

# **Roman Frontier Archaeology – in Britain and beyond**

Papers in honour of Paul Bidwell  
presented on the occasion of the  
30th annual conference of the  
Arbeia Society

Edited by

Nick Hodgson and Bill Griffiths



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Front cover: The Roman fort at South Shields, looking east with the mouth of river Tyne in the background

Back cover: Inscription of AD 222 recording the introduction of an aqueduct to South Shields Roman fort (RIB 1060). Background image: Hadrian's Wall under excavation on urban Tyneside, at Shields Road, Byker, 2001. Images copyright Tyne and Wear Archives and Museums



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# Abbreviations

*AE*

*L'année épigraphique* (1888- ). Paris.

*CIL*

Mommsen, T. *et al.* (eds) 1863-. *Corpus Inscriptionum Latinarum*. Berlin.

*PAS*

Portable Antiquities Scheme

*RIB*

(1-2400) Collingwood, R.G. and R.P. Wright 1965. *The Roman Inscriptions of Britain, I, Inscriptions on Stone*, Oxford: Clarendon Press.

(2401-2505) Frere S.S. and R.S.O. Tomlin (eds) 1990-1995. *The Roman Inscriptions of Britain, II, Instrumentum Domesticum*. Gloucester: Sutton.

(3001-3550) Tomlin, R.S.O., R.P. Wright and M.W.C. Hassall 2009 *The Roman Inscriptions of Britain, III: Inscriptions on Stone found or notified between 1 January 1955 and 31 December 2006*, Oxford: Oxbow.

All dates are AD unless otherwise stated.



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# Introduction



## Paul Bidwell – archaeologist

Arriving in the north in 1980 to excavate inside the fort at Vindolanda, Paul Bidwell was regarded by some as an *enfant terrible*. Here was someone from outside ‘The Wall Game’, an unknown southerner, undertaking an ambitious Hadrian’s Wall excavation. The report on that excavation – *The Roman Fort of Vindolanda* – appeared in 1985 and was striking in a number of ways. It was the first book-length report of a single excavation on the Wall ever to be published, displaying a new level of structural and artefactual analysis. But how many of us have explored all the highways and byways of that book? The interpretation was characterised by a tendency to challenge generally held beliefs. Paul had also written the coarse pottery report, producing what is still one of the most useful catalogues of 3rd and 4th century pottery types on the Wall, and showing at once that here was an archaeologist with an expert grasp of excavated material – the finds – as well as structural and historical data.

Brought up on the south coast, Paul had read law at Exeter University, but shortly after graduation went to work (1971) as a site assistant for the Exeter Museums

Archaeological Field Unit at the beginning of a six-year campaign which uncovered the baths of the legionary fortress at Exeter and the forum and basilica that had succeeded them (Figure 1). Paul’s abilities were such that by 1974 he had become assistant director of the unit, and in 1979, still only 29, he published the monograph report on the excavations, *The Legionary Bath-house and Basilica and Forum at Exeter*. A year later, Hadrian’s Wall beckoned.

In 1980 it meant that Paul brought to the northern frontier some unfamiliar methods (such as pottery quantification), expertise and ideas. After Vindolanda he turned his already capacious knowledge of Roman building techniques to the bridges of Hadrian’s Wall, where there were opportunities for survey and excavation in 1982-5. The report, *Hadrian’s Wall Bridges*, published in 1989, demonstrated that the bridge at Chesters had been of stone arched construction, not the timber platform previously imagined.

Paul started his association with the Roman site at South Shields in 1983, beginning really extensive excavations



Figure 1. Paul Bidwell at Exeter, 1972.

in that year. He remained based there, working for Tyne and Wear Museums Service, now Tyne and Wear Archives and Museums, until his retirement 30 years later. Paul was quick to realise that the Roman forts on Tyneside held huge archaeological potential, but that unless something was done to unlock this, the lack of upstanding remains and unlikely settings destined these sites to be neglected and ignored and to play little part in the lives of the people living around them.

One obvious way of giving poorly preserved urban sites meaning for a non-specialist public was to reconstruct some of the Roman buildings. Seeing that this was the only means by which long-term interest in visiting and excavating sites like South Shields was likely to be sustained, he threw himself behind the campaign to obtain consent to build the west gate at South Shields *in situ* (opened 1988), while the working Roman baths (opened 2000) and section of Hadrian's Wall at Wallsend (1994) – arguably still the only full scale reconstruction of the Wall there is – and the *in situ* barrack and commanding officer's house (2001) at South Shields, sprang very much from his personal vision and have transformed the cityscapes in which these sites lie. He was successful in doing this and won widespread – though far from universal – support because the sites themselves were carefully excavated and the reconstructions designed with academic rigour only after the exhaustive research of all evidence available from the sites on Tyneside and elsewhere in the Roman world.

From the very beginning Paul Bidwell was anxious to ensure that as wide a cross-section of people as possible should have an opportunity to participate in the work of research and reconstruction at South Shields and Wallsend; these included students and local people from diverse backgrounds, gradually developed into a team of paid professionals and an ever-growing army of volunteers, drawn from many countries as well as the local community. In the 1980s and 1990s, like Corbridge before it, South Shields became a kind of training ground for archaeologists, many of whom have since become leading practitioners or academics. At the same time, for many in the local community the inclusive volunteer and training schemes at South Shields and Wallsend have been a life-changing introduction to archaeology and the beginning of sense of place and appreciation of the Roman heritage of the region. It could be said that Paul's pioneering of socially inclusive excavations and research programmes on Tyneside formed the template for what would now be called community archaeology, an achievement recognised in his award of an OBE in 2013. One of Paul's last tasks at Tyne and Wear Archives and Museums was the development of the WallQuest community archaeology project that went on in 2013–16 to great success, discovering and excavating the lost Roman baths at Wallsend.

This was the culmination of many years of advocacy by Paul of the archaeological potential of the works of Hadrian's Wall as they run through urban Tyneside, which he had found undervalued when he arrived in the region. Distressed by the inadequacy of the archaeological mitigation, Paul nevertheless seized the opportunity offered by the destruction of 200 m of the Wall by the A1 bypass at Denton in the late 1980s to squeeze out as much information as possible, excavating in difficult conditions. Since then, he has consistently championed the Wall on urban Tyneside, urging that it should be excavated and displayed wherever the opportunity arises, as at Shields Road, Byker, where thanks to his persistence the Wall – its actual location previously unknown – has been excavated (with truly remarkable results) and partly displayed.

Given his wide-ranging contribution to the field of archaeology it would be easy, but an error, to overlook Paul's contribution to museology in his three decades at Tyne and Wear Museums. In addition to running the archaeology team Paul was also sometime curator of the museum at Arbeia Roman Fort, South Shields. In the days before the ready availability of computers he maintained a hand-drawn chart in his office showing visitor figures to the site and developed a deep awareness and understanding of who visited and why, something many museums still struggle to achieve today.

In the 1990s Paul led on the development of the new museum at Wallsend, having laid the seed for it with the excavation and reconstruction of a section of Hadrian's Wall to the west of the site. When the then new Heritage Lottery Fund emerged, North Tyneside Council asked him to develop a feasibility study, which led to the opening of Segedunum Roman Fort, Baths and Museum in 2000, now an established visitor attraction in the heart of an urban community. The new millennium saw Paul become Senior Manager of all the museums of both North and South Tyneside (the Roman forts of South Shields and Wallsend, South Shields Museum and Art Gallery and the Stephenson Steam Railway), assume responsibility for a wider portfolio of responsibilities across Tyne and Wear Museums, and support colleagues with other refurbishments, notably at South Shields Museum and Art Gallery. It was of course in his leadership of the programme of reconstructions across both fort sites that his archaeological and museological skills most effectively intersected.

With the team that he gathered around him in the 1980s and 90s Paul embarked on a programme of archaeological research that extended far beyond Hadrian's Wall on Tyneside to embrace not only the northern frontier zone but the province as a whole. He has remained active in his old stamping ground in the south-west, and published (often in collaboration with colleagues) a series of monograph archaeological



reports whose number, scale and quality can be rivalled by few archaeologists of his generation, including, in addition to those already mentioned, *Roman Finds from Exeter* (1991); *Excavations at South Shields Roman Fort, volume 1* (1994); *Hardknott Roman fort, Cumbria* (1999); *Roman Pottery from Excavations in Colchester 1971–86* (edited, 1999); *The Roman Fort at Newcastle upon Tyne* (2002) and *Hadrian's Wall at Wallsend* (2018).

He has also published for a wider audience a series of popular (or at least more generally accessible) accounts such as: *Roman Exeter: Fortress and Town* (1980); *Roman Forts in Britain* (1997, revised ed. 2007); *The Roman Army in Northern England* (2009) and has edited one of the most significant collections of Wall studies in recent times, *Understanding Hadrian's Wall* (2008). He was the first guest editor of *Current Archaeology* in 1999 with a Hadrian's Wall special issue. Nor have Paul's interests been confined to the Roman period, as we see from his publication of the pottery from a 5th-6th century trading station at Bantham Sands in Devon (2011), his study of the Anglo-Saxon crypt at Hexham (2010) and report on an early Anglo-Saxon settlement at Shotton, Northumberland (2014).

Paul's business acumen was quick to seize on the opportunity offered by the new developer funded archaeology of the 1990s to expand the museum's department of archaeology into a full-scale commercial contracting unit (TWM Archaeology) whose activities supplemented the capital development projects and research carried out at South Shields and Wallsend. In the following piece Jonathan McKelvey has provided an overview of the highlights of the unit's work under Paul's leadership. The excavation results from Roman Tyneside attracted attention abroad and there was indeed an international dimension to the work of TWM Archaeology – reflected in some of the contributions to this volume – with the South Shields excavations carried out in partnership with the US environmental charity Earthwatch and its hundreds of volunteers, and commercial and Euro-funded research projects taking Paul's staff to countries such as Germany, Austria, Spain, Portugal and Sudan. In 2009 TWM Archaeology hosted the XXIst International Congress of Roman Frontier Studies in Newcastle.

Those involved in developer funded digs throughout northern England, or present during the long years when vast areas of Wallsend and South Shields Roman forts were meticulously excavated down to natural subsoil (Figure 2), will remember Paul's incisive interventions and guidance, at times gentle, stern, or seemingly unorthodox. It is in Paul's nature that he assumes that everyone should want to get involved in every aspect and constantly seek to interpret and to question. He ran the finest of training grounds. Excavators, he would say, should be able (at least in a rudimentary way) to date pottery as it comes out of the ground, rather than



Figure 2. Paul Bidwell at South Shields, 1987.

setting it aside for the specialist to add the chronological dimension when the site was written up. Indeed, when it comes to specialists, he maintained, they should be engaged with and interrogated if what they said was at odds with the structural interpretation (we have all read reports where the structural and specialist reports contradict each other). He has a particular dislike of the belief (no longer as prevalent as it was in the 1980s) that an objective archaeological record could be made via a single context recording system and written up by someone else with complete understanding at a later date. He set out his philosophy in 1994:

We reject the belief that it is possible to obtain adequate results by recording a site without understanding at the time of excavation the likely form of structures, the dating evidence and the general stratigraphical history of the site. No matter how comprehensive the observations made on site, the really significant details will often be overlooked unless there is constant testing of wide-ranging hypotheses during the excavations...at South Shields an interpretative approach is adopted: every effort is made to establish the significance of the contexts at the time of their excavation...in the overall interpretation of the site.

What has characterised Paul's approach and what he has passed on to so many who have worked with him over the years, is essentially *independence of mind* – a questioning approach and a refusal to defer automatically to the judgement of others simply because they had

a particular finds, scientific or period speciality, or, especially, status. Most emphatically of all, he has never deferred to fashion in archaeological interpretation. Equally, Paul has never had any preconceptions based a person's background or whether they were the 'right sort' to be doing the empirical, hands-on-to-every-aspect sort of archaeology he has championed, as is clear from the diversity of origins in the people he has brought on or encouraged over the years – some of that variety can be glimpsed in the tributes from beneficiaries of his support that are included in some of the essays that follow.

The financial crash of 2008 and the increasing difficulty of working competitively within a local authority pay structure led to the closure of TWM Archaeology at the time of Paul's retirement in 2013, but the legacy of a quarter of a century of archaeological exploration, both research and development driven, is obvious from the publication record. Since then Paul has continued to publish prolifically and been involved in numerous archaeological projects and since 2015 he has edited the *Britannia* monograph series. In his 60s Paul taught himself to use Autocad and prepared all the illustrations for his *Hadrian's Wall at Wallsend* monograph himself – an example at once of his immense industry and belief that an archaeological director should be able to lay a hand on every aspect of the work. We look forward to reading what Paul has to say in print – we hope for

years to come – on Hadrian's Wall and other aspects of Roman Britain and the Roman frontiers, while his former colleagues at South Shields are working with him to bring the elements of that great excavation that are still formally unpublished to final publication.

The editors of this volume, through the distractions of other commitments, or perhaps mere indolence, were not able to organise it in time to coincide with one of the usual pretexts – a retirement say, or a 65th or 70th birthday. However, we are presenting it to Paul on the occasion of the 30th annual conference of the Arbeia Society, which he helped to found in 1991 and which supports research and community archaeology in the north-east, and whose conference has become known as one of the most exciting and accessible forums for debate on the Roman northern frontier. The Arbeia Society and its conference exemplify Paul's inclusivity and long-term determination to demystify and make open to all the archaeology of the region. Paul's grounding in the military and urban Roman archaeology of southern Britain and his expertise in finds means that a collection of essays by friends and colleagues who have worked with him over the years was bound not to be limited to the Roman north but to embrace aspects of the archaeology and material culture of the whole province of *Britannia* and the Roman world beyond. We salute a master of the archaeologist's craft, and hope that he will find enjoyment in these essays in his honour.



# The work of TWM Archaeology in the developer-funded field from the perspective of a practising contracting archaeologist

Jonathan McKelvey

Discoveries made during developer-funded projects undertaken by TWM Archaeology (the name given to the commercial contracting arm of the Archaeology Department of Tyne and Wear Museums in the 1990s) have made several critically important contributions to the understanding of the archaeology of the north-east of England. These form one element of several contributions made by TWM Archaeology (under the leadership of Paul Bidwell) to the cultural heritage of the north-east.

Paul Bidwell would be the first to emphasise that archaeology is a team enterprise requiring a group of individuals with a diverse range of skills and capabilities working together toward a common goal. Notwithstanding this, there is no doubt that TWM Archaeology would not have achieved the breakthrough discoveries detailed below without the leadership, direction and enthusiasm of Paul. As both the key architect and main driving force behind this organisation it is only right that his contribution is fully recognised, recorded and celebrated.

Paul's leadership of TWM Archaeology coincided with the onset of developer-funded archaeology which stemmed from changes in government planning policy in the early 1990s, obliging developers to fund the excavation of sites threatened with destruction by their projects. He recruited and developed a team that were positioned to meet the opportunities and challenges of this brave new developer-funded era. Paul took every opportunity to excavate away from the South Shields base, and the team evolved from a series of excavations – some research, some development-driven – undertaken in the late 1980s and early 1990s.

These included several Hadrian's Wall excavations, such as the initial uncovering of the Wall to the west of Wallsend Roman fort at Buddle Street, work on the Wall and Vallum at Denton, and two seasons of excavations on the west abutment of the Roman bridge at Chesters (a supplement to Paul's early-1980s work at the site), undertaken as part of a programme to mitigate riverine erosion. Several projects took place in the early 1990s ahead of large-scale urban renewal programmes, such as at the Riverside in South Shields – which revealed traces of the salt panning industry – or at Wylam Wharf in Sunderland, exploring the post-medieval development of the riverbank in the area.

Indeed, throughout the 1990s and into the current century the team remained flexible, operating across commercial archaeology, but also undertaking research-based projects. Away from the two Tyneside forts, other major works included the Roman bridge at Corbridge (again to mitigate erosion) and a major survey of the crypt at Hexham Abbey. There is no doubt that working across research and commercial excavations gave the team a variety of skills and experiences which enhanced the quality of the work delivered. In many ways, however, it was the purely development-driven projects which produced the most surprising and dramatic results. In what follows I have selected a small number of significant sites to illustrate key advances made in the understanding of the prehistoric, Roman, Anglo-Saxon and medieval periods.

## Prehistoric

A combination of factors has led to significant discoveries that have revolutionised the understanding of the late prehistoric period in the north-east. Advances in geophysical survey techniques, aerial photography and the opportunities provided by developer-funded archaeology have combined to provide the impetus for the discovery of numerous sites and enabled a new and clearer understanding of the archaeology of the region. At an early date Paul recognised the potential of utilising geophysical survey as a rapid method for locating and identifying sites. After initially working in conjunction with Alan Biggins of Timescape Surveys he worked towards the establishment of an in-house geophysical survey team at TWM Archaeology. This was a bold and consequential directorial decision which at the time involved a considerable investment both financially and in terms of training required.

There has been increased aerial photographic coverage of the north-east, with for instance Tim Gates identifying hitherto unknown prehistoric settlements at East and West Brunton, now part of Newcastle Great Park. From the early 2000s the Northumberland coastal plain to the north of Newcastle saw a rapid expansion of open-cast mining and housing developments that formed the background conditions for a revision in the understanding of the late prehistoric period. The fact that much larger areas were being stripped and systematically examined by geophysical survey and higher trench samples required by County Council

archaeologists has led to both the discovery of a greater number of sites and a more comprehensive understanding of their setting in the landscape. Crucially the financial resources made available through developer-funding also meant that it became possible to date sites that are poor in artefacts by means of extensive programmes of radiocarbon dating.

Between 2002 and 2008 TWM Archaeology excavated Iron Age earthwork enclosure complexes in a housing development 6 km north of the wall at East Brunton and West Brunton and in advance of surface mining at Blagdon Park, 12 km to the north. As well as these three settlements several lesser unenclosed sites and pit alignments were also investigated, giving the most complete sample so far of an Iron Age landscape immediately north of Hadrian's Wall. Subsequently work on other prehistoric sites at Shotton Surface Mine and Brenkley Surface Mine and at a number of housing developments in south-east Northumberland have made possible a revised and more comprehensive understanding of the late prehistoric period.

The most striking feature to have come to light relating to the prehistoric period is a regular system of landscape division consisting of a series of pit alignments or pit boundaries. These took the form of long lines of elongated pits snaking across the landscape. Scientific dating derived from their earliest fills cluster in the early centuries of the first millennium BC (late Bronze Age) but it seems likely that they remained open features partitioning the landscape into and through the Iron Age. One explanation of the pit alignments is that they may have demarcated parcels of landscape resources, including pastureland, woodland and access to rivers, that were the preserves of particular communities or groups of settlements. To date these pit alignments have been found at Fox Covert, Shotton, Blagdon Park, Ulgham and at Wallsend adjacent to Rising Sun Country Park. They testify to the widespread settlement and organisation of the landscape by the time of the late Bronze Age or early Iron Age (around 700 BC).

The detailed large-scale excavations of prehistoric settlements at East Brunton, West Brunton and Blagdon Park has allowed the formulation of a new model for understanding the settlement pattern for the Northumberland coastal plain. Palisade enclosures and unenclosed settlements represent the earliest settlement types, some of which may have their origins in the Bronze Age with the latter predominating by the mid-Iron Age period. By the late Iron Age, large earthwork enclosed settlements with banks and ditches

constructed on a monumental scale began to dominate the landscape. These substantial banks and ditches can only have been constructed with communal effort, with their striking visual effect being designed to reinforce the wealth, power and status of the occupants. Evidence from radiocarbon analysis shows that the earthwork enclosures were built c. 200 BC often on sites that had been continuously occupied since the late Bronze Age.

Subsequent work has shown that the density of settlement revealed at East and West Brunton and in the Blagdon Park area is typical and that on the most level and fertile part of the coastal plain for at least 25 km north of the Tyne the late Iron Age landscape was covered with these high-status enclosures at 1 km intervals, interspersed with smaller scale unenclosed settlements in a stratified society with complex links. It seems likely that the substantial earthwork enclosures represent a widespread social elite, while contemporary small unenclosed roundhouse settlements, and agglomerated small-ditched enclosures may have been dependent on the more substantial enclosures. The archaeological work has shown that by the late Iron Age the area of the Northumberland coastal plain was densely occupied by a complex society with much variation in wealth and status, a very different model to the former understanding of the area as being occupied by isolated subsistence farming communities.

Radiocarbon evidence suggests that these large rectilinear enclosures at Brunton and Blagdon Park, just to the north of Hadrian's Wall, came to an abrupt end in the second century. It has been previously argued that Hadrian's Wall had relatively little impact on the native population, acting primarily as a customs border. However, the archaeological evidence that has come to light in the last 20 years show the creation of a supply network and rudimentary Roman provincial society to the south of Hadrian's Wall and an abandonment of settlements immediately to its north. The idea that the Wall had a destructive effect on traditional Iron Age society to the north is a new insight. It is possible that native settlements immediately north of the Wall were cleared to form a demilitarised zone or that the densely occupied society could not be sustained as the building of the Wall had undermined the agricultural wealth and stability of a complex society.

**Further information:**

Hodgson, N., J. McKelvey and W. Muncaster 2012. *The Iron Age on the Northumberland Coastal Plain*. Newcastle upon Tyne: Tyne and Wear Archives and Museums.

## Roman

TWM Archaeology was well placed to take advantage of commercial work along the line of Hadrian's Wall. By the mid-1990s Paul had created a team of specialists with expertise in both the excavation and recording of complex Roman stratigraphy and the analysis of finds and the production of post-excavation reports. An integrated approach meant that it was possible to bring together the results from numerous small interventions to provide a clearer picture of the whole.

A wholly unexpected discovery in 2001 was a system of emplacements for obstacles on the berm between the Wall and its frontal ditch. These were found initially at Shields Road, Byker (Wall Mile 2) and later in the same year over a one kilometre length between Throckley and Heddon (Wall Miles 10-11).

The system of obstacles found at Shields Road, Byker consisted of three rows of elongated pits, the inner and outer row running along the line of the berm with the middle row aligned at right angles. These rectangular and vertical sided pits were most probably emplacements for an impenetrable entanglement of forked branches, close in appearance and function to *cippi* entanglements as described by Caesar. Each pit would have held two forked- branches at either end, the entanglement forming a substantial above-ground structure hindering access to the Wall by a potential attacker. In places the obstacles seem to have been accompanied by a mound raised on the south lip of the Wall ditch.

The discovery of the new element of Hadrian's Wall adds significantly to the understanding of the Wall and marks a significant contribution to understanding its function. The frontier work can now be reconstructed as what would have been a daunting and impressive linear barrier with a substantial wall, fronted by an entanglement and large ditch. The entanglement would have been part of a primary design, that, whether or not implemented everywhere, bound together the functions of the Wall, berm, ditches and turrets in a unitary whole. It is clear that they are a Hadrianic provision and were probably envisaged along the length of the Wall, the width of the berm at 6 m being unnecessarily wide otherwise. These obstacles represent the first discovery

of a new element in the repertoire of regular Wall works to be made in modern times. It is remarkable that these features had not been recognised before given the level of resources previously allocated to establishing the nature of the components of the defensive frontier. It shows the importance of being open to new discoveries and highlights the potential of future investigative work along the line of the Wall.

The rows of pits have since been found at several other points in the eastern 18 km (11 miles) of the Wall. At a number of sites where the pits have been located there is evidence for the refurbishment or renewal of the defensive entanglement.

The discovery of this additional defensive structure taken in conjunction with advances in knowledge about native settlement either side of Hadrian's Wall throw doubt on the interpretation of the Wall as primarily a facility for the control of movement of civilians. With settlement immediately to the north largely abandoned it is difficult to see the Wall as a system whose main purpose was to regulate contacts between separated populations. Conversely the development of villa estates and a supply network to the south of the Wall compels reconsideration of the Wall as a practical defensible barrier against raiders from the north. The discovery of this unknown system of obstacles between Wall and Wall ditch suggests that Hadrian's Wall was indeed designed with the function of being able to act as a defensive barrier. These discoveries have the potential to inform a paradigm shift in the understanding of Hadrian's Wall in relation to its function and impact on the native populations to the north and south of the frontier.

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## Anglo-Saxon

An Anglo-Saxon settlement was discovered in advance of surface mining at Shotton, near Stannington, 10 km north of Newcastle, representing a significant contribution to the understanding of the archaeology of this period. The settlement, excavated between 2009 and 2010, consisted of six rectangular post-built halls, two sunken-feature buildings, and a system of enclosures, fences and trackways. The site is one of a small number of Anglo-Saxon settlements to have been excavated on a scale and under conditions which allows for a detailed analysis of its layout and development over time.

The earliest period consisted of an unenclosed settlement established *de novo* in the early Anglo-Saxon period, with the radiocarbon dates indicating foundation during the mid to later 6th century. The settlement consisted of a cluster of three halls and another structure of uncertain type. These buildings were replaced by a more extensive enclosed settlement, with halls, sunken-featured and other buildings, pens and fenced areas, all located within a row of seven ditched enclosures. This settlement appears to have been established no earlier than the mid-seventh century and to have gone out of use in the ninth or tenth century. The layout of the enclosed settlement says something about its social organisation. The row of enclosures defined by multi-phased ditches suggests longevity and probably continuity of tenure, perhaps by individual households, with each enclosure representing a farmstead. Artefactual evidence recovered consisted of Anglo-Saxon pottery, loom weights and metalworking residues.

The excavation has provided a significant boost to the study of Anglo-Saxon settlement in the north-east of England. In the early medieval period Northumbria was at the forefront of political, cultural and intellectual developments. At its greatest extent in the 7th century the Kingdom of Bernicia, with its capital at Bamburgh, extended from Edinburgh to the Humber. Despite the importance of the early medieval period in the region little is known about settlement archaeology outside a restricted region in north Northumberland (Bamburgh, Yeavering and Thirlings) and the ecclesiastical sites to the south at Hexham, Jarrow, Monkwearmouth and Hartlepool. The discovery of this Anglo-Saxon settlement at Shotton represents an important finding with significant implications for archaeology in Northumberland and the wider north-east Region. Taken in conjunction with recent discoveries of other Anglo-Saxon sites (Felton, Cheviot Quarry, Lanton Quarry) it demonstrates that the rural settlement pattern was of greater density than once thought, with many other similar sites awaiting discovery. The site at Shotton, like several other recently located

Anglo-Saxon settlements lies at some distance from the original focus of the nearest medieval village. It is clear from the place-name evidence that Anglo-Saxon settlement in Northumberland was extensive. Some of the sites are likely to lie undetected in fields on the periphery of other medieval towns and villages throughout the region more of which will come to light through careful archaeological investigation prior to future development. The location, recognition and detailed excavation of further Anglo-Saxon settlements has the potential to gather the data required to answer many of the unresolved questions about the nature and extent of the Anglo-Saxon settlement.

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## Medieval

At Fox Covert Surface Mine 1.20 km north-west of the Dinnington, to the north-west of Newcastle, a medieval monastic grange farm was excavated in 2004-2005 representing, at 3 ha in area, the largest open area excavation undertaken in Tyne and Wear at that time.

The complex represented a monastic grange or specialist farm belonging to Newminster Abbey which acquired the *vill* of Horton, within which the complex lay, in 1157. The complex was probably a satellite farm linked to Horton Grange specialising in hemp production and cloth preparation. It was in use between 1250 and 1350 but had a sudden ending with evidence of burning and destruction of buildings.

The grange was focused on elevated ground overlooking Prestwick Carr to the south, being laid out as a series of enclosures arranged in a tight grid system with a main enclosure at its core. The complex lay by the side of a road flanked by ditches that ran south towards Prestwick Carr which would have been a marsh in the medieval period and used for the extraction of peat. It was clear that the road and enclosures had been laid out at the same time as the eastern roadside ditch also defined the western side of four of the enclosures.

Each of the enclosures was defined by ditches, with the main complex measuring 55 m by 40 m in area. In the interior the remains of two buildings were identified. One of the buildings may have had a stone foundation or dwarf wall but the remains had been heavily disturbed by ploughing and the other building was constructed on a frame of timber posts. A further enclosure to the south contained a large rectangular timber building that was possibly a barn. The interior of the main enclosure also contained a stone-lined well of exceptional quality and



this was completely excavated to its full depth of 7.30 m. A sunken cobbled area was inserted against the interior of the southern ditch and this was probably a purpose-built retting pond for soaking bundles of hemp stalks to extract their fibres for use in manufacturing coarse fabrics, ropes and sails. The grange was reached via a substantial metalled road, with wide flanking drainage ditches, that ran into the site from the north and then continued south down the west side of the two grange enclosures toward the Carr.

A search of the documentary sources suggested that the site was probably associated with Newminster Abbey, a Cistercian house on the outskirts of Morpeth. The Newminster Cartulary states that a grange at Horton and its turbary (the award of the right to extract peat) were provided with a stone road. It is possible therefore that the complex revealed by the excavation was the original Horton Grange or at least an outlying element associated with it, perhaps as part of the turbary. Its end in the second quarter of the 14th century was abrupt and maybe violent given the presence of destruction deposits. Possibly the site was a victim of the plague or one of the frequent Scottish raids; one such in 1327 wasted the township and turbary of Mason, located only 1.5 km to the south-east. Following the abandonment of the site a ridge and furrow field system was created over it, and the grange possibly being substantially re-established on higher ground at 'Old Horton Grange' 1 km to the north. The addition of the Fox Covert site to this distribution plot of known sites associated with Newminster shows a concentration of holdings in the Stannington and Horton areas. It is also notable that nine of the granges, including Horton Grange and the Fox Covert site, were situated within 15 km of the Abbey in a productive landscape which was populated by nucleated townships. The monasteries were at the forefront of innovation in agriculture and were responsible for the diffusion of new technology. The processing of hemp and cloth preparation on an industrial scale at the Fox Covert site provides an example of this both in terms of methods used and the scale of production. The sunken yard and evidence of water management at the Fox Covert site demonstrate a degree of engineering skill and adaptation that are the result of a concentration of specialist knowledge developed over time.

The Cistercian order based at Newminster Abbey had a considerable impact on the cultural and physical landscape of Northumberland between the 12th

and 16th centuries and played an important role in the development of agriculture in the region. The systematic excavation of the Fox Covert complex has made it possible to go beyond the fragmentarily preserved written record documentation to see how a monastic grange actually functioned and was physically organized in its landscape setting.

The Fox Covert complex was a wholly unexpected discovery. Its finding shows the benefit of the extensive geophysical and trenching evaluation strategies now being implemented by County Archaeology Officers even where no heritage asset is previously known. Documentary evidence suggests that there were many such agricultural and industrial complexes under monastic control in the north-east. The discovery of the Fox Covert site shows the rich archaeological potential that exists and potential contribution to the understanding of the medieval period in the region.

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An assessment of the legacy and achievements of Paul and his colleagues during the years that TWM Archaeology functioned both as a museum department and a commercial contracting organization would certainly give pride of place to the significant advances in knowledge made by the detailed long-term research excavations at South Shields and Wallsend Roman forts and to the detailed analysis and reconstruction of Roman structures at these Tyneside forts. However, Paul was not wedded to the Roman period, and was one of the first in the region to see the opportunity that the new developer-funded archaeology offered to enable archaeology to take place on a larger scale and make transformative discoveries in many other areas. This contribution has not been able to do more than select the most dramatic highlights from the hundreds of developer-funded archaeological projects carried out by TWM Archaeology under his leadership. But it says something about Paul as an archaeologist that he was interested and closely involved in them all – he was no narrow period specialist but turned his hand enthusiastically to the problems of the prehistoric, Anglo-Saxon, medieval and industrial periods. He was an inspiring leader and as a result our archaeological knowledge of the region is so much richer.

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