cumberland and Westmorland Antiquarian and Archaeological Society before its consolidation by the Ministry of Works (Charlesworth 1973).

#### T51 b (Lea Hill)

This was taken into guardianship at the same time as Piper Sike turret and was excavated in 1958 by Miss Charmian Phillips with the help of Charles Anderson and the Ministry of Works who then consolidated the remains.

#### Pike Hill signal tower

Found, and partly destroyed, in 1870 when the road over it was lowered. The remains were examined in 1927, 1931 and 1932 (Birley 1961, 140). The signal tower was taken into State guardianship in 1971. The stone wall on the south side of the road was taken down and replaced on a slightly different alignment and a public footpath created to allow visitors safe access from the turret to the signal tower.

#### T52a (Banks East)

The turret, discovered in 1927 and excavated in 1933, was the first section of curtain Wall to be placed in the guardianship of the Ancient Monuments department in 1934. The site and adjacent land were given by the landowners Lady Cecilia Roberts and Mrs W Nicholson, after which the Ministry of Works masons carried out consolidation of the fabric. Later Anderson supervised repairs and first-aid work to the structure, adding new mortar where necessary.

Fig 186  
South face of the Wall newly exposed to the east of Birdoswald.

Fig 187  
Original Roman lime mortar and pointing on the north face of the Wall to the east of Birdoswald.

### Hare Hill

This short section of Wall came into guardianship in 1972. The masons exposed the lower courses at the base of the Wall on the north side, the rest of the upper fabric having been rebuilt by the Earl of Carlisle in the late 19th century. The south face of the Wall had been robbed in the medieval period, leaving only the core. A cost for the cleaning of the site, excavation to the Wall and consolidation and pointing together with the formation of a path and the erection of fencing was made in 1967 by the Superintendent of Works and estimated at £1000.

### Walton

This is the most westerly section of Wall that Anderson and the Ministry of Works masons uncovered. The 20m length of Wall was given into Care in 1963 and authorisation given by F Gilyard-Beer in 1964 to uncover it after work had finished at Willowford West. This was finally done in the early 1970s under the direction of Dorothy Charlesworth (Snape 1996, 24). The masons exposed up to five courses of the porous red sandstone but it was evident that the core and facing stones would not survive the inclement conditions. During the winter months it was covered with bales of straw given to Anderson by one of his farmer friends. The Wall was then uncovered in the spring for visitors to view. In the early 1980s it was decided that the site should be permanently covered to preserve the deteriorating remains and consequently it was clamped with soil and given a grass covering.

In 1968 Anderson wrote to the Area Superintendent of Works in York asking to be relieved of all duties in the western sector of the Wall:

“Under the present conditions which prevail on this sector of the Roman Wall, which perhaps encouraged by the conditions of ‘The New Deal’ has given the powers that be, the unauthorised power to make conditions even more unpleasant, therefore I would consider it a favour if I could be relieved of all duties on this sector. The harmony that existed at one time has now disappeared. You will understand it grieves me very much to submit this application, but under these conditions which I find most unsatisfactory I have no desire to continue.”

### Consolidation methodology

The main aim of the Ministry of Works during the Anderson years was to preserve, not restore the monuments in its care. The Ministry was concerned that the Wall should not be reconstructed, rather that the buildings and walls of the Monument should be consolidated as found. No new stonework

would be added and minimal restoration carried out, and done so that it could be recognised as such. The masons on the Wall followed the methods of consolidation as recommended by the Ministry.

After clearing the top of the Wall of any trees, accumulated soil and associated debris down to the original Roman core, the Wall face was then exposed to its foundations. It was often the case that the core of the Wall survived better than the pointing on the face, so that the task of building a modern mortar and stone capping to protect the core and to provide a water run off was of some skill. About 18in (457mm) of the top of the core stones were removed, cleaned and reset in a mortar bedding mix of Portland cement and sand in varying proportions of between 1:4 and 1:6. This was designed to shed water from the top of the Wall and prevent percolation of moisture into the remaining Roman core.

In most cases it was necessary to remove several of the top courses of masonry facing stones, as these were normally loose and out of alignment, and required re-building. These building stones were numbered before removal to ensure that they were replaced in their original positions. The stones were washed clean and a bedding mix similar to that applied to the core was laid down and the stones reset in the Wall. It was envisaged that the consolidation work would have a life expectancy of 25 years.

The joints on the face of the Wall were lime pointed. The hydraulic lime pointing mix contained a ‘trowel full’ of ordinary Portland cement (opc) to each bucket of lime (for a record of the mortar mixes used on the Roman Wall see Appendix 4, table 70). Below the reset facing stones the joints were raked out where necessary to a depth of 1.5in (38mm) to remove the dirt and loose mortar. The joints were then thoroughly cleaned with water before the new pointing was applied. After the lime mortar on the Wall face had partially set, it was sprayed with a water syringe, which cleaned the sand and gravel in the lime mortar to give it a weathered appearance. It was desirable to avoid pointing during frosty weather but where this was unavoidable the work had to be protected by a covering of hessian sacking. It was also necessary to protect the new mortar during hot weather by damping the covering.

Efforts were made to match the pointing with the nearest original mortar. By adjusting the grit content of the mix and the

use of judicious washing and brushing, the masons hoped to produce a mortar that blended with the original work. A technical note issued in 1977 said that the use of pigments for colouring core binder was not recommended and that every effort should be made to achieve the original colour with selected aggregates or naturally coloured binders such as French hydraulic lime (DAMBH Technical note, May 1977).

Mr Anderson made it a habit to keep samples of the Roman lime mortar from each section of Wall on which his team worked over the years. He said: “I used to keep it in little plastic bags in my office at Corbridge, but I suppose modern times have done away with all that sort of thing.”

He remarked that the locating of sand must have been a problem for the Romans when they built the Wall, as it had been a similar problem for his team in its consolidation work. He noted that nearly every site had a slightly different texture.

“The sand would be coarse with a lot of gravel in it in some sites while others would have very fine soft sand, almost like river sand. I suppose the sand would be mixed with lime about 3 to 1. They would need an awful lot of sand.”

Anderson commented that the texture of the original Roman lime mortar was studied for colour and the sand makeup. Samples were then mixed until they got the makeup similar to the original on that particular section.

In 1985 Mr J A Griffiths, Superintendent of Works for the North, based in Carlisle, commenting in the Roman Wall Mortar Mixes Report said:

“One fact becomes patently obvious and that is that the bedding mix is invariably weaker than the pointing mix. The general philosophy that experience seems to have indicated is that thermal movement in large masses of mortared masonry is better able to be absorbed without fracturing when the hardening agent in the mortar is hydraulic lime and when the mix is calculated so that in its composition it does not compete with the stone for hardness. The practice of adding Ordinary Portland Cement to the hydraulic lime-based mortar was to provide a pointed

surface more resistant to the rigours of summer and winter weather.

With the demise of the last economically available source of hydraulic lime, technical officers (of the Department of the Environment) have been obliged to use Ordinary Portland Cement as a hardening agent together with the use of hydrated lime as a plasticising agent. Two problems have emanated from this: the difficulty of achieving the right colour of mix when dried out, and the considerable fracturing of the surface pointing caused by the imbalance in thermal expansion and contraction within the Wall owing to the very hard pointing. Experimentation had proved that the mix of Ordinary Portland Cement-based mortar on the Wall cannot be made any weaker, as to do so renders the mortar very susceptible to frost action. From the practical standpoint it is evident that for the well-being of the Monument as a whole an acceptable substitute for Ordinary Portland Cement as a hardening agent is urgently needed (Johnson and Wright 1985, 11–12).”

The Hadrian's Wall Mortar Project was begun in the 1980s to evaluate three mortar types: lime-based mortars, hydraulic lime-based mortars and cement-based mortars. This led to the development of a wider full-scale research project, known as the Smeaton Project, which has been investigating the properties of lime-based mortars for several years. Presently English Heritage uses a hydrated lime and white cement mix that does not set as hard as the surrounding facing stones and also has an acceptable colour match to the original Roman mortar. Mortar trials will also be carried out on consolidating a short stretch of Wall at Willowford using a hydraulic lime and sand mix at 2:7 to assess its suitability and durability. Ordinary Portland Cement is no longer used by English Heritage in the consolidation work on Hadrian's Wall.

### Clayton Wall and the National Trust

Some consideration should be given to the initial method of excavating the Roman Wall and associated sites, which allowed both interested visitors and academics to view the previously buried structure.



John Clayton's life-long interest in the Roman Wall was certainly influenced by the Rev John Hodgson, who had begun opening up parts of the monument in the early 19th century. Clayton (1792–1890), the owner of the Chesters estate, began acquiring tracts of land along the line of the Wall and opening up sections of the monument as well as carrying out excavations, with his main campaigns probably taking place between 1848 and 1873. He set out enthusiastically to uncover and preserve his 'Wall Estate', and now lengths of so-called 'Clayton Wall' are to be seen at Peel Craggs, Hotbank Craggs and Cuddy's craggs, within the National Trust Estate. He employed workmen to uncover sections of Wall to expose the surviving masonry and used the fallen facing stones from alongside the monument to re-build it to a uniform height. The re-used material was laid, without mortar, in a dry-stone manner in level courses on the original Roman remains and new core work was added from the fallen debris. A turf capping, taken from the surrounding grassland, was added to the top of the Wall (Woodside and Crow 1999, 103).

The re-built Wall also functioned as an effective field wall along the top of the Craggs. In some sections the re-build was so carefully matched to the original work that it can be difficult to tell what is Roman work *in situ* and what is Clayton's re-built Wall (Johnson 1989, 130). On close examination the original Roman work can generally be distinguished by areas of either surviving hard mortar between the stone joints or crumbling and perished mortar mixed with earth in which grows the lime loving plant Maidenhair Spleenwort (*Asplenium trichomanes*).

It is acknowledged that once Clayton had opened up sections of the Wall, the technique he applied to the core and facing stones was in the best interests of the monument and assisted in maintaining the surviving Roman integrity of the Wall.

The National Trusts' method of preserving the fabric of the Wall within its estate generally followed the principles as set out by John Clayton and was carried on into the early part of the 20th century by F G Simpson. However, Simpson did comment on the effect that the opening of the Wall by Clayton had on the monument. He noted the serious damage done by frost and rain on account of the wide joints in the Wall and the condition of the mortar:

"The latter, although extremely hard and well preserved at certain points, is for the most part soft, and in many places entirely decayed. As a result of exposure of the Wall from about the year 1848, the mortar was soon washed out of the joints, from the face inwards, causing the heavy, wedge-shaped stones to slide forward and downwards, thus affecting not only the top courses, but, frequently, the full height of the exposed face, which bulges and finally collapses, carrying away the whole front at that point" (Simpson 1976, 78).

He considered that the only practical method of preservation was to re-bed some of the facing stones at vulnerable places such as corners of gateways with a new mortar but in the main the work was to be dry-built. The facing stones were not re-dressed or altered but laid directly upon one another with the space at the back of the blocks being packed with small pieces of broken core.

Although the restoration work carried out by Clayton has been relatively successful, problems, unforeseen by Clayton, have occurred. The sections of 'Clayton Wall' that pass through the National Trust Estate have suffered from frost, rain and stock damage, as well as from the countless visitors who have walked on top of it over the decades. The erosion caused by the ever-increasing numbers of the public walking on the turf capping of the Wall increases the effects of water and ice entering the core and joints causing further weakness and instability. The areas of 'Clayton Wall' that do collapse also include areas of original Roman work, which survives to varying heights in the central sector. In these areas the National Trust now uses a hydraulic lime and sand mortar to tail-bed the facing stones into the core to ensure that repair work on these vulnerable sections is kept to a minimum (H Beamish, National Trust Archaeologist, pers comm).

One of the aims of the Hadrian's Wall National Trail is to encourage the public to use the path provided alongside the Wall instead of using the top of the monument as a convenient walkway. The National Trust in recent years has been actively engaged in re-seeding and re-turfing the top of the relevant sections of 'Clayton Wall'.

## The Consolidation controversy of 1958

Since 1933, when the first piece of the Roman frontier (Corbridge) was taken into guardianship, there have been differing views as to the best method of preserving and protecting the Wall and its associated structures for future generations. The National Trust preferred the dry-stone walling and turf capping method, as it saw the Wall as an attractive feature in the landscape while the Ministry of Works considered the use of a cement capping and lime pointing to be more appropriate to a national monument of such historical and archaeological significance. At Housesteads the Trust wished to retain the turf capping on the fort walls and on the rest of the Wall in their ownership and for which they had responsibility when it became clear that the site would be placed in guardianship. Both parties solicited the views of archaeologists and professionals to support their preferred methods of preservation and at times the relationship between the Trust and the Ministry became fraught. The amount of correspondence held by both the National Trust and the Ministry of Works (now English Heritage) regarding methods of preservation is substantial.

On 10 October 1957 a meeting between the National Trust, the Ancient Monuments Board and the Ministry of Works was held at Lambeth Bridge House, London to try and establish a way of consolidating the Wall that was satisfactory to all concerned. Those attending included Lord Esher, the Hon Nicholas Ridley, Mr Romilly Fedden and Mr C Acland of the National Trust, Sir Mortimer Wheeler, Mr Raleigh Radford and Professor Ian Richmond from the Ancient Monuments Board, and Mr Baillie Reynolds and Mr F Gilyard-Beer from the Ministry of Works.

The Chairman, Sir Edward Muir, said the Ministry would continue to use the methods that they considered most effective on sections for which they were responsible, but in the central sector a compromise had to be achieved between the National Trust and Ministry of Works. He suggested that where the Trust had to undertake repairs in the sections they owned, original core-work and facing stones should be consolidated by the Ministry's methods, such pointing being undertaken as was necessary for adequate protection, the Wall being thereafter built with the recovered facing stones in the

customary National Trust method with a turfed walk on top. In order to determine whether this proposal was practicable there should be consultation between the Trust and Ministry so that a section of the Wall in National Trust ownership could be treated by the new method. It was agreed by all the parties that the compromise should be tried in an effort to reconcile the views of the National Trust and the Ministry of Works on the treatment of the Wall.

The report prepared for the National Trust in 1949 (National Trust files HW/EG 1948-1950) concluded that the Roman core could not be left unprotected to disintegrate. Two methods of protection had been used, the turf sod and the re-constructed core. Of the two, the former would appear to be the less misleading and the more harmonious aesthetically while the latter may be more long lasting. Perhaps the best solution, they concluded, would be to combine the advantages of both methods: by placing a protective course of stone in cement-mortar under the turf capping.

As early as 17 and 20 August 1947 letters had been printed in *The Times* regarding the methods of consolidation of the Wall, but in 1958 the archaeologist Jacquetta Hawkes wrote an article entitled 'Battle of Hadrian's Wall' regarding the Ministry of Works method of exposing the Wall and consolidation technique. This was printed in *The Observer* on 9 February 1958. A further article followed on 30 March. Mr Romilly Fedden, the secretary of Historic Buildings for the National Trust, replied in *The Times* on 16 February that at the meeting between the National Trust and the Ministry of Works a programme of conservation for the important sections of the Wall owned by the National Trust had been agreed with the Ministry. This provided for the retention of the turf capping on the Wall and at the same time the Trust was to avail itself of the Ministry's expert advice to ensure that the archaeological interest of the Wall in the Trust's keeping was carefully preserved. Such comments raised the public's awareness of the Wall and questions were asked in the House of Commons (*Hansard*, 2 April 1958, cols 1323–56). Mr Francis Noel-Baker (Swindon) quoted one of the allegations:

"It is reliably reported that on the section near Birdoswald four workmen are employed with only occasional supervision. They dismantle the Wall,



nine feet [2.7m] at a time, stacking the square masonry and rubble filling and consolidating the foundations. The Roman mortar, which varied in colour from one age to the next and therefore shows repairs and alterations, is destroyed without record. Far worse, the work emerging from the hands of these excellent workmen is not Hadrian's Wall at all. It is a copy – and one which has lost all the gifts of time.”

He continued by saying that in a second article in *The Observer*, Mrs Hawkes said:

“The Minister stated that Roman masonry is never dismantled and rebuilt unless the stones are on the point of falling.”

Dame Irene Ward (Tynemouth) said that both Mr Eric Birley and Mr John Gillam had replied to the newspaper article, paying tribute to the skill of the workmen engaged in the work. They also said that the Minister's reply that the views expressed in the article were “absolutely inaccurate and unfounded” were in complete accordance with their own personal observation over a long period of time. Mr Eric Fletcher (Islington, East) said:

“There is the problem of whether or not the Department should preserve a monument in the precise form in which it is found, with all the accumulation of debris which has grown up around it since it was built, or whether there should not be a radical reconstruction, but a renovation in such a way to make the monument more easily intelligible to, and appreciated by, this generation”. He continued: “it may well be that in the course of preservation something is done which necessarily or inevitably disturbs the original nature of the original fabric and the way in which the stones were placed. But I noticed that Mrs Jacquetta Hawkes points out in her article in *The Observer* of 30th March: ‘It would be unfair to say that historical evidence is being lost in this way, but indisputably it could be.’”

Mr Nigel Nicholson (Bournemouth East and Christchurch), who was a lay member of the Ancient Monuments Board, said that

Mrs Hawkes was not only one of the most distinguished archaeologists of her day but was able to marry up scientific fact with a sense of landscape and culture. He continued saying that:

“When the Ancient Monuments Board came to consider this matter of Hadrian's Wall, it went into it with the greatest care. It consulted not only with those archaeologists outside the Board who know most about the subject, but also consulted with the National Trust – and with private landowners. In each of these cases the Board came to the conclusion that there was no single treatment of the Wall which was suitable for every part of it.”

He continued by saying the Board noted that a large part of it is a reconstruction dating from the 19th century and that part of the Wall west of Housesteads (‘Clayton Wall’) was more or less a fake in the sense that although the original stones were re-used they were pulled apart and replaced in an order that did not necessarily correspond to the order in which they were originally found. He said:

“The question arose, when new parts of the Wall were uncovered, should the Ministry treat them in exactly the same way as Mr Clayton did, and which the National Trust followed, or should it evolve a method which would be archaeologically less indefensible. The Ministry decided, and in this it had the complete backing of the Ancient Monuments Board for England, to preserve as much as possible of what it found, and to consolidate, render it waterproof, and, as far as possible, render it proof against the ravages of weather, sheep and trippers. If one has to choose between the National Trust method of preservation and the Ministry of Works method, the ‘Ministry's’ method is certainly sounder from the purely archaeological point of view.”

Interestingly Mr Nicholson suggested that the Ministry should make some serious research into a new mortar to consolidate the remains.

Mr Harmar Nicholls (The Parliamentary Secretary to the Ministry of Works) then addressed some of the issues arising from *The Observer* article. He said that there was no suggestion in the article that the general policy was wrong or deserving of particular criticism. The charge, he said, was that of faulty implementation of the policy. The articles suggested that the use of careless workmen and the lack of general supervision risked destroying archaeological evidence. He then went into some detail of the methods used to uncover the Wall:

“In sections of about twenty yards [18.3m] at a time a trained archaeologist and a Department architect accompany the Superintendent of Works on to the site and decide the character of the work to be undertaken and give detailed instructions to the charge-hand. In this case, the charge-hand [Charles Anderson] was a man of great experience, and in his private capacity is a member of the Society of Antiquaries of Newcastle. They pass detailed instructions through the Superintendent to the charge-hand, who then instructs his leading hand and the workmen as to the detailed methods of handling and the removal of waste. He tells the workmen exactly how he wishes the work to be carried out. The method of handling and of moving it follows a drill which has been very carefully thought out and under which careful instruction is given until the men themselves have some experience of the work involved. The leading hand is on the spot the whole time the work is being carried out. This procedure is meticulously carried out and even the authors of the article, after having given this great message of carelessness and unskilled work, could merely say: ‘It would be unfair to say that evidence is being lost.’”

He then went on to point out that the Ministry's methods have constantly been kept under review and have been approved by the Ancient Monuments Board for England as well as by established archaeologists such as Professor Sir Ian Richmond, Professor Eric Birley and John Gillam. Other members of the Ancient Monuments Board, including Mr Raleigh Radford, F Gilyard-Beer and Mr Rupert Bruce-Mitford, discussed the

controversy and expressed confidence in the methods used by the Ministry of Works (now English Heritage).

The National Trust has had only limited resources and staff to carry out their responsibilities and maintain the Wall in a satisfactory state and as a consequence parts of the Wall have suffered over the years. Although there are still conflicting views on the most appropriate and effective way of preserving the Wall for future generations the National Trust has accepted that all new sections of Wall that are excavated and consolidated on their estate are carried out in accordance with the guidelines prescribed by English Heritage. English Heritage acknowledges that as far as the ‘Clayton Wall’ is concerned it is acceptable for the monument to be maintained with a turf topping and that any repairs to the fabric blend in with the adjacent stonework. Both English Heritage and the National Trust now employ professional archaeologists on all newly excavated sections of Wall, as well as ensuring that there is a full and detailed recording of the existing fabric of the Wall and the associated structures before any work is carried out.

## Recording

Charles Anderson's combined interest in photography and the Roman Wall work meant that the photographic record he made of the work in progress has provided an invaluable archive that would otherwise not have been made. These photographs have provided a unique record of virtually all of the now exposed and consolidated sections of Roman Wall as they existed prior to excavation by the Ministry of Works. This record enables present day archaeologists to view the Wall as it was then being uncovered and consolidated.

Anderson also used an 8mm cine camera to record in colour various aspects of the work in progress, which he showed to interested organisations and groups along the line of the Wall. The film, which has been transferred to video tape, shows a range of activities carried out by the masons on the Wall. Some of the scenes are preceded by a caption denoting the activity. The winter conditions along the Wall are vividly depicted by scenes of workmen clearing their way into Housesteads through several feet or more of snow, and the use of snow ploughs along the Military Road near Limestone Corner.

The uncovering and consolidation of the monument at Willowford is extensively covered showing the method used by the Ministry of Works to preserve their ancient monuments: the felling of the tress on the top of the Wall before exposing and cleaning the Wall face and core; numbering, dismantling and cleaning the facing stones; re-bedding the facing stones and core with a cement and lime mortar; pointing the blocks with lime mortar; and washing the mortar joints in the Wall face to produce a slightly roughened effect to leave the monument in its final consolidated state.

The film includes the Durham Colleges Board Extra Mural Studies Summer School at Corbridge in August 1955 under the direction of Mr I MacIvor, BA. This shows excavations being carried out on sites XI, XX and Temple III, as well as a section on cleaning and recording finds. Also recorded is the excavation of the hoard of Roman armour, weapons, tools and implements at Corbridge in 1964.

In 1963 Anderson filmed the discovery of the Roman auxiliary kilns in the playing fields of Irthing Valley School (now the William Howard School) at Brampton (Hogg 1965, 133-68). The opening of the National Trust section of Wall east of Sycamore Gap towards Highshield Crags is shown, but not the main consolidation programme that exposed a large amount of original Roman mortar. The latrines at Housesteads fort were filmed while workmen cleared the backfilled material from the earlier excavation, before consolidation, as well as scenes from the fort during the excavations within the Commanding Officer's House and Hospital undertaken by Dorothy Charlesworth in the late 1960s and early 1970s. A video copy of Anderson's 8mm film is held by the Museum of Antiquities archive in Newcastle and the author has a personal copy given to him by the family.

After his retirement Mr Anderson initially offered the negatives to the hundreds of photographs he had taken along the Wall to the Department of the Environment, but he became disheartened by the Department's apparent lack of interest and so these were eventually given to the Vindolanda Trust, where they remain. In 1997 the (then) Royal Commission on the Historical Monuments of England made a full set of photographic prints, courtesy of the Vindolanda Trust, and these are deposited in the National monuments Record in Swindon.

No doubt Anderson had been influenced by the various eminent archaeologists with whom he had come into contact and with whom he had closely liaised, recognising the obligation to make some form of permanent record of his work uncovering the Wall and noting any unusual details. His dedication to the work can be seen in the numbers of inscriptions that were recovered from fallen material, photographed and recorded in various archaeological journals (*see* Appendix 4, Table 72).

No archaeologist was assigned full-time to carry out recording of the exposed sections of Wall, as the Inspector of Ancient monuments, who was based in London, made regular visits to view the work in progress and gave instructions on how to proceed. Mr Anderson was generally given a free hand to carry out excavation and consolidation within the guidelines and the instructions given by the Inspector. The photographic record confirms that Mr Anderson observed carefully what was being uncovered and took a close personal interest in ensuring that the highest standards of work were maintained by the men under his control.

### A walk along the Wall

In 1974 the Cumbrian author Hunter Davies published an account of his journey along the Wall from Wallsend to Bowness, during the course of which he met and talked to Charlie Anderson (Davies 1974, 214-223). Anderson, who was now 65 years old and due to retire shortly, took Davies to Black Carts and explained to him the process of how the Wall was uncovered and consolidated. Anderson was always willing to talk to anyone with an interest in the Wall and to pass on any information that may have been of use. Davies wrote:

“Charles Anderson is one of the grand old men of the Wall, yet he never gets acknowledged in the reference books. All students of the Wall know about the work of Simpson and Richmond and Birley. Their contribution is in every book on Roman Britain and will never be forgotten as long as the Wall is studied. Yet Charles Anderson has given a lifetime to working on the Wall. More than anyone else, he can say that the Wall we see today is his.”

Anderson showed Davies some of the photograph albums of pictures he had taken over the years he had worked on the Wall, including one photograph with himself and either F G Simpson or Sir Ian Richmond. Anderson spoke with admiration of the work of Simpson, Richmond and Birley and it is apparent that they had a mutual appreciation of the work being done by Anderson. He mentioned to Davies that he would like to see a replica of the Wall built to full height and was enthusiastic about the replica then being built at Vindolanda. Such a replica has also now been constructed on the line of the Wall at Wallsend as part of the development of Wallsend fort (*Segedunum*) by the Tyne and Wear Museums Service.

Anderson mentioned to Davies that Simpson used to leave a penny piece in the pivot hole in the doorway of every milecastle that he worked on. At the end of their time together Anderson presented Davies with three tiny altars, copies of ones he had helped to preserve at Carrawburgh temple. In 1971 the BBC asked to film some of Hadrian's Wall as part of the British Empire series. Having seen some of the consolidation work being carried out, they wished to film part of this and to interview Anderson.

In recognition of the work that Charles Anderson carried out over nearly four decades on the Wall, with his work force of 26 masons and labourers, he was awarded the British Empire Medal in 1968 and the Imperial Service Medal in 1974. He was also made an honorary member of the Newcastle Society of Antiquaries of Newcastle upon Tyne in 1969. On 28 September 1969 an article was published in *The Sunday Express* on his work on the Wall, in which Anderson is quoted:

“The more I do it the more fascinated I become and the more I admire the Romans for their sheer engineering

ability. I don't think many of the things we are putting up today will be standing in the year 3800. There is a compulsion about the job in which you discover new things every day and it spreads to every man involved. I have chaps who have been with me since before the war and who wouldn't dream of leaving until they have retired.”

Anderson's pet Alsatian dog was, naturally enough, called Hadrian.

Anderson understood the everyday life of farmers along the Wall and would take the time to talk to them regarding their concerns about the poor profits in agriculture, the problems caused by the ignorance of visitors, the effects of the weather and suchlike before dealing with issues like access to the site and the disposal of spoil from the excavations. The farmers in the area came to trust and respect him and he was a friend to many with whom he came into contact. He recognised that some farmers disliked 'the men from the Ministry' and went out of his way to re-assure them and to explain what he was trying to do to preserve the Monument. This invaluable ability to win their respect made a huge difference to the smooth running of the consolidation of the Wall.

On 21 March 1974 Charles Anderson finally retired as the Ministry of Works foreman on Hadrian's Wall. In 1987 the World Heritage Committee of UNESCO recognised the importance of the monument by confirming it as a World Heritage Site. There is little doubt that the valuable contribution made by Charles Anderson and the masons of the Ministry of Works helped push Hadrian's Wall towards the international recognition that it has now acquired.

Charles Anderson passed away after a short illness on 3 November 1998, aged 89.