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POST-EXCAVATION ASSESSMENT
REPORT

VOLUME 1 RESULTS

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Northern Archaeological Associates

Marwood House
Harmire Enterprise Park
Barnard Castle
Co Durham
DL12 8BN

t 01833 690800

f 01833 690801

e rf@naa gb com

w www naa gb com

AI DISHFORTH TO BARTON
IMPROVEMENT

on behalf of

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Text C Ambrey, D Fell, S Ross, G Speed
and P N Wood

Edited by P G Johnson

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A1 DISHFORTH TO BARTON IMPROVEMENT

POST-EXCAVATION ASSESSMENT REPORT

VOLUME 1: RESULTS DRAFT

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A1 DISHFORTH TO BARTON IMPROVEMENT
POST-EXCAVATION ASSESSMENT. VOLUME 1

Summary

This report details the post-excavation assessment of the archive resulting from the programme of archaeological investigation carried out as part of the upgrading to motorway status of the section of A1 between Dishforth and Leeming, North Yorkshire. The majority of the fieldwork took place between March 2009 and July 2010, although some minor works extended beyond this period.

This report has been presented in three volumes. This volume provides a summary of the project background information, the results of the various archaeological interventions undertaken during the initial groundworks required by the scheme, an assessment of the significance of the results of those excavations, summaries of all of the specialist assessments undertaken on all of the artefactual, ecofactual and human remains recovered as part of the excavation works, including summary assessments of their significance, recommendations for the further analysis of all of the stratigraphic, artefactual, ecofactual and human archive where appropriate, an Updated Project Design (UPD) which considers the potential for the analysis of the evidence to contribute towards national and regional research priorities, how these analysis will be undertaken, and, proposals for the full and final completion of the archaeological works necessitated by the scheme through dissemination by publication and archiving.

Volume two contains all of the specialist assessment reports presented in full, in the format provided by those specialists. Volume three contains all of the illustrations that it was considered appropriate to accompany the report at this time. It includes all relevant maps and plans, and a selection of the photographic archive that was acquired as part of the project.

The evidence for early prehistoric activity was relatively small-scale and comprised isolated scatters of pits, some of which contained small assemblages of pottery, flint, heat-affected stones and charcoal. The only possible structural evidence of early prehistoric date was a ring gully located at Sinderby, together with some Eady Bronze Age pottery in an adjacent pit. Some worked flint and other artefacts were also recovered from topsoil.

The largest programme of excavation was undertaken at Healam Bridge where the majority of the archaeological remains fell within the area of the Scheduled Monument (SM Number: 34736/2). The excavation revealed extensive archaeological remains representing a Roman period settlement site and associated enclosure systems on both the north and south sides of Healam Beck. The focus of the settlement as excavated lay

to the immediate north of the beck, with further elements lying to the west of the A1(T), where multiple phases of deeply stratified deposits were identified including evidence for occupation and buildings. The excavated area to the north revealed a system of enclosures containing a number of buildings while to the south of the beck the continuation of the enclosure system and the eastern edge of the settlement was identified. Evidence for a series of metalled surfaces and possible roadside ditches suggested that the enclosures abutted the east side of a Roman road (possibly Dere Street), the remains of which lay partially beneath the later Great North Road. At least 35 burials were also identified across the site, with a focus to the west side of the A1(T).

Part of a substantial Iron Age and Roman period settlement was found adjacent to Humphrey Balk Lane (Fields 23-8) some 7.5km to the south of Healam Bridge and was also situated immediately adjacent to the presumed course of Dere Street. Here, enclosures, ditches and a trackway extended over 700m and represent the largest area of Roman activity outside Healam Bridge encountered within the scheme, although they were not as complex or deeply stratified. A number of smaller sites or clusters of archaeological remains were identified in other areas. The most extensive of these included a late Iron Age or Roman period enclosure complex located to the west of the A1(T), just north of Dishforth Road (Field 1), extensive evidence for a former field system north of Hergill Lane (Fields 33 to 40) and trackways or droveways defining a field system west of Leeming airfield (Fields 99-103).

Possible medieval settlement and an overlying later medieval field system were identified west of Leeming (Field 108) to the north-west of an area containing ditches filled with large quantities of metalworking debris (Fields 106-107). Archaeological features occurred for a distance of over 350m within the easement, and an adjacent balancing pond.

Abundant evidence for medieval and post-medieval agricultural activity comprising ridge and furrow, field boundaries and trackways was recorded throughout the road corridor. It is likely that a number of the post-medieval field boundaries which were identified had medieval antecedents, and many of these were aligned perpendicular to the A1 corridor. The remains of the Great North Road (GNR) were examined immediately to the north of Healam Bridge and at Leases Lane, Leeming Bar.

A full stratigraphic assessment of all of the excavated sites has been undertaken and an attempt has been made to construct a preliminary chronological framework, for each of the more significant archaeological sites for presentation in this report. This was predominantly based upon pottery spot dates and the limitations of such an approach are acknowledged. However, a full integration of the stratigraphic information with the specialist analyses of the various finds categories has yet to be undertaken, but it is readily apparent that such a synthesis will contribute substantially to the understanding of the archaeology of this part of North Yorkshire and the North East region, and will

significantly assist in the further development of a number of national, regional and local research priorities

Due to the limited quantity of early prehistoric remains encountered during the programme of work, their potential for further analysis is necessarily limited. Establishing the date and nature of the ring gully in Field 47 would clarify the date of this structure. There are relatively few recorded Early Bronze Age structures from this part of the Vale of Mowbray which are not funerary and this site has the potential to add significantly to this corpus. Given the restricted evidence, the pit groups and artefactual evidence have only limited significance and interpretative value, although they can still contribute to the corpus of information presently available for this period in the Vale of Mowbray.

Healam represents the most significant site recorded as a result of the A1 Dishforth to Leeming scheme. The excavations there examined a substantial proportion of the largest Roman site in the area between Aldborough and Catterick/Bainesse. The evidence recovered from Healam is particularly important, not only was it the largest and most complex programme of excavation undertaken on the scheme, producing the largest components of artefactual and ecofactual material, and the only assemblage of human remains, it was the only excavation undertaken on a site with a pre-defined model for its origins, development and use. The results of excavation give considerable potential for re-evaluating and questioning this model. There is now, perhaps, sufficient information available to challenge that accepted paradigm, and the full synthesis of the excavated archive will facilitate the formulation of alternative explanatory frameworks for this site and better place it within more convincing socio-economic, and possibly cultural environments through time.

There is also considerable potential to examine the siting of the settlement at Healam with regard to the wider network of Roman roads, forts and towns. Its initial location may have been influenced by conquest or consolidation of the region, while its later use could have included a role within the mansio system of official travel, or other local administrative functions.

The artefactual assemblages recovered from the site have suggested a date for the beginning of activity within the excavated areas in the later 1st century continuing through to the late 4th/5th century with some slight evidence for later Anglo-Saxon activity occurring at the end of the sequence. Assessment has suggested that pottery from the early occupation of the site appeared military in character. Clear identification of the features from which these early finds derive and comparison with the other categories of material have potential to identify the extent of the military presence or influence within the excavated areas and elucidate the character of the wider settlement as first founded. Pottery assessment has also identified a period of less activity (late 2nd to late 3rd centuries AD), which has not been highlighted in other categories of material.

Given the size and range of the palaeoenvironmental assemblages recovered, there is significant potential to examine the economy of the settlement through its lifespan. The study of nucleated settlement in the wider rural society of the Roman period has been identified as a priority, including questions of agricultural practice and economic relations of these settlements with the surrounding area and local towns. Analysis of closely-dated palaeoenvironmental material will provide valuable information concerning crop processing and animal husbandry practices. Analysis may also reveal evidence for distinctive dietary consumption, helping to identify early 'military' occupation or changes in levels of activity.

Burials on the site included several apparently isolated inhumations and cremations, but also what seem to be parts of a discrete burial ground. Burials also lay on the edge of the settlement, for example to the south of the beck (Field 62), but also within the main area of occupation, as found to the west of the A1(T) in Field 61a. Part of a discrete burial ground for peri-natal infants was also found to the west of the A1(T). This was stratigraphically early and the inclusion of infant burials in cemeteries is unusual before the 4th century. One skeleton was found to be suffering from Down's Syndrome, which is a rare condition in archaeological populations. Only two other cases have been suggested in Britain and both appear to be from the early medieval period, which would make the condition afflicting the skeleton at Healam Bridge unique in a Roman context.

The enclosure sites at Humphrey Balk Lane and at Dishforth Road also have potential to enhance the understanding of the Roman period in this area. Assessment has identified a probable pre-Roman phase of activity at Humphrey Balk Lane, but it is unclear how early in the Iron Age this began. The site at Humphrey Balk Lane has the potential to study the direct impact of the Roman conquest on part of a settlement. This site appears to show significant alteration following the Roman conquest and possibly after construction of Dere Street and determining the date at which this change occurs, is of importance in understanding how and when the road was built. The late Iron Age/Roman remains identified beyond the site at Healam appear to be smaller, and perhaps less important, but still have substantial contributions to make to our understanding of settlement patterns and morphologies and chronologies in the Roman period, and perhaps before.

The excavations appear to have largely confirmed that the apparent absence of medieval settlement along the line of the A1(T) between Leeming and Dishforth airfield is real and not just a result of later settlement and landscape consolidation. The only potential settlement evidence that was located in an area where the new road corridor diverted away from the line of the earlier Great North Road. The settlement evidence that has been identified lies west of Leeming village and is far enough distant not to have been a part of that settlement. The possible settlement evidence is significant because it clearly predates a later medieval arrangement of strip fields and was

therefore probably relatively short-lived. It has the potential to shed light on the development of settlement and field systems within this immediate area. The settlement activity may also be related to the production of the industrial waste deposited a little way to the south of it. The quantity of metalworking debris recovered from the excavations here is considered to be exceptional, its nature being indicative of both smelting and smithing practices. The likely period of this activity has yet to be determined, but the site seems to be lacking a regional comparator at present.

The continuous ribbon-like nature of the development, although restrictive in terms of its ability to facilitate the sampling intra-site archaeological remains, can be considered advantageous in terms of its ability to permit a considerable sample of archaeological remains of different characteristics and date through a landscape to be examined. That the present road-scheme represents an upgrade of the A1(T), is significant in the fact that this route represents part of one of the earliest examples of road infrastructure built in this country which is of continued importance nearly two millennia, if not more, after its inception. Although it is possible that the earliest recorded road running along this route, Roman Dere Street, was preceded by a prehistoric route, such arguments have been historically difficult to prove. However, the Roman road continued to be a prominent landscape feature throughout time, even if it fell out of favour as a means of transport in the medieval period. It enjoyed renewed purpose when there became a need to move rapidly over large distances, quickly, bypassing major population centres. This may have occurred in the early post-medieval period when Henry VIII devised the 'Royal Mail'. This postal road eventually developed, became a coach road, a turnpike road which was disturnpiked in the age of steam, became the Great North Road with the advent of the motor-car, which was improved to become the A1(T), and is now being upgraded to motorway status. The history of the road and the various buildings and other facilities that emerged along its flanks are a significant element of the history of the landscape in this area, and is therefore important in its own right.

This report concludes with the presentation of an Updated Project Design which details all of the additional work required on the archive produced by the project in toto, in order bring the project to a successful conclusion through the dissemination of its results by publication, and the deposition of the site archive with the appropriate museum service. It details the level of analysis considered to be appropriate for the site stratigraphic record and each category of artefactual, ecological and human material recovered during the course of the scheme. It proposes the specialists to be involved in these analyses, and the hierarchy of the management team within NAA who will be responsible for achieving this goal. Provisional timescales for the completion of the work are also supplied.

1.0 INTRODUCTION

This report details the post-excavation assessment of the archive resulting from the programme of archaeological investigation carried out as part of the upgrading to motorway status of the section of A1 between Dishforth and Leeming, North Yorkshire (Fig 1) The majority of the fieldwork took place between March 2009 and July 2010, although some minor works extended beyond this period

A pre-defined programme of strip, map and record was carried out on parts of the Scheduled Roman site at Healam Bridge (SM Number 34736/2) and on a series of other sites, which were targeted on the basis of the results of earlier evaluation works Monitoring of soil stripping was also undertaken on certain other areas of the scheme to ensure that archaeological features were identified and appropriately investigated Where areas of minimal, or no, archaeological potential had been identified in previous studies, a 5m wide ribbon was stripped of top and subsoils through these areas under archaeological supervision in order to confirm these observations Certain areas, principally areas of construction fill required for the provision of slip-roads and embankments were not stripped of any soils at all, the fill being placed directly upon the existing ground surface The philosophy behind this methodology was that any archaeological remains that may have been present in such areas were effectively preserved in situ by construction works

Where excavation was carried out, it was undertaken in accordance with an indicative² sampling methodology and pre-defined criteria which were devised to allow those sites of higher value to be recorded more extensively than those of low value and poor survival All soils in these areas were removed by 360 degree back-acting mechanical excavators under the constant supervision of a monitoring archaeologist, to ensure the prompt identification of any exposed archaeological features

This report has been presented in three volumes This volume provides a summary of the project background information presented in detail in earlier documents for the scheme, the results of the various archaeological interventions undertaken during the initial groundworks required by the scheme, an assessment of the significance of the results of those excavations, summaries of all of the specialist assessments undertaken on all of the artefactual, ecofactual and human remains recovered as part of the excavation works, including summary assessments of their significance, recommendations for the further analysis of all of the stratigraphic, artefactual, ecofactual and human archive where appropriate, an Updated Project Design (UPD) which considers the potential for the analysis of the evidence to contribute towards national and regional research priorities, how these analysis will be undertaken, and, proposals for the full and final completion of the archaeological works necessitated by the scheme through dissemination by publication and archiving The UPD also identifies the resources required to achieve this aim, and outlines a provisional timetable for undertaking these works A bibliography of all reference material used

during the course of the assessment, both by NAA and all of the specialists involved in the production of this report, is presented at the end of the volume

Volume two contains all of the specialist assessment reports presented in full, in the format provided by those specialists. Volume three contains all of the illustrations that it was considered appropriate to accompany this report at this time. It includes all relevant maps and plans, and a selection of the photographic archive that was acquired as part of the project.

The results of a programme of standing building recording undertaken on the structure of Healam Bridge, in advance of construction works, will be presented as a separate report (NAA in prep) but will be incorporated, along with the results of other programmes of building recording, within the final technical report for the project.

Location, topography and geology

The route of the modern A1 within this area generally runs along the slightly higher ground at the western edge of the Vale of Mowbray, overlooking the lower-lying valley of the River Swale to the east. Within the southern part of the project area the route follows the low ridge forming the interfluvium between the washlands of the Swale (to the east) and the Ure (to the west). Between Dishforth and Leeming the road typically runs at a height of some 35-50m AOD, although immediately to the north it crosses a ridge of slightly higher ground at Holtby before gradually descending into the Swale valley towards Catterick. Having crossed the river it then climbs onto the higher ground overlooking the northern end of the Vale. It crosses several small watercourses flowing from west to east, the most important of which are the Healam Beck and the Bedale Beck (at Leeming). Except at Leeming and Leeming Bar the modern settlement pattern consists of small villages lying away from the line of the A1, with widely dispersed farms between.

The A1 in this area follows the linear outcropping of Triassic sandstones overlain by glacial sands and gravels except for a band of morainic deposits crossing the route at Burneston (IGS 1979, 1977). Soils along the route to the south of Healam house are mapped as being of the Escrick 2 Association, deep, well drained reddish coarse loamy soils suited to arable cultivation. The soils within the Healam Beck valley and northwards towards Theakston Grange are mapped as being of the Dunkeswick Association, slowly permeable fine loamy soils typically used for grassland with some arable, and in a small area at Londonderry as being of the Bishampton 1 Association, deep fine loamy soils typically used for either arable or pasture. Along the Leeming Bypass section the soils are of the Wick 1 Association, deep, well drained coarse loamy or sandy soils over gravel and suited to arable cultivation (Soil Survey of England and Wales 1983, Jarvis *et al* 1984). The geomorphology of the Swale-Ure Washlands, the area within which the current section of the A1 lies, has recently been considered in depth (Bridgland *et al* (eds) 2011).

Archaeological background

The archaeological background for Yorkshire as a whole has been discussed by Manby *et al* (2003), while that for the immediate vicinity of the development (the Swale-Ure Washlands) has been the subject of a recent review by Vyner *et al* (2011), and is only summarized here

Upper palaeolithic (23000 – 8000 BC) and Mesolithic (8000 -4000 BC)

There is some slight evidence for activity during the Upper Palaeolithic period close to the study area, in the form of a single flint tool from Nosterfield, and a flint blade and flakes from Nab End in Middle Wensleydale (Vyner *et al* 2011, 211)

Although Mesolithic sites are prolific on the Pennine and North York Moors, there is relatively little evidence for the period across the lowland areas between Such evidence as there is consists of a thin distribution of lithic material, mainly residual An exception is a substantial early Mesolithic assemblage of some 3500 flints recovered at Little Holtby to the north of Leeming during the trial trenching in advance of the proposed widening of the A1 in the 1990s (BHWB 1996) A late Mesolithic or early Neolithic chert-knapping floor has been excavated only 5.5km to the north at Marne Barracks (formerly Catterick Aerodrome) (Hale *et al* 2009, 275)

Earlier and middle Neolithic (4000 – 3000 BC)

Earlier Neolithic monuments such as causewayed enclosures, longbarrows and chambered long cairns have not been identified within the area Evidence for activity in this period is mainly evidenced by occasional scatters of lithic material, and as noted above a knapping floor of either later Mesolithic or early Neolithic date has been recorded at Marne Barracks, Catterick However, close to the southern end of the current scheme, widespread groups of pits containing early Neolithic Grimston and Towthorpe style pottery as a polished stone axe were excavated near Marton-le-Moor during upgrading of the A1 (Tavener 1996, Speed in prep) and were associated with a suite of radiocarbon assays providing calibrated dates (2) covering the period 3950-3350 BC (Abramson 2003)

Middle Neolithic activity is better represented within the Vale of Mowbray, with cursus monuments at Thornborough and Scorton, and a small cursiform enclosure at Copt Hewick a short distance from the southern end of the current scheme Groups of pits of middle Neolithic date containing Peterborough Ware pottery associated with calibrated radiocarbon dates (2) spanning the period 3940-2700 BC have been excavated at Marton-le-Moor (Abramson, *loc cit*) just to the south of the development Further afield, a possible ring-ditch containing Peterborough Ware pottery was found during the A1 trial trenching to the south of Catterick (Speed 2010, 77-9) and a possible palisaded enclosure, pits and a small 'house' recorded at Hollow Banks Farm, Scorton (Speed,

forthcoming) Lithic and axe surface finds are known from across the area. On the line of the current scheme, a pit containing probable Peterborough Ware was identified in Field 18 during geotechnical investigations associated with the current scheme in 2004 (A1D2B 2005)

Later Neolithic/Early Bronze Age (3000 -1600 BC)

Later Neolithic evidence mainly comprises a series of major 'ritual' complexes. The Devil's Arrows megalithic stone row at Boroughbridge has been shown to have been accompanied by post-rows, structures and pits all producing Grooved Ware pottery (Speed, in prep). At Thornborough, also adjacent to the Ure, the three large henges have been shown to be accompanied by a range of smaller monuments. Other large henge monuments of the Ure group include Nunwick, Cana Barn and Hutton Moor, the latter lying adjacent to the southern end of the current road scheme. All of these monuments appear to be focussed upon the River Ure. However, the extensive scatter of pits and pit groups at Marton-le-Moor to the east of the Cana henge on the line of the modern A1 produced Grooved and Beaker Wares, together with a major double post-row (Tavener 1996). Fieldwalking identified a significant flint scatter in the field immediately to the south of Field 1 of the current scheme. To the north of the scheme, another major complex of later Neolithic monuments has been recorded on either bank of the Swale at Catterick and Scorton, including a probable large henge at Catterick racecourse (Moloney *et al* 2003), a timber enclosure at Marne Barracks (the former Catterick Aerodrome) (Hale *et al* 2009) and a mini-henge and associated pit alignments at Hollow Banks Farm, Scorton. Ongoing work has recently discovered a timber circle and a second, oval, setting associated with the nearby Scorton Cursus.

Pits containing Beaker pottery and associated with a possible linear boundary were excavated during the A1 improvements adjacent to Dishforth Airfield in 1993 (Speed in prep). Other Early Bronze Age activity across the area is primarily indicated by a number of burial mounds, mainly located slightly to the east of the Ure group of Neolithic ritual monuments on the higher ground nearer to the modern A1 and reflected by a number of 'Howe' place-names. Few of these monuments have been investigated, and mainly during the 19th century. The few more 'recent' excavations include a small barrow at Scorton which produced a beaker (Greenhalf 1980). Excavation of the Early Bronze Age round barrow of Green Howe, North Deighton produced from the mound material a substantial assemblage mostly of the Ebbsfleet style Peterborough Ware, with some Grooved Ware and Beaker material (Wood 1971). In addition to the barrow sites, an Early Bronze Age urn found on the north bank of the Swale at Brompton playing field, immediately adjacent to the A1, may originally have been associated with a burial (Wilson 2002, 8-10). A multiple cremation associated with a collared urn and accessory vessels was inserted in a pit within one of the entrances to the henge at Hollow Banks, Scorton. On the line of the current scheme, the major barrow at Quernhowe was partially excavated in 1949 during previous

upgrading of the Great North Road (Waterman 1951a), however, no evidence for this monument was recorded during the recent excavations (Field 42)

Non-funerary evidence for the Early Bronze Age in the study area consists almost exclusively of flint scatters, an exception are two pits excavated at West Lodge, Killerby during trial trenching for the current scheme in 2006. These produced a small assemblage of animal bones, and a suite of radiocarbon samples produced a calibrated date range (2 σ) of 1890-1410 BC (Speed 2010, 80-3). The unusual assemblage included remains from what was probably one of the last British aurochs, together parts of a dog and fragments of a red deer antler which showed evidence of cutting, probably with a flint tool. Other pits identified nearby remain to be dated.

Later Bronze Age and pre-Roman Iron Age (1600 BC – AD 70)

The main evidence for the Later Bronze Age consists of a scatter of Bronze Age metal artefacts recovered from across the area, but, as is generally the case across the lowlands of Yorkshire, no evidence for later Bronze Age settlement has been recorded in the area.

For the Iron Age, the distribution of finds of beehive querns suggests widespread agricultural settlement based on arable cultivation (Vyner et al 2011, 223). Evidence for pre-Roman Iron Age activity in the wider area is limited, however the relatively high level of archaeological activity around the River Swale at Catterick and northwards to Scotch Corner has identified a significant number of Iron Age farmstead sites, both enclosed and unenclosed (Speed 2010, 85) and it is quite likely that the good quality agricultural land along much of the current route will have been similarly exploited.

At Hutton Moor a substantial pit alignment recorded from aerial photographs passes to the north of the Neolithic henge and approaches, but stops just west of, the road scheme. The North Yorkshire Historic Environment Record (HER) records this monument as being of Iron Age date, although it could equally be associated with the Neolithic/Early Bronze Age complex nearby.

The Roman period (AD 70 – 410)

The A1 in the area of the recent widening scheme closely follows, and in most places overlies, the Roman road known as Dere Street. At Londonderry the modern route deviates to the west, the Roman road continuing northwards through Leeming and Leeming Bar, before the A1 rejoins the earlier route at Leases Hall and continues towards Catterick.

Dere Street seems to have followed the line of an already ancient communication route (Vyner et al 2011, 220), and its continuing importance was reflected by the success of the settlements at Aldborough and Catterick, both of which developed into fully-

fledged Roman towns, Aldborough attaining the status of a tribal capital. At Catterick, a second extensive roadside settlement developed around a separate focus at Baines. Away from the road corridor, many pre-existing Iron Age agricultural settlements seem to have continued to flourish, and a number developed into fully Romanised establishments perhaps deserving the description of 'villa'. Such sites have been identified at Middleham, Well, Langwith House, Snape and North Stanley, and perhaps at Catterick Aerodrome (Wilson 2002 vol 2, 469).

The earliest inference for a network of roads in Britain is contained within the Antonine Itinerary, generally considered to have been written in the third century. This basically describes a number of accepted routes through Britain in the Roman period, and names towns, forts and other settlements situated on those routes. Route I, Bremenium (High Rochester) to Petuaria (Brough on Humber), Route II, Blatobulgium (Birrens) to Rutupiae (Richborough) and Route V, Caesaromagnus (Chelmsford) to Luguvalium (Carlisle) all pass through Caractonium (Catterick) and Isurium (Aldborough) in Yorkshire (Rivet and Smith 1979, 155, 157 and 158). All three routes then pass through Eboracum (York) on their way southwards. Although literary evidence for 'routes' do not necessarily constitute evidence for the former positions of 'roads' of this period, the route between Catterick and Aldborough followed what is now known as Dere Street, and Margary considered that the route of Dere Street was reflected in that of the Great North Road (Margary 1973, 428). However, at the time that Margary was writing, much of the line of the Great North Road had been significantly altered and modernised, in part by a dual carriageway (A1(T)) constructed in 1949, so that little of the original form of the Roman road could be discerned (ibid).

The seventh century Ravenna Cosmography, whilst not identifying routeways specifically, does mention a series of settlements, though the order in which they are identified is considered by many authorities not to reflect routeways that were in use during this period. However, in the north of England, the settlements of Lanchester, Binchester, Bowes, Catterick, York and Brough on Humber are named in that order. With the exception of Bowes, which lies on a former Roman period trans-Pennine route, they all lie on Route I of the Antonine Itinerary, so it would seem likely that this route was still known in this period, and that the route was almost certainly that of a road.

The Roman site at Healam Bridge was discovered during widening of the A1 in 1949 (Waterman 1951b). Hartley (1971, 57) suggested that the site was a fort and associated civilian settlement ('vicus'), a supposition apparently supported by geophysical survey undertaken as part of the preliminary works associated with the planning of the present upgrade of the A1 to motorway standard in the mid 1990s. However, as a result of the additional geophysical survey undertaken as part of the current road scheme, it was possible to reconsider the archaeological evidence at Healam Bridge, and a different model for the development of the site was suggested (NAA 2006).

The geophysical survey shows a number of linear anomalies at the eastern side of the 'vicus' running on alignments at variance to the presumed line of Dere Street. Included

in this group is the linear feature forming the eastern limit of the 'vicus'. The line of this feature appears to continue inside the 'fort', and it was suggested that this represented part of a pre-Roman Iron Age enclosed landscape.

The 'fort' at Healam Bridge is represented solely by a perimeter ditch. None of the features recorded by geophysical survey within this perimeter is reminiscent of structures typically found within a Roman fort (indeed some are suggestive of native-style roundhouses), and it was suggested that the ditch actually represented the site of an early Roman temporary camp. Although previous evaluation of this ditch (BUFAU 1994) recovered 4th century pottery from its uppermost fill, such a large feature will have survived as an earthwork and continued to attract refuse disposal throughout the Roman period. The pottery did not, therefore, help to resolve whether the ditch surrounded a temporary camp or a fort.

It would be an unusual (but not unknown elsewhere in Britain) situation for a major Roman road to pass through a fort. However, if the 'fort' was actually an early temporary camp, which had gone out of use by the time of construction of Dere Street, this anomalous situation would be resolved. The geophysical survey appears to show the features of the 'vicus' continuing uninterrupted across the site of the 'fort'. The positioning, layout and extent of the roadside settlement at Healam Bridge are in many ways similar to the Romano-British settlement along Dere Street at Bainesse some 16km to the north-west. The Bainesse settlement also overlies the site of a temporary camp apparently pre-dating Dere Street.

There is compelling evidence for another small roadside settlement on the line of Dere Street at Leeming Bar on the north bank of the Bedale Beck (NAA 2009). This streamside location is reminiscent of that for Healam Beck 8km to the south and at Bainesse some 8km to the north. At Leeming Bar, gullies, ditches and pits were recorded during development of land to the south of Freemans Way. One feature produced part of a Roman quernstone. The close proximity of the features to Dere Street suggested that they could have formed part of a road-side settlement (ASUD 2007). Cropmarks of a ditched trackway and enclosures of either later prehistoric or Romano-British date have been recorded nearby in the area of Leeming Bar Industrial Estate (HER MNY25678). Late 4th century pottery recovered from the site of Leeming Bar garden centre (SE 287 900) adjoining the Great North Road was reported to be stored in the Yorkshire Museum at York (accession number 1949 5 3) but was not available for examination in 1995 (NAA 1995). It is not clear whether this is the same pottery find recorded by the HER (MNY 13469) nearby.

Elsewhere, beyond these local bastions of 'Romanitas', the pre-Roman Iron Age settlement pattern across the area seems to have remained relatively unaffected, with small farmsteads (either enclosed or unenclosed) scattered within widespread systems of large fields. The rural population seem to have taken a conservative view to the opportunities of 'civilisation' and only slowly adopted the new styles of building and pottery so that later 1st and early 2nd century sites often still feature timber

roundhouses and hand-made pottery with only small quantities of Roman wares present

The early medieval period (AD 410 – 1066)

In the post-Roman Early Medieval period, the landscape presumably continued to be occupied and farmed in a similar pattern, although evidence for this is sparse, with settlement structures only having been identified scattered across a wide area at Catterick (Wilson *et al* 1996) The burial evidence is more extensive, with several cemeteries at Catterick/Scorton and Ripon Vyner (2011, 229) has suggested that early Anglian settlement seems to have favoured locations close to Dere Street, however, from the 8th century onwards settlement seems to have avoided Dere Street, although it clearly continued to have significance as a major north-south route, forming parish boundaries over long sections of its route (*loc cit*) Similarly, while Catterick was an important early royal and religious centre in the 7th century, the religious focus had moved to Ripon by around 670

The distribution of Anglo-Saxon sculptural stone monuments from the 8th century onwards in the area, generally within extant villages, suggests that much of the settlement pattern in the area had become relatively fixed by that period and was similar to that now (*op cit* 230)

Although little is known of the highway network in this part of Yorkshire in the early medieval period, the continued importance of centres such as York, and the emergent centres at Durham and elsewhere, would seem to support the notion that the transport focus had shifted slightly to the east in this period and the route between Aldborough and Catterick, and further north, was in something of a backwater

However direct evidence from within the road corridor for the Anglo-Scandinavian period comes in the form of the burial of a Viking woman found on the line of Dere Street at Fairfield House just to the north of Leeming in 1834 (Lewis 1975, 143 note 225), and generally erroneously mis-located in archaeological publications at Bedale There are numerous 19th century references to the discovery of additional burials nearby associated with 'armour', many within 'mounds and trenches' along the line of Dere Street (the modern Leeming Lane and then the A1) over a distance of some 1km northwards to Cloven Hills, and two mounds recorded by the HER in that area could conceivably be associated monuments Unfortunately no finds from these additional burials survive and they remain undated, however, it has been suggested, on the basis of the elements recorded ('armour' and mounds) and the known date of the single surviving group of finds, that these burials could conceivably have formed part of a Viking cemetery (NAA 2009)

The later medieval period (AD 1066 – 1540)

The medieval settlement pattern through the project area seems to have become established by the later Anglo-Saxon period. However, less is known about medieval settlement and land-use in the area than for other parts of Yorkshire due to an absence of major religious houses, castles or important manorial centres, with correspondingly limited contemporary documentary evidence or antiquarian interest. A pattern of medieval monastic granges extends along the valleys of the Swale and Ure, and widespread remnants of ridge-and-furrow cultivation indicate a heavily exploited landscape, however, since the main settlement pattern consisted of villages lying away from the line of the A1 there is otherwise little evidence for this period within the development corridor. Although John Speede's 1610 map of the North and East Ridings of Yorkshire does not depict roads, it does show bridges at Boroughbridge, Leeming, Catterick and Piercebridge, so it seems likely that a north-south route along the former line of Dere Street did exist in the later medieval period, and was becoming an increasingly important element of the country's communication systems at the close of that period (see below).

The post-medieval period (AD 1540 1900)

John Ogilby's maps of 1675 show that the main route from London to Barwick (sic, Berwick upon Tweed) in this period ran through York, Boroughbridge and Dishforth, then cut eastwards and crossed the Swale at Topcliffe before heading north through Northallerton. However, his map of the road from Ferrybridge to Barnard Castle, which ran through Wetherby, Walshford, Boroughbridge and Ripon before heading north to Richmond and eventually Barnard Castle, joined what was clearly another road leading north from Boroughbridge. The roadway is depicted continuing northwards through Leeming and Catterick and is annotated "Lemyng Lane" by Ogilby.

The need to maintain a road network in this rural part of North Yorkshire may be fairly straightforward to explain. It is obvious from Ogilby's maps that the main route from London to the north was intended to run through conurbations, however, there would have been circumstances where it was desirable to avoid settlements of this nature, and travel as swiftly as possible. In 1512, Henry VIII created the beginnings of a postal system when he appointed Sir Brian Tuke as his Master of the Posts. Originally intended solely for the use of the court, increasing numbers of private letters were carried as the Tudor period progressed.

From this period onwards there was a rapid increase in the use of roads for transport. The Royal Mail began using coaches in about 1778 and stage coaches were also being used as passenger transport in this period but the roads were not suitable for this level of traffic, as they were not being maintained effectively. This eventually led to the formation of turnpike trusts, these being established to shift the responsibility of road maintenance away from the parishes to the trusts themselves, who could then charge the people who used the roads tolls to pay for their upkeep. The road from

Boroughbridge to Piercebridge was turnpiked in 1743, that from Boroughbridge to Durham in 1745. However the whole of the Great North Road from London to Berwick was not turnpiked in its entirety until 1776, the last section being that from Bawtry to Doncaster (Albert 1972, 34)

Despite the turnpike trusts, many of Britain's roads remained in a poor state of repair. It wasn't until John McAdam revolutionised the manner in which roads were constructed in the early 1800s that the situation improved dramatically.

The fortunes of the turnpike roads took a downturn with the advent of the railways in the 1830s, with a rapid decline in their use. This also led to a decline in the level of maintenance and by the 1870s disturnpiking was being actively pursued. The responsibility for the maintenance of main roads, as defined by the Highways and Locomotives Amendment Act of 1878 (www.opsi.gov) was subsequently placed on the then newly formed County Councils in about 1889.

Previous archaeological interventions

A considerable amount of previous archaeological work had been carried out along the route prior to the start of construction of the recent motorway improvement scheme. This was a result of successive upgrades of the route since the late 1940s, and indeed many of the earlier antiquarian references to the route related to previous works in the 19th century as improvements were made to the former Great North Road in order to make it suitable for use as a turnpike. However, beyond these schemes, there has been relatively little archaeological activity in the area compared to the Tees lowlands to the north. This is in large part a result of the presence of the military airfields at Dishforth, Leeming and Catterick, which have served to severely restrict the volume of aerial reconnaissance that has been possible over the past 70 years. In addition, many of the glacial drift deposits in the area produce indifferent cropmarks, making aerial photographic interpretation difficult.

As noted above, Quernhowe was excavated in 1949 during widening of the road, and incidental observation of Roman potsherds in spoil during these works led to the identification of the site at Healam Bridge, although too late to carry out any investigation (Waterman 1951a, 1951b).

Proposals for an upgrade to motorway status of the dual-carriageway section of the A1 between Dishforth and Barton, North Yorkshire, were developed during the mid 1990s. At this time a Conceptual Arrangement was designed and promulgated, but budgetary constraints prevented the construction of the road, however, before the project was abandoned a full scheme of archaeological evaluation was undertaken along the route. In December 1993, Anthony Walker and Partners, subsequently Barton Howe Warren Bleckledge (BHWB) produced an assessment report for the route from Dishforth to Little Holtby (extending just beyond the current scheme to the north). This identified 123 sites of archaeological, architectural and/or historic interest within the defined

study corridor. Subsequently, fieldwork strategies were prepared for 46 sites or areas, including initial fieldwalking, detailed fieldwalking, geophysical survey, earthwork survey and trial trenching, or staged combinations of these techniques. An initial assessment of the built environment was also carried out, together with some documentary research (BHWP 1996).

When the present road scheme was being developed additional evaluation works were commissioned in order to further evaluate the route. This included new geophysical surveys along most of the route (ASUD 2005, 2006a, ASDU 2009), and areas of additional fieldwalking and metal detector survey were undertaken (A1D2B 2006). A new programme of trial trenching was also undertaken, primarily of specific targets identified by the geophysical survey (NAA 2006a, 2006b, 2007). Monitoring of geotechnical investigations was also carried out (A1D2B 2005, NAA 2006c). A palaeoenvironmental assessment of deposits adjacent to the Healam Beck was also undertaken (ASUD 2006b).

Where appropriate, the results of these earlier works are referred to in the relevant sections below.

2.0 AIMS AND OBJECTIVES

The aim of the programme of archaeological investigation was to allow all archaeological features to be treated appropriately during construction of the scheme according to a series of pre-defined methodologies. These were set out in the Archaeological Background and Research Strategy to Inform Archaeological Work (A1D2B 2009a, D2B-0-W-30-002-RE02), the Specification for Topsoil Removal During Construction (A1D2B 2009b, D2B-0-W-30-002-SP01), the Specification for Topsoil Retention/Preservation of Archaeology In Situ (A1D2B 2009c, D2B-0-W-30-002-SP03), the Scheduled Monument Consent Applications for works at Healam Bridge and the accompanying Method Statements/Written Schemes of Investigation produced by Northern Archaeological Associates (NAA (2009a)).

The principal objectives of archaeological investigations along the route of the upgrading work, were defined as follows:

- to achieve "preservation by record" of the archaeological resource in those areas affected by the upgrading work
- to attempt confirm and amplify the archaeological model of the Healam Bridge Scheduled Monument
- to contribute positively to the relevant national and regional research priorities as set out in the Archaeological Background and Research Strategy for the scheme (A1D2B 2009a)

- to prepare illustrated assessment reports (Updated Project Designs) on the results of the archaeological investigations
- to undertake further analysis and publish the results
- to compile and deposit the excavation archive with the relevant museum

3.0 ASSESSMENT OF THE EXCAVATION RESULTS

The post-excavation programme was undertaken in accordance with MAP 2 (EH 1991) and project specification and design documents (A1D2B 2009c Ref D2B-0-W-30-002-SP-02 and A1D2B 2011 Ref D2B-0-W-30-002-RE13-A), prepared for this scheme

Subsequent to archive consolidation, undertaken immediately after the completion of fieldwork, a series of specialist background information reports were produced in order to provide provisional stratigraphic information to inform the specialist assessments (NAA 2010a, 2010b, 2010c, 2010d, 2010e and 2011a)

Scope of the Post-Excavation Assessment

The principal stages of the post-assessment programme were

- Record consolidation, including preparation of preliminary phasing information, plans and catalogues
- Provision of background information for specialists
- Specialist assessment of the artefact and environmental assemblages
- Preparation of assessment report and production of an Updated Project Design (UPD) for the full analysis and publication of the archive

Quantification

The programme of post-excavation assessment was undertaken in accordance with a project design prepared by NAA (2011, A1D2B 2011) All finds were cleaned, identified, marked (where appropriate) and properly packed and stored, in accordance with national guidelines (English Heritage (1995) All metalwork was been sent for initial conservation, comprising x-ray and assessment

An initial programme of archive consolidation was carried out, comprising the cross-checking of context records against drawings, photographs, recovered artefacts and

environmental samples Preliminary phasing of the remains were be carried out where possible, and provisional matrices of the excavated features were be produced of areas where complex archaeological remains were encountered Digital catalogues of context records, illustrations, photographs, artefacts and environmental samples were also produced

An initial quantification of each category of the site archive was made Quantifications of samples and the principal categories of recovered finds were also carried out These are listed below (and excludes the site archive and associated finds assemblage generated by the evaluations undertaken by NAA in 2004-5, by Birmingham University Archaeology Unit (BUFAU) and Lancaster University Archaeology Unit (Now Oxford Archaeology North) in the mid 1990s)

<i>Record Category</i>	<i>No.</i>	<i> Finds Category</i>	<i>No.</i>
Context descriptions	5563	Coins	219
Drawing sheets	1123	Other recorded finds	2066
Plans	846	Pottery (sherds)	13107
Sections	1703	Animal bone	481 kg
B & W photographs (films)	147	Glass (shards)	129
Colour slides (films)	29	Slag and other industrial residues	214kg
Digital images	7727	Samples (bulk and spot)	488

4.0 EXCAVATION RESULTS

The following section represents a narrative of all of the excavation works undertaken on the scheme. These are presented in a broadly chronological order from the prehistoric onwards, rather than as a field by field account, in the attempt to provide a comprehensive overview of the archaeological remains by period. For the Late Iron Age/Roman period, the results of the major excavation programme undertaken at Healam Bridge, and the associated works on the remains of a Roman period roadway encountered at both Healam Bridge and Leases Lane, Leeming Bar, are presented first due to their significance.

EARLY PREHISTORIC SITES

The main evidence for early prehistoric activity comprised a dispersed series of pits which were encountered in a number of fields predominantly within the southern part of the scheme. Some of the pits formed part of a group that occupied Fields 19, 20 and 21 within the vicinity of the A61 junction with the A1(T). Further to the north, work in Fields 25, 33, 42, 51 and 52 identified additional pits. In total, possible prehistoric finds were recovered from eight pits, 27 further pits contained burnt material or showed signs of burning *in situ*, and three had neither finds nor evidence for burning. Nineteen other pits were identified in Fields 33 to 40 which contained no datable finds and might have belonged to any period from the prehistoric to the later medieval.

The only possible structural evidence to be identified relating to this period was identified in Field 47. Here, a gully and a group of pits and postholes were recorded, which appeared to be Bronze Age in date. Finally, a number of Neolithic and Bronze Age flint tools and flakes were also recovered from stratified and unstratified deposits along the length of the scheme, namely in Fields 1, 4, 6, 16, 19, 21, 23, 28, 39, 42, 72, 99, 108 and 112. Perhaps the most significant individual finds were a Neolithic stone axe that was recovered from the subsoil in Field 42, and a Bronze Age copper alloy spearhead identified in a plough furrow in Field 39.

Dishforth (Field 1) (not illustrated)

At the north end of the stripped area in Field 1, two small pits (3291 and 3294) that contained burnt material, were identified. Pit 3291 was filled with black silty sand with a high charcoal content and yielded a group of shattered and fragmented sherds of pottery that may be of later prehistoric or Roman-period date, but were slightly anomalous and might be earlier. To the south, pit 3294 was also filled with black silty sand with a high charcoal content and contained a sherd of post-medieval pottery, which was probably intrusive. A total of 13 flints were recovered from the pits and have been dated to the Mesolithic or early Neolithic period.

It was thought that the character of the pits was similar to those identified in the group to the north. The pair of pits provided additional evidence for a concentration of apparently early prehistoric activity within the corridor of land that was later occupied by Roman Dere Street.

Field 19 (not illustrated)

A small concentration of features were identified within a slip-road corridor and a balancing pond area. The corridor contained a single ditch and two pits. The balancing pond contained seven pits and two short segments of gully. Diagnostic material was only recovered from the southern-most pit (834), which was thought to be prehistoric, though the majority of the other pits were similar in form and had been backfilled with burnt material including quantities of charcoal and cobbles that had been discoloured and fractured by firing.

Pit 834 was filled primarily by a thin silty deposit, overlain by a charcoal rich upper fill, which also contained a large quantity of heat-fractured cobbles and sherds of pottery that may date from the Neolithic or Early Bronze Age.

Field 20 (not illustrated)

A charcoal-rich pit (Plate 1), which appeared to belong to the group of apparently prehistoric pits (1053), was identified within the area of the road corridor. Two similar pits with charcoal-rich fills were identified within the area of the balancing pond. The secondary fills of both pits in the balancing pond area contained a high concentration of fire-cracked pebbles, which suggested that they had been used as cooking pits. A charred nutshell was also recovered from a layer of fill but its species has not been identified.

While no datable finds were recovered, their form and the composition of their fills were common with those other pits belonging to the prehistoric pit group that was dispersed throughout the area.

Field 21 (not illustrated)

Archaeological features were located throughout Field 21 over a distance of 360m. They included one gully and five pits, four of which displayed similar characteristics to those other pits belonging to the putative prehistoric pit group.

The northern area of the road corridor contained the remains of four pits (823, 825, 827 and 829, Plate 2), which belonged to the pit group. They were sub-circular in plan with similar dimensions and were dispersed across the site. The fills of pits 823, 825

and 827 contained charcoal and heat-damaged cobbles. A total of six fragments of flint dating from the Mesolithic or Early Neolithic period, one of which was a blade, were recovered from the fill of pit 829, which was larger than the others.

Field 25 (not illustrated)

Two possible prehistoric features were identified within the area of later Roman activity (see below). They were located within the northern half of the field and comprised two sub-circular pits, one of which contained Bronze Age pottery sherds from two vessels.

Field 33 (not illustrated)

Within the area of a balancing pond in Field 33 two shallow sub-circular pits were identified. The fill of pit 4019 contained a large quantity of charcoal and sherds of early prehistoric pottery. The clay forming the base of the pit was heat-affected, indicating burning *in situ*. The fill of pit 4022 comprised burnt clay, charcoal and pebbles but no datable finds were recovered.

Field 42 (not illustrated)

A small group of features were identified in Field 42 comprising two ditches and a dispersed group of seven pits, three of which contained flint and prehistoric pottery. While there was some limited evidence for activity here in the pre-Roman Iron Age (discussed below), and a small number of pottery sherds possibly dating from the Roman period, the main component of the finds assemblage included sherds of pottery thought to be early prehistoric, a number of flint flakes of probable prehistoric date and a Neolithic prehistoric polished Group VI stone axe from Langdale in Cumbria, which was recovered from the subsoil.

Early prehistoric pottery sherds were identified in the primary fill of pit 4032, which also contained one flint flake. The fill also included large fragments of charcoal, but there was no discolouration of the surrounding natural geology that would have suggested burning *in situ*. The base of a nearby circular pit (4029) was defined by a layer of burnt clay, which suggests possible use as a fire pit. The primary deposit contained fragments of charcoal, fired clay, flint flakes of a probable Neolithic date, and sherds of early prehistoric pottery.

An elongated pit, which was found to have been re-cut with similar dimensions, contained one sherd of 3rd century colour-coated ware, and numerous sherds of prehistoric pottery of possible Neolithic date which were assumed to have been re-deposited. The pit had an unclear stratigraphic relationship with an adjacent pit (6559), from which two flint flakes were recovered from a secondary layer of fill. A re-cut of

the pit was found to contain a sherd of decorated Nene Valley ware dating from the 3rd century AD

Sinderby (Field 47) (Fig 2)

The archaeological features identified in Field 47 provided the best evidence for prehistoric settlement within the road corridor. A semi-circular section of gully was identified in close proximity to an additional section of gully and a group of pits and postholes (Plate 3). It was thought that the features represented the truncated remains of a structure. Pottery sherds, thought to be Early Bronze Age in date, were recovered from one of two pits located to the north-east of the semi-circular gully and may have been associated with it.

The semi-circular gully (1251) extended for 11m and was 0.83m wide. The feature was relatively shallow with an average depth of 0.22m. It was cut by a single posthole, but a cluster of seven other postholes were situated towards its south-eastern limits. The gully contained a single fill comprising mid greyish-brown silty sand containing occasional grit. No datable finds were recovered from this deposit.

A linear gully (1272), of which approximately 15m was exposed within the excavated area, was located some 16m to the south of the semi-circular gully. It was filled with mid reddish silty sand from which no finds were recovered. Two postholes were located towards the western end of the feature.

Two small pits, (1257 and 1259), were identified some 45m to the northeast of the features discussed above. The fill of 1257 comprised dark greyish brown sandy silt containing frequent charcoal fragments but no artefactual material. The fill of pit 1259 was similar in composition and contained sherds of degraded pottery, with no visible decoration. Initial analysis has shown that the sherds formed part of a plain jar of probable Early Bronze Age date.

Although the two excavated gullies and their associated postholes yielded no datable finds, they had the appearance and character of features attributable to the prehistoric period, possibly originating in the Iron Age.

Field 58 (not illustrated)

The remains of a small ring-ditch were identified within an evaluation trench (L10) excavated by NAA in 2005 (NAA 2007, 17-19). The remains comprised a ditch that appeared to have been infilled with re-deposited natural subsoil, thought to represent material derived from a putative mound. The fill contained 3 worked flints and frequent flecks of charcoal. Other features identified within this field dating from the Roman period are discussed below.

LATE PREHISTORIC/ROMAN SITES

HEALAM BRIDGE (*Fields 60, 61, 61a, 62, 63 and 64, Figs 3 to 23*)

This section presents the results of archaeological excavation undertaken at Healam Bridge within the Scheduled Monument (SM Number 34736/2, Fig 3) in accordance with SMC Ref HSD 9/2/7461

The new road alignment at Healam diverged to the east of the existing A1(T) and passed through the eastern side of the scheduled area. The main areas of investigation lay within the new road corridor to the north and south of Healam Beck. An additional narrow zone was also investigated for the diversion of the High Pressure Gas Main which crossed the site from east to west south of Healam Beck. This provided the only investigation of the mam vicus area south of the beck.

The mam area of occupation activity to be encountered lay immediately north of the beck, where multiple phases of deeply stratified deposits were identified together with a series of buildings and enclosures. Evidence of a series of metalled surfaces and possible roadside ditches suggested that the enclosures abutted the east side of a Roman road (possibly Dere Street), the remains of which lay partially beneath the later Great North Road. To the south of the beck, no structural remains were encountered and the evidence here appeared to reflect the rear of plots and field system elements forming the eastern edge of the settlement. Additional deeply stratified deposits including structural remains, enclosures and burials were encountered in the gas mam corridor west of the A1(T). At least 35 burials were also identified across the site, with a focus to the west side of the A1(T).

Following specialist assessment of the recovered finds assemblage a date range of the late-1st to late 4th/5th centuries AD has been posited. A hiatus of this settlement within the 3rd century AD has been suggested following assessment of the coarse ware pottery assemblage.

Animal bone and industrial waste was ubiquitous within the fills of the features on all areas of Healam Bridge and has not been discussed within the following description of the excavation results. The fills of the features were extensively sampled during investigations.

NORTH OF HEALAM BECK. (*Fields 63 and 64, Figs 3 to 13*)

The archaeological features encountered in fields north of Healam Beck (fields 63 and 64) were significant and widespread across both fields. The southern part of field 63 immediately to the north of Healam Beck was situated on a gradual south-facing slope which had been both terraced and built up during the Roman period to facilitate its use. The area to the north of this slope was relatively flat and the archaeological

features extended for a distance of over 280m from the beck. The southern end comprised up to 1.5m of archaeological remains overlying peat and alluvial deposits associated with the earlier course of the beck. The development of the site in this area has been described here as a series of eight horizons, largely derived from stratigraphic information, which represent preliminary phases for the purpose of this discussion (Figs 4 to 11). These horizons will be refined and assigned definitive phases following further analysis of the site archive and artefactual material. For the purpose of this report the area of deeply stratified archaeology adjacent to the beck has been discussed separately from the shallow archaeology identified on the more level ground to the north. The only physical link between the two areas is ditch 5151 / 5547, which appears within horizon 6. Specialist assessment of the finds assemblage suggests occupation of the site dated from the late 1st to the late 4th century AD with a possible hiatus during the 3rd century AD.

The archaeological features exposed throughout the southern area of field 63 comprised a series of re-cut enclosure ditches delimiting areas of occupation, a series of seven stone and timber buildings, two large midden deposits, bank-side revetment formed by wooden stakes and stone dumps, numerous kilns/ovens, pits and three inhumations.

The northern area of field 63 and field 64 contained a complex of roadside enclosures which developed over time into a series of south-west to north-east aligned ditches defining plots of land. Many of the land plots contained the remains of timber buildings. Other features investigated included six inhumations, one cremation and a series of pits, hearths, postholes and a possible corn dryer. The remains were located to the east of a metalled road surface which appeared to relate to the former Dere Street.

The archaeological features and deposits identified within the southern area of field 63 overlay natural clay [7113]. Those identified within the northern area of field 63 and field 64 were cut into sandy clay with isolated pockets of sand [5550].

The slope to the north of Healam Beck (*Field 63 south, Figs 3 to 11*)

Waterborne organic deposits were confined to the area immediately to the north of the present beck. These comprised peat-like layers (5201, 7066, 7107, 7108, 7287 and 7848), which extended from the present beck northwards for up to 13.1m and survived to a maximum depth of 1.15m. A large assemblage of Roman period artefacts was recovered from all levels of these deposits and had a date range from the 1st to the 4th century AD, indicating that they had been laid down during the period of the occupation of the settlement. The materials represented comprised copper alloy, lead, iron, pottery, animal bone, wood and stone and the artefacts included a lead cloth seal with an embossed star, a medical implement, a semi-circular wooden lid, a green, a glass cylinder bead and a group of three worked timbers (6983).

The organic deposits were overlain by laminated bands of sands and gravels interleaved with further lenses of peat-like material. In places this banded sequence was seen to have cut into the earlier organic deposits in curving channels or scours (not illustrated), running roughly from south-west to north-east. The fills of these scours (5100 and 5234/5238) yielded a large quantity of pottery, including samian ware, while materials recovered from the sandy layers included copper alloy, iron, leather, bone and pottery and included a fragment of a copper alloy military diploma, leather shoe fragments, a glass bracelet fragment and a large quantity of pottery. The channels varied greatly in size from 1.35m in width by 0.15m in depth to 3.6m in width by 0.8m in depth and it seems possible that they represent the former course or courses of Healam Beck during the prehistoric and Roman periods. The bands of sands and gravels were also interleaved with dumped deposits along the southern periphery of the settlement, which appeared to have occurred over a considerable time period. The dumped deposits may have also served the purpose of raising and levelling the sloping ground for the expansion of settlement towards the beck.

The sequence of deposits suggested that the area had been subject to periodic flooding and that the stream channel had changed its position on numerous occasions. Taken together, the evidence suggested that during the Roman period Healam Beck was much wider than today and was flanked by a considerable zone of marshy ground.

A sequence of Roman period occupation deposits up to 1.5m deep and including six structures was encountered on the slope above the beck for a distance of up to 80m. Within the sequence of deposits, there was evidence of a series of buildings, large ditches and a large rectangular enclosure. Two of the buildings had cobbled floor surfaces (5009 and 7951) and four were post-built structures (5129, 5695, 6949 and 7968).

Horizon 1 (Fig 4)

Among the earliest features identified in field 63 was a quarry cut (7929) for the purpose of clay extraction. A further two cuts (5608 and 5610) were identified terraced into the natural clay, which may have been associated with quarry cut 7929. Finds recovered from the fill of cut 5610 included an iron nail and grey ware dating from the mid-1st to late 2nd century AD.

A series of three kilns were also identified (5413, 7115 and 7498), all of which were cut into the natural clay. The surrounding clay in each case was scorched and the kilns were filled with charcoal-rich material, suggesting *in situ* burning. Kiln 5413 comprised a circular pit with two distinct lobes and a rake-out deposit (5423) to the south. Deposit 5423 yielded a fragment of folded lead sheet, a copper alloy pin head and pottery, including samian ware, dating to between the 1st and 2nd century AD.

Kiln 7115 was composed of an oval pit, which had been re-cut. Pottery dating to the mid-2nd century AD was recovered from the upper fill, which may suggest that the oven had a secondary use as a refuse pit.

Kiln 7498 was figure-of-eight shaped in plan and had a narrow flue to the south. Grey ware dating to the mid-2nd century was recovered from the fills.

Inter-cutting pits 7342, 7344 and 7346 were also identified at the same level as the kilns described above and pottery dating from the late 1st to early 2nd century AD was recovered from the fill of pit 7344.

Three postholes (7609, 7611 and 7615) were identified in the vicinity of the inter-cutting pits described above. No finds were recovered from the fills of the postholes and their function remains unclear.

Pit 7732 was located approximately 10m to the south-east of the group of inter-cutting pits and was circular in plan. The pit had vertical sides and contained organic material at the base, suggesting that it may have been either a storage pit or a cesspit. An assemblage of pottery, including samian ware, dating from the mid-2nd century AD was recovered from the earliest fills and a single sherd of coarse pottery dating from the 3rd to 4th century was recovered from the upper fill, which may have been intrusive in this context.

A further pit (7862) was identified c 10m to the south-west of pit 7732. Pottery dating from the late 1st to 2nd century AD and an iron fragment were recovered from the fills of this pit. A further five pits were encountered at broadly the same level (7139, 7160, not illustrated, 7583, 7619 and 7868). Finds recovered from the fills of these features included pottery, including samian ware, dating to the mid-2nd century AD, a glass bracelet fragment and two iron objects.

Two small pits containing burnt material (6903 and 6904) (not illustrated) were identified cutting into peat deposit 5201 towards the southern area of the site. An iron nail was recovered from the fill of pit 6903.

A series of 175 wooden stakes (groups 7191, 7518, 7847 and 7915) were identified driven into the edge of the alluvial deposits, of which a total of 116 were excavated. In plan, the stakes formed sinuous lines but were not found to be associated with any plank, wattle or hurdle walls. The stakes were orientated at various angles and may have represented an informal revetment protecting the southern edge of the settlement area from flooding or encroachment by the beck. Stakes 7782 and 7510, which were located at the northern and southern end of group 7518 respectively, were much more substantial than the other stakes and may have provided support for the smaller stakes between. A total of 91 of the stakes were assessed and were found to be from a mixture of species including *salix*, *quercus*, *acer*, *prunus*, *fraxinus*, *sambucus*, *alnus*, *corylus* and *pomoideae*. All of the wood species are native to the British Isles and could have grown locally. The curving, knotty nature of the majority of the wood suggests an origin in

branch wood from grown trees rather than managed woodland and the major element of technology displayed is the cutting of points on the lower ends of stakes/piles

A piece of morticed timber (7545) was also identified at the southern end of stake group 7518. This is the only joint from the site and represents a simple form of through mortice which appears infrequently in the archaeological record. The timber lay horizontally and as it was located adjacent to the former course of the beck it is possible that it formed part of a structure that had been disturbed by a flood episode. A peg (7348) was also identified towards the southern end of group 7518 and represents an unusual find in this context and regionally since wooden pegs of this size and of Roman date are not common finds.

A series of stone spreads (7657, 7658 and 7896) were identified along the line of the former beck edge, to the immediate north of the stake-built revetment. It is possible that these represented successive phases of revetment protecting the edge of the settlement area from the encroachment of the beck. Finds recovered from these stone spreads included a piece of lead melt, a copper alloy dumb-bell stud, a worked stone and Hadrianic/Antonine pottery.

An early series of features was identified cutting the latest of the alluvial deposits. It comprised a shallow curvilinear gully (7892/7908) from which pottery dating to the 1st and 2nd century AD was recovered. The gully was truncated by one of thirteen postholes in sub-square arrangement with a break to the south-east, which potentially formed part of a small structure (7968). Finds recovered from the fills of the postholes comprised a copper alloy peltate trumpet derivative brooch, an iron spear-butt and an assemblage of pottery, including Dressel 20 amphora and samian ware.

A substantial pit (7788) filled with large stones was located within the area enclosed by postholes and may have been the setting for a central posthole within a post-built structure, with an entrance to the south-east. Finds recovered from the fills of the pit included an iron joiner's dog, an iron object and pottery, including Dressel 20 amphora and samian ware, dating from the 2nd century AD. A double line of stake-holes (7914) was identified running in an arc around the south-eastern side of the potential structure and may represent a temporary wind-break across the entrance.

An occupation deposit (7781) was identified within the area delimited by the postholes from which a substantial quantity of pottery dating from the late 1st to early 2nd century AD was recovered. This was overlain by metalled surface 7365 which may have provided a later floor for the structure. Finds recovered from this surface included a sherd of samian pottery dating to the 2nd century AD.

Two gullies (6956 and 7086), which ran north-south and east-west respectively, were identified towards the eastern side of the excavated area. The gullies ended at the line of the former beck edge indicating that they probably fed into it. The finds recovered from the fills of the gullies comprised a glass melon bead, a glass sherd and grey ware dating to the 2nd century AD.

Horizon 2 (Fig 5)

The series of features described above was overlain by structure 7951 and its associated yard. Structure 7951 was stone built and rectangular, measuring 7.50m from north to south by 4.00m (Plate 4). It comprised facing stones along the eastern and southern edges with a foundation of large stones (7152). The remnants of a stone-built wall (7120) were identified overlying the northern edge of stone foundation 7152. An assemblage of Roman period finds was recovered from within the make-up of both the foundation layer (7152) and the wall (7120), which included six fragments of vessel glass, a bone counter and a large quantity of pottery dating from the late 1st to early 2nd century AD.

The building foundation (7152) was overlain by a number of occupation deposits (7011, 7012/7021, 7080, 7114 and 7151, not illustrated) from which an assemblage of Roman period finds were recovered. These included a glass melon bead, two glass vessel sherds, iron artefacts and grey ware dating to the 2nd century AD.

The occupation deposits were overlain by a crushed daub surface (5289), which may have represented a formalised floor surface. The crushed daub extended to the south of the limits of the building where it was much deeper and possibly represented a phase of floor clearance. Finds recovered from layer 5289 included pottery with a date range from the late 2nd century AD.

To the immediate east of building 7951 a layer of burnt material (7296) was identified which contained a large quantity of charcoal, wood fragments, fired clay and seven nails, suggesting that it may have resulted from the collapse or destruction of part of the building. Samian pottery dating to the 2nd century AD was recovered from this deposit.

The skeleton of a horse (within cut 7614) was encountered beneath the north-eastern corner of the foundation of building 7951 (Plate 5). The horse was oriented from north to south and lay on its left side. The back legs were splayed out and it was missing the scapulae and one of the front legs. It may have been a ritual deposit beneath the building. The fill of the horse burial also yielded an assemblage of Roman period finds which included pottery dating from the late 1st to 2nd century AD.

An area of cobbled surface (6943/6944) bounded at its southern edge by a wall foundation (6999) was identified to the south of building 7951. It was also directly overlain by crushed daub deposit 5289 and may have been associated with structure 7951. Pottery, which potentially dated from the – late 2nd century AD, was recovered from the make-up of the cobbled surface.

Building 7951 had an associated yard surface lying to the south and east, which measured 7.7m from north to south by 7.6m. It comprised bedding layer of sand (7808, not illustrated), which provided a base for its foundations comprising a two separate layers of large stones (6939 / 7090 and 7607) and yielded a finds assemblage comprising a large quantity of pottery dating to the mid-2nd century AD.

The stone foundation was overlain by a series of small patches of burnt material and sand (7604, 7608, 7640 and 7860, not illustrated) Finds recovered from these layers included a Roman period glass vessel sherd, and Hadrianic – Antonine period pottery

A further foundation layer of large stones (7404) broadly covered the same area as foundation 7607 Finds recovered from this layer included pottery dating from the 2nd century AD The foundation layer (7404) was overlain by small patches of sand, burnt material and metalled surface An assemblage of finds was recovered from these deposits which had Hadrianic – Early Antonine date range These artefacts comprised a large assemblage of pottery, which included Dressel 20 amphora and samian ware, an iron stylus/pin, a leather shoe fragment, a bone flute and a tinned spatula A linear strip of pebbles and gravel (7393) also overlay foundation 7404 and may have represented a path running from building 7951 towards the beck

The foundation layers and subsequent deposits were overlain by an intermittent metalled surface (7327, not illustrated), which was in turn overlain by a sandy layer (6965, not illustrated) providing a foundation for an extensive metalled surface 6762/6763/6794 Sand layer 6965 yielded finds comprising iron nails and pottery, including Dressel 20 amphora, samian ware and Gallic amphora, dating from the early to mid-2nd century AD

An assemblage of Roman period finds was also recovered from the metalled surface 6762/6763/6794 which comprised artefacts composed of iron, copper alloy including four copper alloy coins dating to between the 1st and 3rd century AD and a large quantity of pottery, including later material It is possible that some patches of the surface belonged to a later phase (horizon 6), but could not be readily separated during excavation The metalled surface was partly overlain by an occupation deposit (7246), which was composed of burnt clay and sandy silt

A further area of sequential layers of cobbled and paved surfacing (6783, 6901, 6923, 7072 and 7155/7411) was identified to the north-east of structure 7951 and may also have been associated with it Finds recovered from these surfaces included the base of a disc hand quern, which was made of Mayen lava and displayed "harp" patterning, an iron washer and grey ware dating to the early 2nd century AD

Horizon 3 (Fig 6)

Building 7951 was overlain by a large sandy deposit (5652) The finds from this layer included a copper alloy trumpet brooch, a copper alloy bow brooch and grey ware dating from the late 1st to 2nd century AD

Layer 5652 was truncated by structure 6949 which was rectangular, measured 12.8m from east to west by 6.95m The structure was timber-built and comprised of 40 postholes arranged along the northern, western and southern sides, with a number out-lying to the south The large number of postholes forming this structure suggests that it

had been rebuilt, potentially twice. The eastern side of the building constituted a single post-pad (7003), suggesting that this side may have been open-fronted. The finds assemblage recovered from the fills of the postholes included iron, glass, stone, lead, copper alloy artefacts, including two coins dating to between the 1st century BC and the 2nd century AD and pottery, including Koln roughcast ware and Dressel 20 amphora, which dated predominantly to the 2nd century AD.

A further 'L'-shape of eight smaller postholes (7952) around the north-western corner of structure 6949 may have been related or represented part of a separate structure. The finds recovered from the fills of this group of postholes included pottery dating to the 2nd century. A circular hearth (6953) measuring 0.94m in diameter was identified within the structure (6949). It was truncated by a posthole suggesting that it was from an early phase of the building. A charcoal-rich deposit (5596) respected the outline of building 6949, which may have resulted from industrial activity within the building. A number of finds were recovered from this spread. These included a silver coin and a large quantity of early Antonine coarse ware pottery.

Three large, shallow pits (5900, 7464 and 7827) were identified in the vicinity of structure 6949 and may have been associated with this building. An assemblage of pottery, including fragments of a late 1st- early 2nd century Gallic amphora was among the finds recovered from the pits. Pits 5900 and 7827 also yielded a large quantity of slag indicative of metal-working in this area.

A further four pits were also identified at this level (5815, 7617, 7638 and 7736). The finds recovered from these pits included glass, small fragments of lava quern and a small quantity of grey ware dating from the late 1st to early 2nd century AD. A further small pit of unknown function (7479) was lined with a single large sherd of Dressel 20 amphora, which weighed 4800g.

An adult inhumation burial (7303) was identified approximately 1m to the north of structure 6949. The remains were oriented from east to west and were supine extended with the right arm flexed over the chest and the left arm resting on the lower ribs, with the front of the skull displaced to the left, probably post-deposition. Eight iron nails were found around the remains suggesting it had been interred within a coffin, which was corroborated by the large rectangular grave-cut. Further finds recovered from the grave fill comprised abraded pottery, which probably date to the 2nd century AD. The individual was aged between 10 and 11 years and the sex could not be determined. Osteological analysis of the skeleton revealed that it had suffered from Trisomy 21 (Down's syndrome), which may have prevented it from reaching maturity.

Three parallel linear features (5097, 6776 and 6777) were identified c 5m to the north of structure 6949. The features ran from north-east to south-west for a distance of 5m and potentially represented the remains of spade cultivation / drainage cuts terraced into the slope. All three features were filled by a large deposit (5038/5067/5199/5959, not illustrated), which yielded finds including a quern fragment and pottery with a date range from the mid-1st to 3rd century AD.

A stone-built revetment (7959) was identified at the same stratigraphic level as building 6949. It ran parallel to the northern edge of the alluvial and peat deposits and appeared to have had a similar function to the earlier wooden revetment. It ran for a distance of approximately 20m, had a maximum width of 4.1m and survived as a single course of large boulders. A line of large facing-stones was traced for approximately 7m along the south-eastern edge, which appeared to have been robbed-out from the rest of the revetment. A small assemblage of Roman period finds, including a sherd of 2nd century AD Köln roughcast ware pottery and ceramic building material, were recovered from the soil matrix between the stones. The revetment appeared to have been bedded into a layer of sand (5200) from which a glass melon bead was recovered.

The remains of a possible building (5977) were identified to the south of structure 6949 and comprised a rectangular metalled surface measuring 3.8m by 3.1m. There was no clear evidence for the positions and form of any walls and it is possible that the walls may have rested on sill beams or pad-stones.

Horizon 4 (Fig 7)

A further structure (5009) was identified towards the southern end of field 63. It measured c. 15m from east to west by c. 15m and was bounded by a series of post-pads and a single posthole (5575). The post pads included a notched stone and an opposing stone with a pivot-hole (5343), suggesting that there had been an entrance at the south-eastern corner of the building. The pivot stone was set into layer 5285, which comprised large stones and may have formed a foundation for the building along its southern edge where the ground was unstable adjacent to the beck. Finds recovered from stone deposit 5285 comprised pottery, including Dressel 20 amphora and samian ware, dating from the mid-1st to 3rd century AD.

Structure 5009 comprised a primary cobbled floor surface (5224, not illustrated), which had slumped in some places and had been repaired and overlain by further patches of cobbles and metalling (5222/5269, 5223, 5225, 5226, 5266 and 5268). These patches occurred in the area which lay within the limits of the post-pads and may represent periodic repairs to an internal surface. Finds recovered from these deposits included an iron girth buckle and pottery, including a stamped sherd of mortarium and samian ware, with a date range from the mid-1st to the mid-3rd century AD.

The remains of a stone-lined dram (5441) were identified running from east to west for a distance of approximately 6m. It was incorporated into a deposit of large flat stones (5399), which may have formed part of a foundation layer for structure 5009. Finds recovered from the composition of layer 5399 included a fragment of an upper stone from a sandstone disc hand quern, two fragments of lava quern, and a large quantity of pottery, including a sherd of samian ware with a lead rivet *in situ*, dating from the mid-1st to 3rd century AD.

A deposit of loose rubble (5271, not illustrated) was encountered within the area of structure 5009 as delimited by the post-pads. It overlay dram 5441 and the repairs to surface 5224, and may have represented the destruction of the building. The finds recovered from this layer included grey ware dating from the late 1st to the 2nd century AD.

Cobbled surface 5251 was identified at the same level as surface 5224 extending to the south-west of the building and may have represented an external surface associated with it. It covered an area measuring 12.5m from north to south by 10.4m. Finds recovered from the make-up of this surface included lead and iron artefacts and pottery dating from the mid-1st to 3rd century AD.

A number of discrete deposits (not illustrated) immediately overlay pit 5252 and cobbled surface 5251. These included three small areas of silty clay (5603, 5624 and 6795), an ashy layer (5213), a gravel patch (5569) and a small cobbled area (5625) with a sand bedding layer (5599), which may have been a repair or a small extension to surface 5251. Finds recovered from these discrete deposits included pottery dating from the mid-1st to 3rd century AD.

Cobbled surface 5179 overlay surface 5251 and may represent an extensive repair/re-surfacing of this layer outside of the structure. Beam-slots 5212 and 5248 appeared to delimit the southern edge of metalised surfaces 5179 and 5251 close to the beck and may indicate a fence-line in this location. Two postholes (5191 and 5126) were identified in the vicinity of the beam-slots and may have been associated with them. Finds recovered from the surfaces and the fills of the postholes and beam-slots included, two iron hobnails, glass and pottery dating from the mid-1st to 3rd century AD.

An extensive deposit of mottled orange/brown silty clay (5121/5375, not illustrated) overlay surfaces 5224 and 5179, and would appear to have been laid down after the building had passed out of use. Finds recovered from this layer included a collection of iron artefacts, including a possible spearhead, a glass bracelet fragment and pottery dating from the mid-1st to 3rd century AD.

The south-western corner of yard surface 5179 was truncated by later timber building 5129. It was rectangular, measuring c 8.5m from east to west by c 8m, and comprised sixteen postholes. Four further postholes were identified which ran from east to west beyond the southern edge of the structure. It is possible that they formed part of structure 5129 but they may also have formed a fence-line to the south as they were cut into the fill of, and follow the same course as, earlier trench 5123. A small assemblage of finds was recovered from the fills of the postholes and from trench 5123 which included iron nails and pottery with a date range from the mid-1st to 4th century AD. A bulk sample was recovered from each of the fills of postholes 5075 and 5157 as they appeared to contain posts rotted *in situ*.

Horizon 5 (Fig 8)

Structure 6949 was partially overlain by extensive midden deposit 5042/5237, which measured c 20m by 20m in plan and had an average depth of 0.2m. A large assemblage of Roman period finds was recovered from this deposit, which comprised artefacts composed of copper alloy, iron, lead, bone, glass, ceramic building material and pottery with a date range from the mid-1st century to the late 4th century AD. These artefacts included four copper alloy coins, two brooches, a glass barrel bead and a fragment of lead window came.

Structure 5695 was located towards the top of the slope and truncated midden deposit 5042/5237 described above. The structure measured 17.5m from east to west by 5m and comprised 24 postholes. Packing stones were observed in the majority of the postholes, post-pads were noted in the base of five postholes and a further two post-pads (5440 and 5919) were evident at surface level. No postholes were identified along the eastern end of the building suggesting that it was open. Finds recovered from the fills of the postholes included glass, iron and pottery, including Huntcliff ware, dating to the later 4th century.

A possible hearth (5604) was identified within the area of building 5695, which comprised a deposit of charcoal-rich material from which a sherd of Roman period pottery was recovered. The hearth was not central to the long axis of the building but was clearly located within it.

An elongated pit (5388) was also located within building 5695, adjacent to the northern wall. It was filled with charcoal-rich material and showed signs of *in situ* burning. Grey ware dating to the 2nd century AD and two iron nails were recovered from the fill of the pit.

A group of five stakeholes (7969, not illustrated) were identified within the south-western area of the building. They were too small to be a structural component of the building and their function remains unclear. No finds were recovered from the fills of the stakeholes.

Horizon 6 (Fig 9)

Subsequent to the disuse of structure 5695 (Horizon 4), a series of re-cut enclosure ditches were identified in field 63 which appeared to enclose linear plots of land running from east to west, perpendicular to the posited course of the Roman road. The southern-most enclosure (5007) was cut through a midden deposit (5042) and appeared to truncate building 5695. The enclosed area measured approximately 12.5m from north to south and 30m from east to west within the excavated area. The northern flank of the enclosure was composed of the earliest ditch (5149, not illustrated), from which pottery, including Koln roughcast ware and samian ware, dating from the late 1st to 2nd century AD was recovered. Ditch 5149 was only detected in one sondage and

had been heavily truncated by ditch 5151/5311. This ditch ran the full length of the northern flank and turned north at western edge of the enclosure, where it continued for a further 32m (as 5547), forming part of the enclosure to the north. Finds recovered from ditch 5151/5311 included pottery with a date range from the 2nd to the late 4th/early 5th century AD. No internal structural features were noted inside the enclosure.

Ditch 5151/5311 was re-cut by a series of ditches (5085, 5562, 5259/6724, 5689/6919, 6715 (not illustrated), 7054, 7958, 7960, 7961 and 7962), which formed the enclosure to the south. The earliest of these ditches (7962) was also seen to continue further to the south of the enclosed area. A large Roman period finds assemblage was recovered from the fills of the enclosure ditches which ranged in date from the mid-first to the late 4th/early 5th century AD throughout. The finds assemblage comprised a wide range of artefacts composed stone, copper alloy, iron, lead, glass, bone, ceramic building material and pottery. These finds included four fragments of large sandstone millstones, a copper alloy heart-shaped inlaid stud, an iron shield rib, an iron spearhead and a large quantity of pottery, including Dressel 20 amphora, imported mortaria and Nene Valley ware.

Enclosure 1 truncated pit 6872 along its northern flank. Pottery, including Nene Valley ware, with a date range from the mid-1st to the 3rd century AD and iron fragments were recovered from this pit. A posthole 5290 was also identified in the base of ditch 7962 from which two sherds of pottery were recovered which dated to the mid-2nd century AD. A further posthole (7471) was identified on the outside edge of the north west corner of the enclosure, from which a sherd of samian pottery dating to the 2nd century AD was recovered.

An earlier phase of activity represented by ditches 5070, 5204, 5952, 6908, 6910 and 7916 was truncated by the main enclosure. Finds recovered from these ditches comprised artefacts composed of glass, lead, iron, bone, a silver coin dating to the 2nd century AD and pottery with a date range from the late 1st to the late 4th/5th century AD.

Ditch 5952 was truncated by pit 5881, the finds recovered from which included two copper alloy coins and pottery with a date range from the mid-1st to the early 5th century AD. Ditch 5070 was truncated by pit 6893 from which no finds were recovered.

Horizon 7 (Fig 10)

Subsequent to the disuse of structure 5009 a series of features was identified, including kiln 5330, ditches 5054/5182, 5079, 7966 and 7987/7901, fence-lines 5133 and 5332 and a number of pits. Kiln 5330 comprised a rectangular clay superstructure (5377) with a flue running through the centre, which had become scorched on the inside (Plate 6). A semi-circular layer of hard-standing (5383, not illustrated) was evident at

the eastern end of the structure. It was composed of large flat stones and had been overlain by a further layer (5331), which was composed of both flat stones and 31 large pieces of Dressel 20 amphora dating from the mid-1st to 3rd century AD. The flue was lined with a deposit of burnt ashy material (5379, not illustrated) from which pottery dating from the mid-1st to 3rd century and a boar's tusk were recovered. A further deposit of burnt material (5378) was identified at the eastern end of the flue. The burnt deposits were overlain by a layer of flat stones (5096) which filled the flue and formed a circular area beyond its western end. There was no evidence of burning associated with this stone layer and it may represent a change in the use of the feature. Two fragments of tegula had been re-used in stone layer 5096 and other finds recovered from it included pottery with a late 3rd to 4th/5th century AD date range. Three post-pads (5380, 5602 and 7970) were identified in the vicinity of the kiln, which may have formed part of its superstructure.

Two layers of silty material with a high content of fired clay (5632 and 5633) were identified to the immediate north and north-east of kiln 5330 and seemed to result from the demolition or collapse of the superstructure. Finds recovered from these deposits comprised pottery with a date range from the mid-2nd to late 4th/early 5th century AD.

A wide, shallow pit (5839) was identified to the immediate west of kiln 5330. A large assemblage of Roman period finds were recovered from the fill of the pit including a leather fragment, iron nails and pottery with a date range from the 2nd to late 4th/early 5th century AD. The pit may have been associated with the adjacent kiln but its function remains unclear.

A further small pit (5590) was encountered to the immediate north of the kiln, the fill of which contained 35 sherds of an early 3rd century AD dish, which appeared to have been intentionally interred, suggesting that it may have been a cremation burial. An assemblage of pottery with a date range from the 2nd to 4th century AD was also recovered from the fill of the pit.

Pits 5029 and 5178, to the north and south of the kiln respectively, were also identified as being relatively late in the sequence. The fills of both pits yielded a finds assemblage comprising a collection of iron objects and pottery, including Nene Valley ware and samian ware. A further three pits (5662, 7877 and 7963) were also identified at broadly the same level. The fills of the three pits yielded pottery, including Dressel 20 amphora and samian ware, which dated from the mid-1st to 3rd century AD.

A small pit (5819) containing a large quantity of burnt material was identified towards the eastern area of the site. There was evidence for in situ burning around the edges of the pit suggesting that it had functioned as a hearth. A small pit (5660) was located approximately 8m to the south-east of pit 5819. The fill of the pit contained iron nails and grey ware dating to the 2nd century AD.

A heavily truncated surface (5318) was identified to the south-east of the kiln. The surface was too heavily truncated to indicate its original form or function and the make-up yielded pottery dating to the mid-2nd century AD.

Ditch 7966 was identified truncating building 5009 (Horizon 4). The ditch ran south from the south-western corner of enclosure 1 and turned due east. It is possible that this ditch represented an enclosure to the south of enclosure 1, although there is no physical relationship between the two. Finds recovered from the fills of ditch 7966 were composed of iron, glass, ceramic building material and pottery with a date range from the late 2nd to the late 4th/early 5th century AD.

Two sections of ditch (5554 and 7897, re-cut by 7901) may represent the continuation of one ditch enclosing an area of land on the slope up from the beck. Finds recovered from the fills of the ditches included pottery with a date range from the late 1st to early 5th century AD.

A further ditch (5182) was identified which ran from north to south along the western edge of the excavated area. It was re-cut by ditch 5054, which followed the same course but extended over a greater distance to the north. The fills of the two ditches yielded a small assemblage of finds, which included iron artefacts and pottery with a date range from the mid-2nd to the late 3rd -4th/ early 5th century AD. A single posthole (5152) was identified which cut into the upper fill of ditch 5182 and a large wooden post was found *in situ* within the posthole. It is possible that these ditches followed the course of the Roman road and were roadside ditches, but this could not be proven due to the restriction on the excavated area. A shallow gully (5180) ran perpendicular to ditch 5182 and may have fed into it. No finds were recovered from the fill of the gully.

The line of a fence (5133) was identified which roughly followed the same course as the two ditches described above and truncated ditch 5054. The fence comprised three postholes (5131, 5135 and 5164) with an adjoining beam-slot (5133). A further fence (5332) was identified converging with fence 5133 and the two structures may have formed a stock funnel. Fence 5332 comprised five postholes (5250, 5327, 5340, 5353 and 5371) with an adjoining beam-slot (5332). Pottery with a date range from the late 3rd to the 4th/5th century AD was recovered from the fills of two of the postholes. A further posthole (5571) was identified to the immediate east of fence line 5133 and may have been associated with it. The fill of the posthole contained three iron objects.

A scour (5079) was identified running from north-west to south-east down the slope towards the beck. The fill of the scour contained a fragment of opus signinum and pottery dating from the late 1st to 2nd century AD which was probably residual.

Horizon 8 (Fig 11)

A second extensive midden deposit (5002/5018/5027/5028/5045/5048/5068) was identified which overlay the majority of the features described above. It covered an area of c 50m by 50m and had an average depth of 0.1m. A large assemblage of Roman artefacts was recovered from the midden deposit, which had a date range from the late 1st to the 5th century AD. The finds were composed of stone, copper alloy, iron, lead, glass, ceramic building material and pottery and included an intact, circular sandstone disc, three copper alloy brooches, a disc-shaped lead weight, a glass melon bead and an iron stylus. A number of modern artefacts were also recovered from the midden deposits, but these are likely to have been the result of recent agricultural activity.

Two adult inhumation burials (5016 and 5026) were identified in the southern part of field 63. Both burials were cut into midden deposit 5002, making them relatively late in the sequence. Skeleton 5016 was oriented from north to south and was supine extended with both hands clasped over the chest (Plate 7). Part of the skull, the front of the ribs, the left humerus and the toes of the right foot were absent. The individual was identified as an adult male aged between 36 and 45 and over 70 iron hobnails were recovered from around the feet. A large animal bone was identified lying diagonally across the pelvis. The bone displayed butchery marks and may have been placed within the grave following a funeral feast. A small bone bead was recovered from the fill of the grave, which may have represented body adornment and a number of bulk finds were also collected from the fill (5015) of the grave including an iron nail. Broadly, the associated pottery was not closely dateable, but included a possible late 4th century mortarium sherd.

The second burial (5026) was oriented from west to east and lay on its left side with the legs flexed. The right side of the body was missing, probably due to later agricultural activity. The individual was identified as a male adult aged between 35 and 45, with a stature of approximately 173cm. The fill of the grave yielded glass, pottery, which dated to the mid-2nd century AD, which were probably residual, and an iron object was found alongside the left femur.

Two cobble spreads (5036 and 5066) overlay the midden deposit and a pit (5296) was cut into it. Cobble spread 5036 covered an area measuring 4m by 4.4m and incorporated a number of large flat stones, which may have been post-pads for a heavily truncated building. A deposit of silty clay (5037) overlay cobble spread 5036 and may have represented an occupation layer. Finds recovered from deposit 5037 comprised three copper alloy coins dating to the 3rd and 4th century AD, ceramic tile, iron artefacts and a large quantity of pottery including Huntcliff forms dating after AD 360.

Cobble spread 5066 covered an area measuring 6.80m x 8.75m, but did not form a coherent floor surface. It may have simply been laid down as hard-standing. A number of finds were recovered from the make-up of surface 5066 including four fragments of

a saddle quern, two of which are joining fragments, a rim fragment of a large sandstone upper millstone and pottery including Huntcliff and Crambeck forms dating after AD 360-370

Pit 5296 was identified approximately 7m to the south-east of cobble spread 5066. The pit was circular and had a cobble lining (5295) (Plate 8) which incorporated a 90% intact upper stone from a disc hand quern in the base. A finds assemblage comprising tegula and Huntcliff pottery were recovered from the backfill (5294) of the pit. Pit 5296 was identified in a previous evaluation trench (LUAU 1995). The pit was only partially exposed and was not fully excavated at this time. Other features identified within the evaluation trench included a series of cobbled surfaces located at the southern end of the trench, which is described above as the surfaces constituting structure 5009.

Healam North (*Fields 63 (north) and 64, Figs 3, 12 and 13*)

The northern area of Field 63 and Field 64 contained a complex of roadside enclosures, boundary ditches and timber structures, many of which had been identified by an earlier geophysical survey. The remains are described below in a provisional sequence comprising two broad periods based upon stratigraphic, pottery and numismatic evidence.

The earlier period (Fig b) dates broadly to the 2nd century AD and includes enclosures and ditches that defined plots of land which contained the remains of at least three post-built structures. Two inhumation burials were also identified that appeared to date to this period. The activity appeared to be largely bounded to the west by a sequence of ditches on a single south-east to north-west alignment. It is possible that a Roman road lay west of this ditch, but its extent could not be established with any certainty. Many of the ditches within this stage had been re-defined on multiple occasions and throughout the 2nd century AD.

The later period dates from the late 3rd to the late 4th/5th century and comprised a series of later enclosures together with the remains of two further post-built structures which clearly post-dated some of the 2nd century boundary ditches. The southern-most enclosure contained three further inhumations and a group of refuse pits. The remains of other timber structures were identified which proved to be later than. A ditched trackway, and a series of pits, hearths, postholes and a possible corn dryer were also identified. A metalled road (Dere Street?) lay to the west of these features, and there was evidence that it had been constructed over an earlier building and a series of ditches.

A small quantity of Anglo-Saxon material was also identified during investigations suggesting the site remained in use into the sub-Roman period. However, where finds originating within this period were identified, there was the potential for them to have been introduced into Roman contexts by medieval ploughing.

The 2nd century AD and associated remains (Fig 12)

North of enclosure 5430, pit 7206 was the earliest dated feature identified in this area. It was located towards the southern end of the principal north-south ditch 7954, and had been cut by it. The pit was quite irregular and it seemed likely that it represented a root bole or a pit that had become overgrown. It contained pottery dating to the mid-2nd century AD which included sherds of grey ware and amphora.

Ditch 7954 represented the earliest surviving phase of large scale land division within the northern area of the site. It was 'T'-shaped in plan and was recorded for a distance of 120m on a south-east to north-west alignment with a rounded terminal to the south-east. Midway along its length, an eastern branch of the ditch divided the area in two. A large finds assemblage was recovered from the fills of ditch 7954 which included Roman glass and a large assemblage of pottery. The pottery within the primary fills comprised material which dated to the late 1st/2nd century AD, although sherds were also recovered which dated to the 3rd or 4th/5th century AD from upper levels which may have been intrusive or was evidence of later recutting.

The eastern branch of ditch 7954 cut an undated ditch (7018) and had itself been re-cut at least twice (ditches 7009 and 7131, not illustrated). Ditch 7009 contained undiagnostic Roman coarse ware and ditch 7131 contained fragmentary iron objects including an iron nail, large quantities of slag and sherds of mid-2nd century AD pottery. The later ditch (7131) had been cut by pit 7136, towards its western end, which contained iron objects and pottery including sherds dating to the 2nd century AD.

Ditch 7954 was re-defined several times by ditches 6696, 6886 (not illustrated) and ditch 5674. Pit 7263 cut the western edge of ditch 7954 and was located near the centre of the 'T' junction. Its fill contained an assemblage of iron objects which included two hinges and a joiner's dog or latch lifter. The pit was cut by later ditch 7955.

The fills of the ditch re-cuts (6696 and 6886, not illustrated) contained a moderate finds assemblage which broadly dated to the mid-2nd century and included flint, slag, furnace lining, a lead object, a copper alloy fragment, iron nail fragments, glass and sherds of pottery including samian ware. Ditch re-cut (5674), which was located to the northern end of ditch 7954 contained undiagnostic Roman coarse ware. Ditch re-cut 6696 was cut by enclosure ditch 5430 to the south and ditch re-cut 6886 was cut by enclosure 6802 to the north. Ditch re-cut 7955 (not illustrated) represented the final phase of re-definition to ditch 7954 and its fills contained an assemblage of pottery with a Hadrianic/early Antonine date range.

Enclosure 6802 was almost square measuring approximately 22m x 22m. It had cut a short length of ditch (251) at its western end, which contained a copper alloy pendent and undiagnostic Roman pottery. The ditch which defined the enclosure (6802) produced iron objects and an assemblage of Hadrianic/early Antonine pottery. It was cut to the south-east by ditches 7203 and 7361 (the latter belonging to the later period).

Ditch 7203 was recorded for a distance of 13m and contained finds which included early 2nd century AD pottery and undiagnostic Roman coarse ware. A further ditch (7355) was located c 5m to the south-east of enclosure 6802 and may have been contemporary with the enclosure. The ditch produced only undiagnostic Roman pottery.

The interior of enclosure 6802 contained numerous features which included two inhumations and a series of pits which may or may not have been related. The inhumations comprised skeletons 5243 and 7275.

Skeleton 5243 was located 3m to the south of the northern circuit of the enclosure (Plate 9). The individual was aligned north-west to south-east and was supine extended with the right hand on the chest. The remains represented those of a male aged to between 26 and 35 years. There was no artefactual evidence to date this burial.

Skeleton 7275 was located 3m to the south-east of skeleton 5243 and was identified within a grave that had been severely truncated by later ploughing (Plate 10). The individual was aligned north-west to south-east and was flexed on the left side with the left hand on the chest and the right hand on the pelvis. The remains represented those of a possible male also aged to between 26 and 35 years. Again, there was no artefactual evidence to date this burial.

A number of other pits (including pits 5320, 6880, 7039 and 7082) were identified within enclosure 6802. Pits 5320, 6880 and 7039 contained pottery including samian ware and amphora which dated to the mid-late 2nd century AD. Pit 7082 may have been later than the surrounding features as it contained pottery which dated from the late 3rd/4th century AD. The fill of pit 7082 also contained a fragment of Roman ceramic roof tile.

An elongated pit or short length of ditch (6934) was identified 10m to the north-east of enclosure 6802. It had cut an undated pit (6936) and its fill contained a copper alloy coin dating from the 1st to 2nd century AD and undiagnostic Roman coarse ware. Pit 6934 was cut to the north by ditch 7094.

Structure 7252 (Plate 11) was located 3m to the north of enclosure 6802. It displayed a slightly different orientation to the other structures recorded in this area (discussed below) but was aligned consistently to the adjacent enclosure ditch 6802. The building comprised twelve postholes and had overall dimensions of 12m x 6m. Two of the postholes contained artefactual material but only those from posthole 6781 were diagnostic and indicated a Hadrianic/early Antonine date range. A pit and re-cut pit (6785 and 6787) were located within the eastern end of the structure and may have represented the remains of a hearth. The fill of the earliest pit (6785) contained Roman roof tile and pottery which dated to late 1st/2nd century AD. The later pit (6787) contained no diagnostic finds.

A series of intercutting ditches were identified c 7m to the north-west of Structure 7252. The earliest of these ditches was features 7122 and 7127. Ditch 7122 was 10m long and was aligned south-east to north-west. It contained no diagnostic material and was cut to the south by ditch 7094 and along its western edge by ditch 5678.

Ditch 7127 was located 2m to the north-east and was 4m long with a similar alignment to ditch 7122. Ditch 7127 contained pottery which dated from both the 2nd and 3rd centuries AD. It is considered that the later artefactual material may be intrusive within this context as this area of the site had suffered disturbance from construction of a modern building. Ditch 7122 was cut to the south by ditch 7094 and to the west by ditch 5678.

Ditch 7094 was 41m long and was aligned south-west to north-east. It represented the redefinition of an earlier undated ditch (7281, not illustrated). The fills of ditch 7094 contained an assemblage of pottery which dated to the mid to late 2nd century AD. It was cut toward its western end by ditches 5678, 7277 and 7074.

Ditch 5678 was 20m long and was aligned south-east to north-west. The fill of the ditch contained sherds of late 2nd/early 3rd century AD pottery. It was cut by an undated ditch 5676 and a modern culvert. Another short length of ditch (7277) was located 6m to the east of ditch 5678. It was 5m long and had also cut ditch 7094. Its fill contained no finds.

A further ditch (5010) was identified c 45m to the north of ditch 7277. This feature contained an assemblage of pottery which dated from the mid-1st to the 2nd century AD and a sherd of medieval green glazed pottery which was probably intrusive as a result of later ploughing.

Ditch 7205 was located 2m to the south of the southernmost Structure 5730 and was aligned south-west to north-east. The ditch had been badly disturbed by a modern hedge line, which marked the boundary between Fields 63 and 64. Ditch 7205 represented the re-definition of an earlier ditch (7582, not illustrated) whose fill contained pottery with a Hadrianic/Antonine date range. The fills of the later ditch (7205) contained pottery which may have dated to the late 2nd century AD and a fragment of intrusive post-medieval brick introduced by the later hedge line.

Structure 5730 appeared to represent a single phase of building supported by two rows of twelve opposed posts which measured in the region of 12m x 4m. It may have contained a double length bay to the west as evinced by posthole 7047. Nine of the postholes survived and artefactual material was recovered from only one, which comprised a single sherd of possible handmade pre-Roman Iron Age pottery that was presumably residual within this context.

Numerous other features were identified surrounding the structural remains which may conceivably have represented further phases of the structure. These included both

refuse pits and postholes, seven of which contained pottery that broadly dated to the 2nd century

Two further pits (6985 and 6988) were identified 18m to the east of Structure 5730 towards the eastern edge of the excavation. The fills of one of the pits (6985) contained undiagnostic Roman coarse ware and 2nd century AD pottery.

An 'L'-shaped ditch (6672) was identified c 10m to the south-east of Structure 5730 and beyond ditch 7205. Originally, it may have formed a square enclosure measuring 8m x 8m, but any evidence for a southern circuit had been completely removed by enclosure ditch 5430. The ditch continued to the east beyond the edge of the road corridor. No finds were recovered from this feature and it was partially overlain by a further 'L'-shaped ditch (6670). Ditch 6670 had a total length of 8m. It had a rounded terminal to the south and also continued to the east beyond the edge of excavation. Its fills contained fragments of iron nail and sherds of probable 2nd century AD pottery.

A possible enclosure (5430) was located to the south-west of ditch 6670. It was 'L'-shaped and was aligned south-east to north-west and measured c 65m in length. The north-eastern return of the ditch overlain an earlier ditch (5991) which appeared to represent an earlier phase of the enclosure. The fills of ditch 5991 contained fragments from a Roman glass vessel and pottery which dated from the 1st to the mid-2nd century AD. The fills of the enclosure ditch 5430 contained a large finds assemblage which comprised fragments of iron, a copper alloy ring and sherds of pottery which included amphora and was broadly 2nd century in date. A small quantity of 3rd-4th century Crambeck ware was recovered from an upper fill. Ditch 5430 was cut to the south by pit 5557 (not illustrated), which contained pottery that dated from the late 1st to early 2nd century, and centrally by enclosure ditch 5696. The enclosure contained the remains of Structure 6698.

Structure 6698 represented the remains of a single building supported by 2 rows of 12 opposed posts with overall dimensions of 12m by 6m. The postholes were very shallow and had suffered significant truncation by later ploughing. Only ten of the postholes survived, which included five from both rows. Two further postholes were identified which continued the alignment of the northern row to the east although these features were smaller than the main structural components. They may have represented later extension to the structure. Three of the postholes contained artefactual material which included early 2nd century AD pottery and undiagnostic Roman coarse ware. A single posthole (5637) and two small undated pits were identified within the internal area of Structure 6698. It is possible that posthole 5637 provided extra roof support for the surrounding structure. No finds were recovered from this feature.

Two ditches (5589 and 5587) were identified to the south-east of structure 6698. Ditch 5589 was aligned south-east to north-west and represented re-definition of an earlier ditch (5647, not illustrated) which contained 2nd century AD pottery. The fills of ditch 5589 contained a lead weight and ball, a fragment of a Roman glass vessel, and a 1st/2nd century AD copper alloy coin. Ditch 5589 was cut by an undated pit that pre-

dated ditch 5587 and ditches 7499 and 5151. Ditch 5587 was aligned west-south-west to east-north-east and was 24m long with rounded terminals. The ditch contained a small assemblage of 2nd century AD pottery.

Late 3rd/4th century AD and associated remains (Fig 13)

At the southern end of the area, a large enclosure comprising ditches 5696 (re-cut 5639) and 5151, was identified. It was linked stratigraphically to the southern, deeply stratified, area adjacent to Healam Beck (Horizon 6). The enclosure was sub-rectangular and measured 28m x 42m. It contained a 4.6m wide entrance within the south-west facing side that may have contained a gate structure (undated postholes 5842 and 5860).

The northern side of the enclosure (5696) represented the latest ditch within a series of partially surviving ditches that may have represented earlier phases of this enclosure, although none of these features contained diagnostic artefactual material. Ditch 5696 was aligned near north to south for a distance of 8.5m before returning to the north-east where it was cut by ditch 5639. The ditch appeared to continue beyond the road corridor to the east. Its fills contained fragments of copper alloy and sherds of pottery that dated to the late 3rd to 4th centuries AD. It was partially re-cut by ditch 5639.

Enclosure ditch 5151 was aligned north-west to south-east for a distance of c 30m before returning to the north-east at its southern end and continuing beyond the extent of the excavated area. Its fills contained sherds of later 4th century pottery. The southern part of ditch 5151 was related to a series of re-cut ditches and deposits located within the more deeply stratified area to the south.

Ditch 5639 was 29m long and partially re-cut the enclosure ditch 5696 but did not fully re-define the earlier feature. Its fills contained iron objects, two late 3rd to 4th century AD copper alloy coins and sherds of pottery which date from the 4th/5th centuries AD. The earlier geophysical survey suggested this ditch may have formed an enclosure some 50m long by 25m wide which returned to the south as ditch 5556.

Ditch 5559 was aligned south-west to north-east and sub-divided the enclosure (5696/5151). The single fill of the ditch contained undiagnostic Roman coarse ware. Ditch 5559 had been re-defined once by ditch 5323 (not illustrated). The later re-cut (5323) contained a large finds assemblage which dated to the late 4th century AD and included a bone tool, a fragment from a jet bangle, copper alloy coins, a dumb bell stud, a ring and Crambeck grey ware.

The internal area of the enclosure formed by ditches 5696 and 5151 contained three inhumations (5301, 5305 and 5022), a group of probable refuse pits and a linear feature. The inhumations were identified north of ditch 5559 and to the east of ditch 5151 in the vicinity of the entrance.

Skeleton 5305 represented the southernmost of the burials and was identified within a grave that had been severely truncated by ploughing. The individual was aligned west to east and, although only the lower legs and feet survived, appeared to be supine extended. The remains represented those of an unsexed adult aged to over eighteen years. The burial was not associated with any grave goods although a single sherd of pottery dating to the 3rd/4th century was recovered from the fill of the grave.

Skeleton 5301 was identified 1m to the north of skeleton 5305. The individual was aligned east-north-east to west-south-west and was supine extended with the left hand on the pelvis and the right hand under the left arm. The remains represented those of an unsexed adult aged to between 36 and 45 years. No artefactual material was recovered from the grave to date the burial.

Skeleton 5022 was identified 3m to the north of skeleton 5301 and survived in poor condition. The individual was aligned west-south-west to east-north-east and was supine extended with the left hand on the pelvis. The right hand was not present. The remains represented those of an unsexed child perhaps aged to between three and fourteen years. No artefactual material was recovered from the fill of the grave to date the burial.

The refuse pits were identified as two distinct clusters, one located within the southern half of the enclosure and the second close to the north-western corner of the enclosure. The pits located within the southern area, including features 5572, 5997, 5994, 5995, 5861 and 5885, all contained diagnostic artefactual material which included pottery dating to the late 3rd/4th century, although mid-2nd to 3rd century AD material was also recovered. The finds assemblage also included iron objects and a copper alloy military belt fitting (RF 348) dating to the 2nd or 3rd century AD (from pit 5995).

Four pits were located in the north-western corner of the enclosure which included pit 5807. The fill of this pit contained a small finds assemblage that dated to the late 3rd/4th century AD.

A further ditch (7499) was located within the enclosure, to the south of ditch 5559. It was 10.2m long and continued beyond the road corridor to the east. The ditch fills contained some late 3rd to 4th century pottery together with a small quantity of residual late 1st/2nd century material. Ditch 7501 (not illustrated) was identified re-defining the eastern part of ditch 7499. Its fill contained an iron ring/loop and 2nd century AD pottery that was residual in this context.

Structure 5728 (Plate 12) was situated 8m to the north of enclosure ditch 5696/5639. It overlaid the fill of an earlier 2nd century enclosure ditch 5430 at its western end. The structure comprised 42 postholes that appeared to represent at least two phases of building. One of the phases seemed to be constructed with twelve postholes and had overall dimensions of 12m x 6m. The second, later, phase appeared to be located further to the north-east and displayed a slightly different alignment. A total of fifteen of the features contained artefactual material which included a copper alloy object,

fragments of iron nail and a small assemblage of pottery. The pottery suggested that this area may have contained structures that dated to both the 2nd and 4th century AD.

Two inter-cutting pits (5908 and 5910) were identified to the east of the structure. The later pit (5908) contained late 3rd/4th century pottery.

A second structure (5729) (Plate 13) was located 5m to the north of structure 5728 and overlay one of the re-cuts (6886) of ditch 7954 to the west. Structure 5729 represented a single building, supported by twelve postholes, with overall dimensions of 11m x 4m. Two further postholes were located to the east (7396 and 7475), which may have represented extension of the structure or an entrance. An assemblage of finds was recovered from the fills of eight of the postholes which included fragments of iron nail, a fragment of copper alloy bracelet and a small assemblage of pottery which dated from the pre-Roman Iron Age to the 2nd century AD. The early date of the pottery assemblage may suggest it was residual within this context as the structural remains overlay the 2nd century ditch 7954.

One of the structural postholes (7453), located at the western end of the building, was truncated by an intercutting pit group including features 7743 and 7745. The fills of the earlier pit (7743) contained Roman coarse ware and the later pit (7745) contained a fragment of iron horseshoe and mid-2nd century AD pottery, which again may have been residual.

The remains of a corn dryer 7405 and a small pit group, which included pit 7366, lay immediately to the north of structure 5729. It seemed unlikely these features were contemporary with the timber structure and probably represented a different phase of activity. The corn dryer (7405, Plate 14) consisted of an elongated pit that had been lined with irregularly coursed sub-angular stone. It was orientated north-west to south-east and was 1.3m x 0.4m x 0.19m in size. The feature had been fired at some point as both the masonry and surrounding soil matrix were discoloured by heat. The feature had suffered significant disturbance from the modern hedge line. The backfill surrounding the structural component contained a silver comb which dated to the mid-4th century AD and the main fill of the corn dryer contained residual 2nd century AD pottery.

The pits group, which included pit 7366, was identified 1.6m to the east of the corn dryer. The feature complex comprised four sub-circular pits and had overall dimensions of 2.6m x 1.2m x 0.35m. All the features were discoloured by heat at the base and generally contained quantities of charcoal within their fills. The fills of the two later pits contained a 3rd/4th century AD comb and late 3rd to 4th century AD pottery.

A series of shallow pits, including pit 7436, were located 5m to the north-west of corn dryer 7405. Many of these features contained traces of fired clay and had been heat affected. It seemed likely they were associated with the corn dryer and pit group located to the south-east but they had been truncated by the modern hedge line which lay in between. Artefactual material was recovered from the fills of four of the pits.

which included an iron nail and sherds of pottery which indicated a date of the mid-3rd century AD

A short section of ditch (7519) lay to the west of structure 5729. Ditch 7519 was aligned south-east to north-west and had a rounded southern terminal. The relationship between ditch 7519 and ditch 7954 and its re-cuts was uncertain due to disturbance to the area by the later hedge line however, its fill contained a sherd of Huntcliff ware (AD360) suggesting it was a late feature.

Some 20m to the north of ditch 7519, ditches 6861 and 7361 appeared to define a possible trackway aligned south-west to north-east. Ditch 6861 represented the re-definition of an earlier ditch 6817 (not illustrated) which contained two mid-3rd century AD copper alloy coins and a sherd of Crambeck ware which dated to the late 3rd or 4th century AD. The later ditch (6861) contained Roman stone roof tile and ceramic roof tile, a fragment of iron nail, a 3rd or 4th century AD copper alloy coin and pottery which dated to the late 3rd/4th century AD. The western terminal of ditch 6861 was almost completely removed by a large pit (7185). The fill of the pit contained no diagnostic finds.

Ditch 7361 was located 8m to the north of ditch 6861 and represented the re-definition of two earlier ditches (6897 and 7359, not illustrated). The earlier of the two ditches (6897) had cut an undated ditch (7018) at the eastern side of the road corridor. The fill of ditch 6897 contained undiagnostic coarse ware and ditch 7359 contained pottery which dated to the 3rd century AD. The fill of the ditch re-cut (7361) contained a copper alloy pin, ceramic roof tile and pottery that dated to the 4th century with some residual 2nd century material. The fill of ditch 7361 was cut to the west by pit 5429 (not illustrated) and along its length by a short length of ditch (6813, not illustrated). The pit produced a copper alloy nail cleaner and a large assemblage of pottery which dated to the late 3rd/4th century with some residual 2nd century AD material.

Ditch 6813 appeared to represent the final phase of re-definition of ditch 7361. Its fill contained a glass sherd, fragments of iron and pottery which dated to the late 3rd/4th century AD with some residual 2nd century material. Numerous iron hobnails were also recovered from the upper level of the fill in the vicinity of a later possible cremation pit (6838). It seemed possible the hobnails had been removed from the cremation by subsequent ploughing.

Cremation pit 6838 was located at the southern edge of ditch 7361 and was cut almost entirely within its fill. The fill of the cremation pit contained burnt bone and base fragments from single ceramic vessel which was not closely datable. The cremation pit had been badly disturbed by later ploughing.

A short length of ditch (5368) was identified 80m to the north of the cremation 6838 and at the north-eastern trench edge. It was c 3m long and was aligned south-west to north-east. Its fill contained iron nails and late 3rd/4th century AD pottery.

Ditch 7074 was identified at the western edge of the stripped road corridor within the verge of the former Great North Road. It was aligned north-west to south-east and ran parallel to the earlier ditch 7954 and its re-cuts some 4m – 6m to the west. It seems likely that it was associated with ditch 9071 located to the south and within the area of the road to the west. The ditch may have defined the extent of a series of Roman road surfaces investigated in that area. The fills of ditch 7074 contained fragments of iron objects, Roman brick and pottery which dated to the 3rd century with some earlier residual 2nd century AD material. The ditch was sealed by the remains of a possible cobbled road surface (7967) and had been badly disturbed by a modern hedge line.

Many of the features identified within the western area of the site were overlain by a cobbled surface (7967) that may have represented the displaced remains of a Roman road surface. The surface had a south-east to north-west alignment and was recorded for a distance of c 150m. It was formed by loosely packed rounded and sub-rounded cobbles which did not appear to be an *in situ* road in its own right. It had been severely truncated by medieval ploughing, which resulted in it being discontinuous along its length, and had been colonised by a modern hedge line which had created further disturbance. It is possible that the cobbles were surface material re-deposited from a series of Roman roads identified to the west. The matrix of the surface produced an iron object, a copper alloy coin which dated to AD270 – 273 and an assemblage of pottery with a date range from the mid-1st to the mid-3rd century AD.

During investigations some evidence for the use of the site within the Anglian period was identified. A single pit (5989) was identified centrally within Structure 5728 which contained an assemblage of Roman finds which included a fragment of a copper alloy spatula, iron nail fragments and Roman coarse ware. These finds were associated with two items comprising a 5th/6th century AD glass cylinder bead and a sherd of Anglo-Saxon pottery. It is possible that these finds were intrusive as the pit was partially truncated by a medieval plough furrow, however, it is equally feasible that the feature was associated with a phase of Anglian activity corresponding to some of the latest features within this part of the site. Another sherd of Anglo-Saxon pottery was recovered from the fill of ditch 6848 which represented part of ditch 7954 where it was overlain/disturbed by a later hedge line.

The Roman Road (Fig 13)

A length of Roman road was exposed and recorded for 211m beneath the carriageway and verge of the former Great North Road north of Healam Beck, to the west of fields 63 and 64. Four trenches were excavated (Trenches 25-28) through the road surfaces to investigate the sequence of deposits, although the southern-most could not be investigated fully on health and safety grounds. A series of road surfaces, make-up deposits and associated roadside ditches were identified and investigated in these trenches, together with the remains of a post-built structure and possible enclosure ditches, which appeared to be overlain by later road surfaces. The eastern side of the road and the stratigraphic relationships with the features recorded in fields 63 and 64

was truncated by a major cable duct and a post-medieval hedgeline. On the western side, the Roman road surface and the western-most roadside ditch lay beyond the limit of the excavation and could not be fully investigated.

A heavily truncated section of the Roman road was identified between two probable roadside ditches in trench 26, both of which had been re-defined. The western ditch (9035) appeared to have been constructed first and its primary fill contained pottery of Flavian/Trajanic date. The ditch had been re-cut and had infilled again with a deposit that incorporated a large assemblage of Flavian/Trajanic pottery, fragments of daub or fired clay, a Roman period glass melon bead, part of a Roman chain or necklace, CBM, and numerous iron objects including nails. The stratigraphic relationship between the ditch and the road surface had unfortunately been removed by later activity, but it was thought that the ditch probably represented the western edge of the road corridor. The eastern ditch (9071) flanked the eastern edge of the road surface and may have been a continuation of ditch 7074, to the north-east. The ditch was later re-cut through the road surface, but no datable finds were recovered from its fill.

Structure 9189

The eastern end of a large rectangular Roman period structure (9189) was discovered near the truncated remains of an early Roman road in trench 26. The remains of both the structure and part of the early road were overlain by a later Roman road (9099). The form of the structure was comparable in scale to those identified to the east (structures 5728, 5729, 5730, 6698 and 7252) and was also aligned perpendicular to the Roman road corridor.

The exposed remains of the structure comprised 17 postholes, 12 of which enclosed an area measuring 7m from south-east to north-west by 4m from south-west to north-east (Plate 15). A partition formed by five postholes crossed the structure along its short axis. The short axis of the building was apparently aligned on, and lay adjacent to, road 9038, which suggests that the two may have been contemporary.

Six of the postholes were excavated, but only one contained artefactual material. The assemblages comprised four iron hobnails, fragments of daub or fired clay, a sherd of samian with a date range of AD120-200. A small adjacent pit produced later pottery with a date range of the late 3rd to 4th century AD and was probably not contemporary.

To the south of the structure, both phases of Roman road had been heavily truncated, but the remains of a probable roadside ditch (9071) were exposed along the eastern edge of the trench, where it was seen to cut through part of a fire-pit or hearth (9169), which contained no finds. To the north of the structure, three short gullies (9197, 9196 and 9195) were exposed but not excavated. The function of the gullies is uncertain, but gully 9197 may have extended to the north, and may be the same as gully 9048 in Trench 27.

To the south of Trench 26, similar sections of cobbled road surface, believed to be Roman, were identified in three trenches excavated through the former Great North Road on the approach to the 18th century bridge over Healam Beck

Trench 27

In trench 27, the earliest phase of the Roman road (9038) overlaid the backfilled terminals of a number of large ditches which had been re-cut (9112, 9113, 9114, 9117, 9119, 9122 and 9123) (Plate 16). The alignments of the ditches were uncertain due to the confines of the trench, but they appeared to extend to the north-west and west. The fills of the ditches contained pottery with dates ranging from the late 3rd to 4th centuries AD and fragments of CBM, daub and fired clay, suggesting that there had been buildings nearby. The scale and orientations of the ditches, when considered with their stratigraphic relationships to the road, suggest that they were not elements of the Roman road, but may have been backfilled in order to allow its construction.

A cobbled layer (9038) formed a cambered road surface that was 4m wide. Running along its course were four grooves, assumed to be wheel ruts (Plate 17). The grooves were 0.1m wide on average and the two most prominent extended for the full length of the surviving surface, which appeared to follow the course of ditch 7074 to the east. These two grooves were spaced 1.16m apart (3'8"), which was thought to be within the acceptable range for a Roman period cart axle (Plate 18). Finds embedded between the cobbles and within the sandy clay of the road surface included fragments of horseshoe, a copper alloy loop, and several iron objects including nails. The finds assemblage and the ruts were thought to be commensurate with the use of the road for haulage of relatively heavy goods by horse-drawn carts – i.e. the movement of goods along Dere Street.

To the west of the road (9038), ditch 9050 ran along the same course and cut through the earlier large ditch terminals (described above). It was thought to be a roadside ditch, but it was not clear which phase of the road it belonged with. Its fill contained fragments of daub or fired clay, fragments of CBM, oyster shells, late 3rd or 4th century Crambeck pottery and three coins, all dating from AD330-5, making infilling of the ditch no earlier than the mid 4th century AD.

Between ditch 9050 and road 9038 a parallel gully (9048), which may have been associated with the early road, was found to contain pottery with a date range between the late 3rd and 4th centuries. The gully terminated within the trench and may have been part of gully (9197) to the south.

The ditches and the western half of the early road were overlain by a later road surface (9099), which was also around 4m wide (Plate 19). The foundation layers of the later road (9089, 9090 and 9147) produced a small amount of 2nd and 4th century pottery, a coin dating to AD346-8, and some metalwork including a copper alloy domed stud, and fragments of three horseshoes.

The later road was found to have been sealed by a two apparently contemporary layers of redeposited sand that contained a range of cultural material and may have been imported for construction the 18th century turnpike road, but were formed from deposits containing Roman artefactual material

Trench 28

Trench 28 was located almost 100m to the north of Trench 27 at the northern end of the Scheduled Monument. It demonstrated a more complex sequence for the development of the Roman road(s). An early road, which had deep repaired wheel ruts and a western roadside ditch, was superseded by three parallel road surfaces, one to the west and two to the east, all constructed on imported foundation layers. The western road overlay a large re-cut ditch that was aligned along the course of the roads, but it was cut through by a ditch on a similar alignment. Shallow wheel ruts were observed in the surfaces of the two eastern surfaces and in an area of cobbles between them. The evidence suggests that a Roman road corridor developed and ultimately comprised a metalled surface that was at least 20m wide, (Plate 20)

The earliest finds recovered from the area comprised an assemblage of pottery with a date range of the mid 2nd to 3rd century AD and sherds of samian ware dating from AD120-200 and AD130-175, recovered from the fill of ditch 9116, which also contained large quantities of animal bone. The ditch ran parallel to the early road to its west and was re-cut (9115), but its later phase contained no datable finds, and was later sealed by the western road (9045)

The earliest road (9061) incorporated two deep parallel wheel ruts (9084 and 9110) that were spaced 1.2m apart and had been repaired with a combination of clay and cobbles (Plate 21). The western rut (9084) contained two iron nails, while the fill from eastern rut (9110) yielded a copper alloy bristle, wire, buckle and a large iron nail.

The early road was partially overlain by a sandy foundation layer (9072) which extended to the west beneath later road make-up (9045). The deposit contained sherds of samian ware with date ranges of AD120-170 and AD150-200.

The western road (9045) comprised a layer of large stones. They were set in a soil matrix that was found to contain a sherd of glass, a quantity of animal bone and an assemblage of pottery with a date range from the late 3rd to 4th century AD. The surface of the road had been largely removed by later activity and had been cut through by a parallel ditch (9057) which was seen to terminate half way across the trench (Plate 22). The primary fill of the ditch contained animal bone, two sherds of samian and coarse ware pottery dating from the late 3rd to 4th century AD. The secondary fill contained similar pottery and a quantity of animal bone, daub or fired clay, and iron objects including a nail.

The western surfaces and ditches were sealed by a layer of colluvial soil (9068) which contained coarse ware pottery including Crambeck ware with a date range of the late 3rd to 4th/5th century AD. The road surfaces to the east (9053 and 9150) were found to have been heavily damaged by later activity and no diagnostic or datable finds were recovered from their cambered foundation layers or surfaces. Despite this, they overlay ground that has been stripped to natural clay in preparation for road construction.

South of Healam Beck (*Fields 60, 61 and 62, Figs 3, 14 to 17*)

To the south of Healam Beck, archaeological excavation was undertaken within Fields 60, 61 and 62 over a distance of 700m within the road corridor. Archaeological remains were also identified within the area of a balancing pond, in the corridor for a new High Pressure Gas Main (HPGM) diversion and in a launch pit for the new gas main, known as the Western Annex. The stripped road corridor was divided into three separate areas by a farm access track and a pre-existing HPGM which was protected with concrete during fieldwork.

A concentrated area of archaeological remains was located at the northern end of Field 62, which was closest to the proposed centre of activity at Healam Bridge. This broadly reflected the distribution of anomalies recorded by geophysical survey, undertaken in advance of excavation.

Healam Beck to the High Pressure Gas Main (*Field 62, Fig 15*)

To the north of the original HPGM, the archaeological remains were more densely concentrated than to the south. In this area, closely datable pottery sherds from the late 1st to early 5th century were recovered from a total of 45 deposits, with pottery assigned broadly to the Roman period identified in a further 17 deposits. Datable coins were identified in only two deposits. Assemblages of animal bone, many of which showed signs of butchery, were recovered from a large number of deposits. Horse bones were most numerous, with cattle and pigs also frequently represented. Some deer bones were also identified.

In common with the area to the south of the HPGM, the dominant feature was ditch 2890, which had been re-cut on numerous occasions and paralleled the western side of the corridor. It was an integral component of a series of rectilinear enclosures which lay on its east side and extended over a distance of 100m to the south of Healam Beck.

The complex of rectangular enclosures and associated features

Preliminary typological and stratigraphic assessment of the linear gullies and ditches indicate that there were three types of enclosures, all of which were associated with

ditch 2890 during one or more of its phases of re-working. The first type of enclosure, located to the east of the ditch, comprised steep-sided shallow gullies (2399, 2403, 2491, 2492, 2496 and 2557) that were relatively straight-sided. Their fills produced only small finds assemblages, which included small fragments of pottery ranging from the 2nd to the 4th centuries AD, making them stratigraphically equivalent to phases of ditch 2890.

The largest enclosure was defined by gully 2492. The northern half of the enclosure was subdivided by three south-west to north-east aligned boundary gullies (2491, 2496 and 2557). Four discrete pits (2377, 2564, 2631 and 2643) within the southern half of the enclosure and may have been related, while only two pits lay (2352 and 2366) in the northern half. It is possible that features have been lost in this area as a result of later plough truncation. Only one of nine sections excavated through gully 2492 yielded any pottery, and these comprised only small fragments of late 3rd or 4th century AD date. A soil sample yielded a quantity of industrial waste and a hazelnut shell. On the slope close to Healam Beck, gully 2399 may have represented a continuation of gully 2492. Its fill contained animal bone and samian ware dating from AD100-120. Its relationship to other linear features is discussed below.

Within the enclosure, pit (2564) contained sherds of pottery of 2nd century AD date, while the fill of pit 2631 contained sherds of late Iron Age or Roman pottery. Pit 2643 contained no datable finds. Gully 2557, which extended between gully 2492 and ditch 2890, produced no finds. However, it was stratigraphically early and cut through the fill of pit 2389, which contained fragments of fired clay. Gully 2496 also extended between gully 2492 and ditch 2890. It was seen to cross ditch 2504, but the relationship between the two had been disturbed.

A series of gullies were identified on the eastern side of ditch 2890, below the latest fill, which had been cut by the later ditch (Plate 23). These gullies (2616, 2618, 2620, 2664 and 2777) may have formed sides of a number of the rectilinear enclosures defined by the narrow gullies and larger ditches described above. The exact courses and extents of the gullies could not always be defined, as in most cases they had been truncated by subsequent activity. Beyond the northern terminals of these gullies, gully 2811 extended almost to the edge of the slope to Healam Beck. Its fill was found to contain a quantity of animal bone and sherds of pottery dating from the 4th century AD.

Two later enclosures defined by larger ditches (2504 and 2508) were also identified to the east of ditch 2890. These ditches ran parallel to one another, some 5m apart. The outer ditch (2508), turned to the north over gully 2492. The fill of ditch 2504 yielded sherds of samian ware and other pottery dating from the 2nd century AD. An upper fill produced a quantity of slag, which was rarely found in deposits to the south of Healam Beck. Ditch 2508 contained one flint flake and sherds of undiagnostic Roman pottery. It was seen to cut pit 2377, which yielded sherds of samian ware dating from AD120-200 and sherds pottery dating from the 2nd century AD, while sherds dating from the

mid 2nd to mid 3rd century AD were recovered from the upper fill. The ditch was also seen to have cut through the fill of a possible posthole 2506, from which no datable finds were recovered.

A cremation burial (2352) was identified within a shallow pit located to the south of gully 2557, and between ditches 2504 and 2508. The deposit of burnt human bone and charcoal was capped by an upper fill containing an upright samian ware bowl, which had a surviving maker's stamp and dated from AD105-120 (Plate 24). The presence of the samian ware dish suggests that the burial may have taken place any time after AD105, though it may have been considerably later if the bowl was a curated object.

Pit 2366 was located close to the intersection of ditch 2504 and gully 2491, apparently respecting both. It was found to have been backfilled with sand which contained animal bone. No datable finds were recovered.

To the west of ditch 2890, three perpendicular ditches (2596, 2645 and 2623) were identified which may have defined further enclosures. Ditch 2596 extended from the western edge of excavation and was seen to cut ditch 2641. The fill of ditch 2641 contained 3rd or 4th century AD pottery. The fill of ditch 2596 contained sherds of 1st and 2nd century samian and a coarse ware sherd dating from the Hadrianic-Antonine period. To the south, ditch 2645 contained no datable finds, but a soil sample yielded a quantity of industrial waste.

To the north-west of occupation layer 2589, a crouched inhumation burial of an adult (Sk 2581) was found near ditch 2623. It had been truncated by a later field drain, but was also vandalised, resulting in significant damage to the in situ remains. A mere ten percent of the skeletal remains were left intact and the state of preservation was relatively poor. The grave had no stratigraphic link to any dated features.

Towards the northeast corner of Field 62 three ditches, (2508, 2783 and 2880) and gully 2492 were found to converge. At this point they appear to have been truncated by the excavation of a pit or sump (2877), which contained animal bone, one sherd of samian ware dated to AD120-200 and two fragments of Roman stone roof tile. The alignment of ditch 2880 did not reflect that of the rectilinear enclosures to the east of it. Its fill produced a lead sheet, animal bone and pottery dating from the late 1st or early 2nd century AD. Based on the alignment, it is possible that ditch 2880 continued almost to the edge of Healam Beck as ditch 2427, discussed below. A short ditch (2783) was seen to link ditches 2504 and 2508 and gully 2492, but contained no datable finds.

Pit group 2889 and associated gullies

To the west of ditch 2890 and south of ditch 2623, excavation exposed four short gullies, a row of probable postholes, and a group of pits (2889), which yielded pottery dating mainly from the late 3rd and 4th centuries AD together with some earlier samian. The majority of features appeared to have been sealed by mixed homogeneous occupation or midden deposit (2589 -not illustrated) that contained material dating predominantly from the late 3rd to 5th century AD. A total of seven coins were recovered (AD69-341) together with a mirror fragment, a pin/stylus head, an enamelled brooch and animal bone.

Within the area defined by pit group 2889, a row of possible postholes (2662, 2676, 2691 and 2735) may have represented one side of a structure or part of a substantial fence. The line followed the same orientation as gully 2762 to the north-east. It was notable that these features followed a different alignment to the surrounding gullies and ditches. The fills of the postholes were devoid of datable finds except for that of 2735, which was found to contain animal bone and sherds of undiagnostic Roman pottery.

It is possible that pits 2586, 2674, 2760 and 2671 were broadly contemporary and probably became infilled at the same time. Pit 2586, located to the north of the pit group, contained pottery that dated from the late 3rd to the 5th century AD, although it was unclear whether this pit or posthole had been cut through occupation layer 2589 or was sealed by it. Pit 2674, located towards the centre of the group, cut gully 2762. Its fill contained a quantity of animal bone and pottery dating from the mid-late 2nd century. Pit 2760 was identified to the immediate west of gully 2696, but pre-dated it. The primary fill of the pit contained animal bone, fired clay and samian ware dated to AD120-200, but the uppermost fill yielded only animal bone and a sherd of pottery dating from the 4th century. To the immediate north-west, pit 2761 may have been a re-cut of pit 2760. Its primary fill was found to contain animal bone and sherds of samian ware, one dating from AD120-200. The secondary fill yielded animal bone and undiagnostic Roman pottery.

Towards the southern end of the group, pit 2840 was found to contain a quantity of animal bone, but no datable finds. At the western edge of excavation, pit 2680 also yielded animal bone and a sherd of a grey ware jar dating from the late 1st or 2nd century AD. Two larger pits of unknown function were identified within the area. Pit 2678 was at the north end of the group and yielded no datable finds, nor did pit 2694, which was seen to have been cut across by gully 2696, so may have been early in the sequence of activity.

To the south of the group of pits, a large pit (2853) was located towards the western edge of excavation. Its fill contained large quantities of animal bone, iron objects, samian ware dated to AD120-200 and sherds of pottery dating from the late 3rd to 5th century AD. Five fragments of post-medieval CBM were also recovered, but are

considered to be intrusive due to the presence of a post-medieval dram that cut across the feature

Pit 2693 appears to have been a re-cut of the earlier feature. Its primary fill yielded large quantities of animal bone, two flint flakes, and a pottery assemblage containing late 2nd to early 3rd century and 4th century AD material. The finds recovered from the upper fill comprised large quantities of animal bone and sherds of pottery dating from the late 3rd and 4th century AD.

Within the area of the pit group, gully 2696 parallel to ditch 2890. The primary fill produced animal bone and a Roman glass segmented bead, while the secondary fill was found to contain animal bone, fired clay, and sherds of pottery dating from the late 3rd or 4th century AD. To the south-east, gully 2706 followed a similar alignment to gully 2696, but contained only sherds of undiagnostic Roman pottery. To the north-west of gully 2706, a short section of a parallel gully (2748) contained no datable finds, but both it and gully 2706 pre-dated the large pits (2853 and 2693).

On the east side of ditch 2890, gully 2777 was partially truncated by this ditch. The secondary fill was found to contain pottery dating from the late 3rd to 5th century. This gully cut gully 2757, which extended only for a short distance to the north-east before it petered out, probably truncated by agriculture. It may once have formed a further subdivision of the enclosure defined by gully 2492.

Ditch 2890 and associated features (Figs 15 to 17)

Ditch 2890 was respected by all the enclosures to its east and west. Sections of the ditch had been re-cut along the same alignment on numerous occasions. Within this part of the site, it incorporated ditches 2513, 2441, 2444, 2538, 2570, 2636, 2651, 2784, 2870, 2871 and 2828. Fills from early phases contained undiagnostic Roman pottery, and a copper alloy com of the House of Constantine (AD 330-35), with sherds of samian ware dating from AD 120-200 in the upper fill.

Some of the excavated sections were particularly rich in finds. A late phase of the ditch at the northern end of the area yielded pottery dating from the 4th century AD and samian ware dating from AD 120-200 from the primary fill, with pottery dating to the 2nd century AD in the secondary fill and samian ware dating from AD 40-100 from the tertiary fill. Sherds of pottery dating from the late 3rd and 4th century and samian ware dating from AD 40-100 were recovered from the latest fill. The evidence suggests that the fills all contain quantities of redeposited material.

To the immediate south of the former access track, ditch 2890 was found to have been re-cut three times. The finds from the primary fill of a late phase of the ditch comprised a copper alloy bow brooch, animal bone, one flint flake and sherds of pottery dating

from late 3rd to 4th/5th century AD. A secondary fill was found to contain fragments of fired clay and some animal bone, while the uppermost fill contained only animal bone.

To the north of the original HPGM, an elongated pit or short ditch (2687) was identified orientated along ditch 2890. It was potentially cut by the main ditch, and produced an assemblage including an iron nail, sherds of undiagnostic Roman pottery, samian ware dating from AD120-200, and animal bone. The function of this feature is unclear, but a large boulder had been rolled into it while it was open. To the south of ditch 2687, evidence of a cobbled surface 2764 was found on the eastern edge of ditch 2890 (Plate 25). Insufficient remains survived to establish whether this represented more than a limited area of metalling.

Features to the north of the former access track (Fig 15)

To the north of the former farm access track, the land fell away from the edge of a marked terrace towards Healam Beck. In the area between the access track and the beck, ditches 2478, 2462, 2468 and 2374/2395 and gullies 2417, 2454 and 2473 appeared to respect the contours of the slope. The features were intertwined with two south-east to north-west aligned ditches, 2427 and 2484, and gully 2399. A number of other linear features ran perpendicular to the slope and appeared to extend ditches seen to the south of the track (2492, 2508, 2880 and 2890) downslope towards the beckside.

Ditch 2890 extended for some 15m on the shallow slope towards Healam Beck. Here it appeared to have been redefined relatively frequently, with the terminals of numerous phases identified alongside each other (Plate 26). Early phases contained animal bone, pottery dating from the late 3rd to 5th centuries AD and an assemblage of pottery with dates from the mid to late 2nd century AD in an upper fill. The fills of two phases of re-cuts that appeared to be stratigraphically late yielded animal bone and pottery dating from the late 1st and early 2nd century AD, and samian ware dating from AD120-170, which was clearly indicative of re-deposition.

To the east of the ditch terminals, ditch 2423, was seen to extend from the north side of the former access track to the north-west where it was truncated by perpendicular ditch 2374. A primary layer of fill of 2423 contained animal bone and a sherd of samian ware dating from AD120-200. The ditches were sealed by a spread that was found to contain animal bone, a copper alloy coin of Constantius II dating from AD348-50.

To the west of the ditch terminals, an early ditch (2517) extended to the north and had been re-cut as ditches 2502, then 2463. The primary fill of ditch 2517 contained pottery dating from the mid 1st to 3rd century AD, while from a secondary layer, a sherd of samian dating from AD40-100 was recovered. Ditch 2463 extended some 18m in to the area of alluvial and peat deposits. From this ditch, a deposit was found to

contain pottery dating from the late 3rd to 5th century, and large quantities of animal bone and fired clay. Once again earlier (2nd century) material occurred in the upper fill. The ditch was sealed by a spread of silty material containing a copper alloy coin of the 3rd or 4th century AD, and by another spread containing a copper alloy coin of the 2nd century AD and an iron chain. Also sealed by this layer was a north-east to south-west aligned ditch (2475), which yielded no datable finds in this area.

Ditch 2462 is thought to have been the earliest of the ditches to follow the contour of the slope above the beck. A primary fill contained pottery dating from mid to late 1st century AD, while the secondary fill yielded a copper alloy trumpet brooch dating from the 1st or 2nd century AD and animal bone, and an nail head. A tertiary fill was found to contain a damaged comb which was not closely dated. At the western edge of the corridor, the ditch was sealed by a layer of midden material (2466) that contained, a lead object, large quantities of animal bone, iron objects, sherds of samian ware (two dating from AD120-200), and pottery dating from the 2nd to the 4th century AD.

A south-east to north-west aligned gully (2399), which cut ditch 2462, may have been part of gully 2492 to the south and contained one sherd of samian dating from AD100-120. It also cut gullies 2403 and 2417 which were devoid of finds. Gullies 2454 and 2473 which extended from the eastern edge of ditch 2484 contained no datable artefacts. These gullies were cut by ditch 2484 which contained only undiagnostic Roman pottery in a secondary fill. This ditch was superseded by ditch 2427, which also produced no datable finds. However, it was cut by ditch 2374, which contained a relatively rich finds assemblage. Its primary fill contained animal bone and a sherd of samian ware, dating from AD120-170, while a secondary fill yielded a Roman period copper alloy dumb-bell form toggle and animal bone. Animal bone was also recovered from the secondary fills of the ditch, which continued to the west as ditch 2543, later re-cut as 2531. These ditches cut across the vestiges of heavily truncated pebbled surface (2530), located at the western edge of excavation.

Ditch 2475 was the northern most ditch adjacent to Healam Beck and stratigraphically it was the latest in the sequence of ditches which followed the terrace edge. Whilst the only dating evidence to be recovered from it comprised a sherd of samian ware dating from AD120-200. The ditch was found to cut through layers of re-deposited peat and silty alluvial deposits which had formed to the north of ditch 2462, demonstrating the regularity of wet conditions and flooding in this area.

Deposits associated with Healam Beck

Immediately to the south of Healam Beck numerous alluvial layers were found to be interleaved with re-deposited peat and anthropogenic deposits and features. A total of five oak stakes were preserved in a layer of re-deposited peat (2412, not illustrated). One of the stakes was found to have been driven into natural boulder clay deposits below. A large fallen oak branch, which appeared not to have been worked, was also

identified. An assemblage of sherds of grey ware dating from the Hadrianic-Antonine period were recovered from a re-deposited peat layer (2483), identified close to the base of the slope (not illustrated). Small assemblages of metalwork were also recovered from two alluvial layers that were cut by gully 2464 and ditch 2374. In general, the quantity of finds from these horizons was much lower than was recovered from the equivalent deposits on the north side of the beck. This presumably reflects the differing nature and intensity of activity in the adjacent areas.

To the east, in the area of the balancing pond, two small pits (2430 and 2434) were identified. Pit 2430 was a cremation that was found to contain a small quantity of burnt bone, while pit 2434 was a similar size but was found to contain fragments of Roman CBM. Between the two pits, a shallow ditch (2455) was traced crossing the area which appears to match a field boundary identified on a 1st edition six inch Ordnance Survey map of 1856.

Field 62 Southern area (Fig 17)

To the south of the original High Pressure Gas Main, the principal archaeological features comprised a series of ditches (2890 and 2178) which defined the eastern side of two large enclosures separated by ditch 2217 (Plate 27). The southern enclosure may have been part of an irregularly shaped field while the northern enclosure was part of the vicus on the east side of Dere Street. A number of smaller ditches (2182 and 2351) potentially defined plot sub-divisions, while a group of ditches/gullies (2164, 2174, 2177 and 2223) may have represented the re-definition of parts of the eastern enclosure ditch. A range of discrete features were identified within the northern enclosure(s) including a group of pits (2316), a metallised surface (2262) (Plate 28), and a cremation (2220), were recorded on the west side of ditch 2890.

Ditch 2890 and associated enclosure ditches

The southern part of Field 62 was dominated by ditch 2890, comprising elements 2140, 2156, 2159, 2169, 2238, 2244, 2250, 2254, 2258, 2263, 2293, 2344 and possibly 2383 and 2384. As in the area to the north of the HPGM, the finds recovered from the fills of the ditch complex suggested that it had been redefined during a relatively short time period. Primary, secondary and tertiary fills all contained pottery dating from the 3rd or 4th centuries AD together with some Hadrianic-Antonine material, suggesting a certain degree of residual material is also present.

To the south of the HPGM, some five ditches (2305, 2182, 2152, 2217 and 2248) appeared to define enclosures on the west side of ditch 2890. The layout of the putative enclosures was notably less formal and regular than those to the north of the HPGM. Ditches 2152, 2182, 2305 and possibly 2248 appeared to be contemporary elements in a relatively early system of enclosure.

Ditch 2182 appeared to be cut by ditch 2890 and was therefore earlier. This appeared to be substantiated by the finds assemblage associated with it. A quantity of burnt bone and sherds of pottery dating from the 2nd century were recovered from its fill. The fill was also cut by a small cremation pit (2220) which contained a burnt fragment of a beaker associated with the cremation deposit which was dated to the late 1st or early 2nd century AD. Ditch 2248, which was cut by ditch 2217, may have been an extension of ditch 2182, but no diagnostic pottery was recovered from the fill to confirm this. To the south of the ditch intersection (2890, 2217, 2178), gully 2332 was aligned with ditch 2217. It yielded one fragment of Roman period plaster and sherds of pottery dating from the 2nd century AD. The short gully appeared to continue the trajectory of gully 2248 and may have been a truncated element of it. To the north, ditch 2305 may have belonged to the group of earlier features as the finds assemblage recovered from its fill included pottery dating from between the late 1st and 3rd centuries.

To the south, ditch 2217 extended south-west from the intersection between ditches 2890 and 2178. The fills of the ditch produced dating from the 3rd or 4th centuries AD and a quantity of animal bone.

Pit group 2316

A group of nine inter-cutting pits (2316) was identified extending from intersection between ditches 2890 and 2217 for c 7m towards the west. Most of the pits had similar proportions (c 1.4m in diameter and c 0.8m deep). The latest phase of re-cutting of ditch 2890 post-dated the earliest of the pits.

Initial stratigraphic analysis of the pits suggests that the sequence from earliest to latest was as follows: 2356, 2325, 2323, 2320, 2200, 2219, 2213 and 2199. Pit 2167 was relatively early in the sequence and was shown to post-date pit 2325, but to pre-date 2199. The finds recovered from the earlier pits included a polishing or grinding stone fragment, pottery dating from the 2nd to 4th century AD, and sherds of samian from AD120-200. Pit 2199, which was the latest in the sequence, contained sherds of samian ware dating from AD120-200 and pottery dating from the Hadrianic-Antonine period. In most cases the pits had not been completely backfilled prior to excavation of the next pit in the sequence. This was demonstrated by shared upper fills within some of the pits. It was thought that this upper layer, which was also rich in gravel and sand, may have been a remnant of make-up belonging to a road or track that overlay the partially backfilled pits.

To the south-east of the main ditch intersection, ditch 2178 was orientated in a south-east to north-west alignment and extended beyond the eastern edge of the road corridor. Its fill contained sherds of amphora dating from the mid 1st to 3rd century AD, however this ditch was thought to have been a contemporary element of an enclosure complex defined by ditches 2217 and 2890.

To the north-east of ditch 2178, ditch 2174 was observed to run approximately parallel, though it diminished in size and terminated as it encountered the main ditch intersection. It was also identified some 23m to the east within the new HPGM corridor, following the same north-west to south-east alignment. A layer of fill from the ditch yielded an assemblage of finds that included a copper alloy coin dating from between the 1st and 3rd centuries AD and sherds of pottery dating from the late 3rd or 4th century AD. A group of shallow gullies including 2223 and 2226 which ran parallel to ditches 2890 and 2178, produced no datable finds and their place in the sequence of ditches remains uncertain.

To the south of the original HPGM, a pit (2277) was found to have been cut by ditch 2890. The secondary fill of the pit was found to contain sherds of pottery that dated from the mid 2nd to mid 3rd century AD. The primary fill contained no datable finds. To the west of ditch 2890, a compacted pebble and cobble surface (2262) was found to cover an area approximately 8m by 6m (Plate 28). The layer extended up to the edge of ditch 2238, but overlies the fill of enclosure ditch 2305. To the north of the cobbled surface a layer of imported material resembling fine aggregate (2162) was found to have been cut by ditch 2890. The deposit contained finds including samian ware dating from AD150-250, and other pottery dating from the late 3rd to 4th centuries AD. It seems likely from initial assessment of the pottery assemblages that ditch 2890 and the cobble surface were coexistent.

Towards the north end of the area south of the HPGM, a linear feature (2138) crossed the road corridor on a north-east to south-west alignment. It cut through a small perpendicular gully (2225), surface 2262 and ditch 2890. Whilst stratigraphically, this feature was very late, its fill contained residual pottery dating from between the late 1st and 3rd centuries AD.

Fields 60 and 61 (Fig 14)

Relatively few features were identified within fields 61 and 60 and those that were could be largely equated with the principal anomalies recorded by the earlier geophysical survey, namely a long and relatively straight south-east to north-west aligned ditch (2270) and two associated linear features (2134 and 2144) which were perpendicular to it. Closely datable pottery was recovered from 13 archaeological deposits, with Roman period pottery identified in a further five. A total of five coins were recovered, but only one was from a stratified context.

Ditch 2270 extended for 246m within the main road corridor and was also identified in the Western Annex. The feature had been re-cut several times and the fills of the ditch contained pottery dating from the late 1st to 3rd century AD, the Hadrianic-Antonine period of the 2nd century, and the late 3rd to 5th century AD. Also recovered were pieces of slag, fragments of fired clay and one fragment of possible plaster. It cut the terminal of ditch 2144, but this produced only undiagnostic Roman pottery.

At the northern end of ditch 2270 an earlier north-east to south-west orientated ditch (2738) was identified in the Western Annex where it terminated within ditch 2270. The fills from ditch 2738 contained a quantity of animal bone and a coin of the House of Constantius dating from AD335-41, and a coin of Constantius I dating from AD330-35. Two narrow gullies (9000 and 9006) were identified approximately parallel to ditch 2270 and perpendicular to ditch 2738. It was thought that gullies 9000 and 9006 may have formed one side of a sub-enclosure with possible entrance. No datable finds were recovered from the gullies, though they were probably contemporary with the larger ditches.

Fragments of human skull, Roman pottery and a quantity of animal bone were recovered from the southern end of ditch 2270, where it was truncated by an east to west orientated ditch (2292), which extended for c 40m across the road corridor and had apparently been partially backfilled with cobbles. The fill of this feature contained a large finds assemblage that included a samian spindle whorl, and sherds of samian ware, dating from AD120-200 and AD150-200. The fill also contained sherds of coarse ware pottery dating from the mid 1st to 3rd century, with one fragment made into a counter. Some 43m to the north of ditch 2292, a narrow gully (2134), lay perpendicular to ditch 2270 but terminated before coming into contact with it. Its fill contained one sherd of samian ware dating from AD120-200.

The archaeological remains identified in Field 60 included two shallow fire pits (2104 and 2108). No diagnostic or datable finds were recovered from the fills, though burnt material was sampled.

The Vicus south of Healam Beck (Field 61a, *Figs 3, 14, 18 to 23*)

The investigations undertaken within Field 61a situated to the west of the existing A1 (T), were carried out in advance of the diversion of an existing high-pressure gas main. The excavations were undertaken within three interconnecting trenches (Fig 14). Trench A represented a stopple pit which measured 14m x 42m and contained an existing gas main. Trench B represented a reception pit measuring 13m x 13m that was excavated to receive the new gas main which was to be thrust-bored beneath the existing A1. Trench C measured 3m x 28m and was excavated to facilitate construction of a length of new gas main between the stopple and reception pits.

The existing gas main was aligned north to south and ran slightly to the west of the centre line of Trench A (Fig 2). Installation of the main had severely truncated archaeological features in the western side of this trench. Trench B and C were located beyond the area disturbed by the earlier pipe.

The exposed archaeological features predominately dated to the Roman period and were located in and around a waterlogged area associated with the beck (Plate R0012199). The excavated features included part of a cemetery containing at least 22

inhumation and cremation burials, a series of possible enclosure ditches, the remains of two earthen banks, evidence for two timber built structures, a series of human footprints, a cobbled surface and numerous pits. The features were stratified within a sequence of Roman period deposits that represented both alluvial and colluvial materials which are illustrated within the relevant trench sections. The only features that could potentially have pre-dated the Roman period were a series of possible Iron Age ard marks.

Due to the deeply stratified nature of the archaeology encountered in Trench B, the results from this trench have been presented as a series of five preliminary horizons for the purpose of this report. The archaeological remains identified within Trenches A and C were less deeply stratified and are therefore presented accordingly.

Trenches A and C (Fig 18)

The earliest feature identified within the southern end of Trench A was ditch 8099. This feature was aligned north-west to south-east and was c 2m in length. Its fill contained sherds of undiagnostic Roman coarse ware pottery. The ditch was cut by ditch 8040 to the south and continued to the north into the area truncated by the existing gas main. It seemed likely that ditch 8099 turned to the east and onto the course of ditch 8040 as the truncated remains of an earlier ditch were identified within an intervention located at the eastern trench edge.

The later ditch 8040 was aligned north-east to south-west and was traced for a distance of c 15m. The primary fill of the ditch contained sherds of 2nd century AD pottery and the secondary fills contained mid-2nd to 4th century pottery. The ditch continued the line of a linear geophysical response identified to the east of the stripped area which formed part of a series of narrow land divisions (NAA 2010). It was cut on its southern edge by a sub-circular grave containing skeleton 8240.

Skeleton 8240 (Plate 29) represented the remains of an unsexed juvenile aged between ten and eleven years, which was identified prone and semi upright within a grave pit that was too small to accommodate the inhumation in an extended position. A group of four copper alloy finger rings were identified at the base of the grave pit and adjacent to the individual's left leg and a small dog or puppy was identified underlying the skeleton. The grave fill also contained sherds of undiagnostic Roman coarse ware pottery.

Two further inhumation burials (8126 and 8247) were identified to the south of ditch 8040. The easternmost skeleton (8126, Plate 30) represented the remains of a female aged between 36 and 45 years. The skeleton was aligned west to east and was crouched facing south. The right arm was folded back to the shoulder and the left arm lay across the waist. The skeleton wore a copper alloy bracelet around the left wrist and a group of iron hobnails were identified around the feet showing the individual was interred wearing boots. The remains of a peri-nate infant (8170, not illustrated) were

identified within the same grave cut and slightly to the west of the adult's skull and the two individuals had been interred together

Skeleton (8247, Plate 29) was located 1m to the west of skeleton 8126. The remains represented that of a female aged over 46 years. The skeleton was aligned east to west and was laid supine with the skull tilted slightly to the right and facing forward. The right arm was flexed slightly with the hand at the pelvis. The left arm was folded across the waist and clutched the right forearm. The skeleton wore a copper alloy bracelet on the wrist of the right arm. The grave fill contained sherds of 3rd century AD pottery.

A large pit group (8233) was identified c 10m to the north of the graves. The earliest material in this area was a shallow layer of subsoil (8085, not illustrated) that contained 3rd century AD pottery and was cut by many of the pits forming the group. The pit group comprised eighteen irregularly shaped inter-cutting features of varying sizes. A moderate artefactual assemblage was recovered from twelve of the pit fills which included coins, iron nail fragments and sherds of pottery and indicated a date range from the mid-2nd to mid-4th century AD. It seems likely that the pit group represented a series of waste pits associated with domestic occupation of the site.

A further inhumation burial (8279) was identified c 4m to the north of pit group 8233 and was located immediately adjacent to a ditch 8209 (discussed below). The grave contained the remains of a perinatal infant. The burial was aligned west to east and was laid supine. The remains survived in poor condition.

The remains of two phases of a possible bank (8271 and 8238) were identified within the eastern side of the trench between ditch 8209 and the waterlogged area to the north. The bank was c 2m wide and was aligned west-south-west to east-north-east. It was constructed from re-deposited natural material, possibly originating from the excavation of earlier phases of the adjacent ditch. Two small pits (8259 and 8348) were identified cut into these deposits, which contained cremated human bone.

The earliest bank was represented by deposit 8271 which contained mid-2nd century AD pottery and overlay an earlier gully (8419) to the north. The bank was cut by cremation pit 8259. The cremation pit (8259) had a diameter of 0.23m and a depth of 0.08m and was filled by small quantities of cremated human bone. Pit 8058 was located at the eastern trench edge and was undated. Both pits were sealed by a second bank (8238) into which the second cremation pit (8348) had been cut. This cremation pit had a diameter of 0.4m and a depth of 0.06m and contained large fragments of cremated human bone. Two further undated pits (8360 and 8253) were located within this area. The secondary bank was cut by ditch group 8209.

Ditch 8209 was aligned north-east to south-west and contained multiple recuts. It was traced for a distance of 15.5m and appeared to represent a boundary ditch dividing the higher ground to the south from the more deeply stratified northern waterlogged area. The overall series of ditches had cut a deposit of subsoil (8344, not illustrated) to the south which contained mid-2nd century pottery. The fills of the earlier ditches within

the sequence contained relatively few finds including sherds of pottery that ranged in date from the pre-Roman Iron Age/early Roman period to the late 2nd century AD. The last ditch in the sequence, ditch 8077, contained a larger finds assemblage that included a 1st or 2nd century Roman coin and mid-2nd to 4th century AD pottery.

A continuation of this ditch group was identified within the western part of Trench A beyond the zone truncated by the existing gas main. Here, only a single ditch (8210) was identified, the fill of which contained 3rd century AD pottery.

Pit 8057 was located at the western trench edge 2m to the north of the western end of ditch 8210. Its single fill (8056) contained 2nd to 3rd century AD pottery.

The heavily truncated remains of another ditch (8480, not illustrated) were identified within the western trench edge section approximately 11m to the north of the western end of the ditch 8210. This ditch appeared to be aligned perpendicular to ditch 8209 and may have formed a 'T'-shape with ditch 8209/8210. Its fill contained a single sherd of late 1st to 2nd century AD pottery. Ditch 8480 had been almost completely removed by the installation of the gas main.

The remains of a further possible bank (8374, not illustrated) were identified at the western trench edge (within section only) 2m to the north of ditch 8480. The bank appeared to be aligned east-north-east to west-south-west and was 2.1m wide x 0.3m high. It was constructed from rounded cobbles set within a sandy clay matrix. Any continuation of the bank into Trench A had been completely removed by excavations associated with the construction of the existing gas main.

Stratigraphically, the earliest features identified to the north of ditch 8209 were gullies 8419 (Trench A) and 8502 (Trench C). Gully 8419 was located 3m to the north of ditch 8209 and was aligned west-south-west to east-north-east. It was recorded for a distance of 7.6m and was not identified to the west of the gas main. No finds were recovered from this gully and it was sealed beneath bank material 8271 to the south (discussed above) and an organic deposit (8255) to the north.

Gully 8502 was located at the northern end of Trench C and was aligned north-north-west to south-south-east. It was recorded for a distance of 5m and petered out before the eastern trench edge. The gully had an irregular shape suggesting it may have represented a hedge line. It contained no diagnostic material and was overlain by an organic deposit (8255).

Layer 8255 consisted of waterlogged plant material and was located across much of the northern part of Trench A and throughout Trench C. It contained a flint scraper, a worked length of timber (8313) and an assemblage of 1st to 2nd century AD pottery. Layer 8255 was cut by gully 8500 in Trench C. Gully 8500 was aligned west-south-west to east-north-east for a distance of 3.4m. Its fill contained no diagnostic material. The gully was overlain by a further organic deposit (8129). A dark brown/black organic layer (8129) was located across the larger part of the waterlogged area and produced

only a single sherd of late 1st to 2nd century pottery. The layer was cut by gully 8200, footprints 8251, pit 8093 and an undated pit 8224 within Trench A and gully 8295 and a series of dumped deposits (8339) within Trench C.

Ditch 8200 was located centrally within the waterlogged area and was aligned north-west to south-east, which differed from the other investigated features. It was 8m long and terminated with a rounded end to the south-east of ditch 8030. Its fill contained sherds of pottery which dated to the 2nd century AD pottery. The ditch was sealed below layer 8027.

A series of four human footprints (8251) were identified impressed into the upper level of layer 8129 adjacent to the terminal of ditch 8200 (Plates 31 and 32). They represented a linear series of impressions formed by a right foot followed by two left foot impressions then a further right foot. They were formed by a shoe or boot with a length of c 22cm and were sealed by a deposit of coarse alluvial sand (8228) that contained late 1st to early 2nd century AD pottery. Deposit 8228 was sealed by layer 8027.

Pit 8093 was located within the north-eastern corner of Trench A (Plate 33) and was located between later ditches 8154 and 8134. The single fill of the pit contained a finds assemblage that dated from the late 3rd to 4th/5th centuries AD and included a near complete disc hand quern (which contained the remains of an iron spindle), a complete Crambeck grey ware dish and a bone needle. The pit was overlain by layer 8299.

Gully 8295 was located at the southern end of Trench C and was aligned west-south-west to east-north-east for a distance of 3.8m. Its fill contained no diagnostic material. The gully was overlain by layer 8300.

A series of dumped deposits (8339) were identified overlying both the northern extent of the organic material (8129) within Trench C and the south-western area of Trench B (numbered 8433). The deposits appeared to represent domestic refuse which included compacted organic material, animal bone, shell and charcoal. The deposits could be separated into eight distinct types whose colours varied greatly. A large finds assemblage was recovered from the deposits which included an amber bead, a fragment of glass and an assemblage of pottery which ranged in date from the 1st to the 3rd centuries AD. The dumped deposits were overlain by layer 8327 followed by layer 8326. Both layers contained 2nd century AD pottery. Layer 8326 was cut by ditch 8177 (discussed below).

Deposit 8027 represented a further organic, waterlogged layer that was extensive across the northern area of Trench A and Trench C. It contained a finds assemblage which included copper alloy coins and sherds of pottery which ranged in date from the 1st to 2nd centuries AD. The deposit was cut by ditch 8154, elongated pit 8062 and an undated pit 8267.

Ditch 8154 was located within the northern end of Trench A and was the earlier of a series of three ditches identified in this area. The ditch was aligned west-south-west to east-north-east and was recorded for a distance of 16m on both side of the existing gas mam. The remains of three stake holes (8220, 8222 and 8231) were found within its base which appeared to represent a fence line. No diagnostic finds were recovered from the fill of the ditch. It was sealed below layer 8015.

An elongated pit 8062 was located centrally within the waterlogged area within Trench A. It was aligned north to south and its fill contained mid-2nd century AD pottery. The pit was sealed by layer 8015 which was composed of light grey mottled sand which contained a moderate finds assemblage comprising a copper alloy pin with a blue glass head, a coin and sherds of pottery which ranged in date from the 1st to the 2nd century AD. Layer 8015 was cut by ditches 8030 and 8177.

Ditch 8030 was located 3m to the south of the earlier elongated pit 8062 and was sealed below layer 8299. It was aligned west-south-west to east-north-east and was recorded for a distance of 16m on both side of the gas mam. Its fills contained an assemblage of pottery which dated from the 2nd to the 3rd century AD.

Ditch 8177 was located close to the northern edge of Trench A. It was aligned west-south-west to east-north-east and was recorded for a distance of 16m on both sides of the gas mam. The fills of the ditch contained sherds of pottery which ranged in date from the mid-2nd to the 3rd century AD and a fragment of leather. The ditch was cut by ditch 8134 and was overlain by discrete patch of subsoil (8300) which contained 2nd century AD pottery. Subsoil 8300 was sealed by layer 8299. Ditch 8134 was aligned parallel to ditch 8177 located to the north. It was recorded for a distance of 16m on both sides of the gas mam. Its fill contained pottery which ranged in date from the mid-2nd to the 3rd century AD. Ditch 8134 was cut centrally by ditch 8102. Ditch 8102 was aligned north to south and was recorded for a distance of 3.4m. It terminated with a rounded end to the south and continued beyond the extent of the stripped area to the north. The fills of the ditch contained pottery ranging in date from the 2nd to the mid-3rd century AD. It was sealed by layer 8299.

Layer 8386 represented a widespread deposit which sealed almost all the features recorded within the waterlogged part of Trench A and Trench C. It also formed an extensive layer within Trench B to the north. During investigations it was found to contain a large finds assemblage which included a copper alloy 'U'-shaped binding, a copper alloy ring, a folded lead strip and sherds of pottery which ranged in date from the 1st to the 4th/5th century AD. It was overlain by deposit 8002, which was also an extensive deposit across Trenches A, B and C, and may have represented a midden. It contained a fragment of lead and large quantities of pottery which ranged in date from the 2nd to the 4th/5th century AD. It was cut by an undated ditch (8478) within Trench C and was overlain by post-medieval subsoil.

Trench B

Horizon 1 (Fig 19)

The earliest features identified to the north of the organic deposits within Trench B were a series of ard marks (8497). The features were located within the south-west corner of Trench B, cut into the natural sandy clay (8423) and were oriented both north-south and east-west. The ard marks appeared to be the result of ploughing, possibly during the Iron Age.

An early ditch (8517/8492) aligned from north to south was encountered running along the crest of the slope and cutting directly into the natural sandy clay (8423). No finds were recovered from its fills. The location of this ditch on the break of the slope meant that it broadly marked the edge of the flood plain on the lower ground to the west.

A shallow deposit of alluvial material (8366/8416, not illustrated) was identified in the western half of Trench B directly overlying the natural sandy clay (8423). The pottery recovered from the deposit dated to the mid 2nd century AD. Two stakeholes (8487 and 8489) were identified truncating this layer. The fill of stakehole 8489 yielded a sherd of grey ware, which dated to the 2nd century AD. A subsequent alluvial deposit (8454) also covered the western half of the trench and partially overlaid ditch 8517.

Evidence for a structure (8541) was encountered in the south-western corner of Trench B, truncating layer 8454 (Plate 34). A gully (8455) and a parallel beam slot (8457) were both aligned from north to south and were traced for a distance of 5.2m. Roman pottery, which possibly dated to the 2nd century AD, was recovered from the fill of gully 8455. A series of five equally spaced postholes (Group 8469) was identified running from north to south adjacent to the beam slot. It is possible that all of these features represent the eastern section of a building. Gully 8529 and subsequent re-cut 8527 ran perpendicular to feature 8455. Feature 8529 terminated at its eastern end respecting gully 8455 and may have been associated with it. A further posthole (8515) was identified approximately 1.0m to the east of the northern terminus of gully 8455 and may have been associated with the same phase of activity. A small pit (8440) was identified at the same stratigraphic level towards the eastern edge of the trench, from which no finds were recovered.

The earliest feature located in the north-western area of Trench B was pit 8536, from which no finds were recovered. Two gullies (8499 and 8520) were also identified running from north to south for a distance of 3.2m within the trench. Finds recovered from the fill of gully 8499 comprised pottery, including amphora and mortaria, ranging in date from the mid 1st to the 3rd century AD. A much smaller gully (8521) ran into feature 8520 from the west. Overlying layer 8509 in-filled both features (8521 and the upper part of 8520). Finds recovered from this layer comprised fragments of infant human bone, and pottery dating to the mid 2nd century AD.

A further gully (8357/8495) ran perpendicular to these features over a distance of 13m within the trench. The primary fill of the feature yielded Roman pottery, which was not closely dateable. Grey ware with a date range from the late 3rd to the 4th century AD was recovered from the secondary fill of this gully. This pottery may have been associated with a later peri-natal burial that was identified within this fill during the post-excavation process, thus explaining the anomalously date of the pottery within this feature. Feature 8357 was truncated by gully (8453), which was traced for a distance of 4.8m from north to south, where it narrowed to become gully 8482. Both features appeared to have been intentionally backfilled with a charcoal-rich deposit. The fill yielded a large quantity of grey ware, which ranged in date from the 1st to the 2nd century AD and iron nails.

A further alluvial deposit (8432) was identified sealing the earliest sequence of features described above. Finds recovered from this deposit comprised pottery ranging in date from the mid 1st to the mid 2nd century AD. A series of intentionally dumped deposits (8339) were identified overlying alluvial deposit 8432. These included organic material which was interleaved with ash and sand. A moderate assemblage of finds was recovered from the dumped deposits which included a silver com dating to the 1st century BC, a lead spindle whorl and pottery with a date range from the mid 1st to the mid 2nd century AD.

Two further alluvial deposits (8297 and 8386) overlay the series of dumped deposits described above. A substantial assemblage of artefacts dating from the 1st to the 2nd century AD was recovered from the alluvial deposits. The finds were composed of silver, copper alloy, lead, iron, glass, wood, ceramic building material, pottery, human and animal bone and included a silver com which dated to the late 1st century AD, an enamelled copper alloy seal box lid and a possible terret ring fragment.

Horizon 2 (Fig 20)

The remains of the north-west corner of a building (8538) were identified in the south-east corner of Trench B, on the high ground. It is possible that this represents a replacement for structure 8541 (Horizon 1), the remains of which had been submerged by flood deposits. Structure 8538 contained an early clay floor surface (8322) which was overlain by a foundation layer of sand (8227), from which a number of artefacts were recovered. The finds comprised iron, lead, a stone roof tile and pottery ranging in date from the mid 1st to the early 2nd century AD. A compact metal surface (8021) overlay sand layer 8227 (Plate 35). Coarse ware sherds dating to the 2nd century AD were recovered from the make-up of surface 8021. The jaw of a horse (8213) was encountered between the two floor surfaces and 0.13m to the east of it the teeth had been intentionally placed in a small pile suggesting that this may have been a placed deposit.

Two large postholes (8427 and 8435) were also associated with this building. Posthole 8435 was located directly beneath the north-western corner of metal surface 8021.

and posthole 8427 was situated 1.40m to the east beneath its northern edge. Both postholes were filled with large packing stones and would have held posts of a substantial size. Samian pottery dating from the late 1st to 2nd century was recovered from the fill of posthole 8435. Two further postholes (8445 and 8447) were identified in the north-facing trench edge. Since both postholes underlay metalled surface 8021 they may have been associated with an earlier phase of the structure.

The remains of a later wall (8317), oriented from north to south, were identified to the west of floor surface 8021. It comprised one course of stones bonded with mortar. Pottery dating to the 2nd century AD was recovered from the make-up of wall 8317. Two spreads of stones (8283 and 8298) lay to the immediate west of this wall, which possibly represented the collapsed make-up of the wall and yielded five sherds of glass. A single posthole (8312) was identified underlying spread 8298 but its function was unclear. A further wall (8047) was identified immediately to the north of floor surface 8021. It was bonded with clay rather than mortar but may have represented the return of wall 8317.

Pit 8365 was identified at the eastern edge of the investigation area and was truncated by later ditch 8310 (Horizon 4). The fill of pit 8365 yielded grey ware, which dated to the mid 2nd century AD.

The alluvial deposits described above were cut by a number of features including ditch 8382, which ran from north to south for a length of 4.7m. The fills of the ditch yielded pottery dating to the mid 2nd century AD and a sherd of glass. Ditch 8382 was truncated by pit 8400. A sherd of Roman period pottery, which was not closely dateable, was recovered from the secondary fill of this pit. A single posthole (8437) was identified to the immediate east of ditch 8382, which was cut from the same level and may have been associated with the ditch.

The alluvial deposits were also cut by pits 8257 and 8396 which yielded pottery ranging in date from the late 1st to the early 2nd century AD. It is possible that the pits represented the continuation of a single feature, but they were too heavily truncated by ditch 8036 (Horizon 5) for this to be proven. Pit 8471 was also identified cutting the alluvial deposits and yielded no finds.

A number of dumped silty sand deposits (8281, 8282, 8294 and 8323) were identified interspersed with the features described above and yielded a collection of pottery, including samian and Dressel 20 amphora, with a date range from the late 1st to the mid 2nd century AD.

Horizon 3 (Fig 21)

The alluvial deposits were post-dated by a cemetery comprising an adolescent / young adult burial (8351), a juvenile burial (8265) and eight peri-natal burials (8286, 8287, 8290, 8319, 8342, 8404, 8406 and 8507). Evidence for a further four peri-natal

inhumations has been identified during post-excavation, which were not recorded during the excavation. These remains were encountered within fills 8352, 8356, 8383 and 8394 and in each case represented less than 30 percent of a complete skeleton.

Skeleton 8351 represented an adolescent/young adult male aged between sixteen and twenty years with a stature of 160-163cm (Plate 36). The individual was interred with the head to the east and was supine extended. The head was resting on a pillow stone and was tilted forward onto the chest. The lower jaw was slightly displaced which had probably occurred post-deposition. The right arm was raised over the chest and the left arm was resting across the waist. A small assemblage of finds was recovered from the fill of the cut for burial 8351. These comprised a copper alloy coin dating from the 4th century AD, seven iron nails, a large quantity of pottery ranging in date from the late 1st to the 2nd century AD, and a small quantity of unidentifiable cremated bone. The cut for burial 8351 truncated cut 8385 which had similar dimensions to the grave cut but yielded only an iron fragment and pottery with a date range from the late 3rd to 5th century AD from the secondary fill. Both the cut for burial 8351 and feature 8385 were truncated by ditch 8019 (Horizon 4).

The remains of a juvenile skeleton (8265) were identified to the south-west of burial 8351. The infant was aged between three and a half and five years and its sex and stature could not be ascertained. The skeleton was orientated from west to east and was supine extended. It had been truncated from the waist down by later ditch 8019 and only the skull, upper body and left forearm remained *in situ*. The top of the skull had also been removed, possibly due to later agricultural activity.

A shallow pit (8355) was identified at the northern edge of the excavated area, truncating the alluvial deposits. The fills of this cut yielded a number of finds comprising part of a hone/whetstone, a fragment of human bone, Roman pottery which was not closely dateable, and iron fragments. Two peri-natal infant burials (8319 and 8342) cut the fill of this feature. The burials were interred in small oval cuts up to 0.3m in depth and were oriented south-west to north-east and east to west respectively. Skeleton 8319 was laid supine, whereas 8342 had been buried in the foetal position on its right side. Grey ware dating to the 2nd century, were recovered from the fill of the cut for burial 8319. Three further cuts (8346, 8361, 8369 and 8379) were identified at the same level as the cuts for burials 8319 and 8342. The fill of cut (8346) yielded twenty hobnails and a small amount of animal bone. Finds recovered from the fill of cut 8361 included three fragments of cremated bone, one of which was part of an adult scapula and a sherd of Roman pottery, which was not closely dateable. The fills of cut 8369 yielded two hobnails and pottery, which dated to the 2nd century AD. It is possible that all four of these cuts represent the remains of cremation burials.

The latter two burials (8319 and 8342) and three of the possible cremation burials (8361, 8369 and 8379) were overlain by a rectangular layer of large stones (8249), which was delimited to the south by a wall (8250). Stone layer 8249 followed the same plan as cut 8355. It yielded a sherd of amphora dating to between the mid 1st and the 3rd century AD and was overlain by a deposit of sandy silt (8266) which yielded a

moderate assemblage of finds comprising an iron tool, a further iron object and pottery with a date range from the mid 1st to the 3rd century AD

Peri-natal infant burials 8404 and 8406 truncated gully 8357 (Horizon 1) and had also been placed in oval cuts to a depth of 0.2m. The remains were aligned from east to west and from north to south respectively. Skeleton 8404 was only partially intact and appeared to be lying supine whereas skeleton 8406 was better preserved and was laid in the foetal position on its right side. A small amount of unidentifiable cremated bone was recovered from the fill of burial 8404. Burial 8406 was truncated by a small, circular pit (8393), which was similar in shape and size to the grave cut. Pottery dating to the 2nd century AD was recovered from the fill of pit 8393.

Perinatal skeleton 8290 was buried in a shallow cut aligned from south to north (Plate 37). The remains survived in excellent condition and were laid in the foetal position on the right side. Perinatal burials 8286, 8287 and 8507 were all aligned from north to south and the grave cuts for all three burials were barely perceptible due to dry ground conditions. The remains of perinatal burial 8286 had been interred in the foetal position lying on its left side and a large iron nail was recovered from the fill of this cut. Only a few bones of perinatal skeleton 8507 remained in situ but it appeared to be lying supine. Neonate burial 8287 was also recovered in a poor condition but could be seen to be lying in the foetal position on its left side. A further small oval cut (8448) was identified approximated 1.0m to the north-east of burial 8287. This may have been a cut for a further burial but its location meant that it could not be fully excavated, and only a small quantity of animal bone was recovered from its fill.

Horizon 4 (Fig 22)

The majority of the burials described above were sealed by further alluvial deposits (8017 and 8018), which extended across the trench from the west. This suggested there had been a period of extensive flooding following the deposition of the burials and prior to the next phase of activity in this area. The finds recovered from layer 8017 comprised two copper alloy coins which both dated to the 4th century AD, an iron object and a large quantity of pottery, including samian, which had a date range from the early 2nd century through to the early 5th century AD, possibly indicating a continuous accumulation. The artefacts recovered from deposit 8018 comprised a collection of iron hobnails, lead, a glass bracelet fragment and a large quantity of pottery, which had a date range from the late 3rd to the 4th century AD.

A number of features were identified cutting alluvial deposits 8017 and 8018. These features included cremation burial 8273, a line of postholes (8537), pit 8137 and ditches 8012, 8019 and 8310. The line of five postholes (8537) ran from north-east to south-west and finds recovered from the fills of two of the postholes included glass and residual pottery of 1st to 2nd century AD date.

Pit 8137 was located to the immediate south of the line of postholes Pit 8137 and two of the postholes were cut by a curvilinear ditch (8019), which followed the same alignment as the postholes, curving slightly eastwards at its northern end. It is possible that ditch 8019 was recorded as a cut edge (2125) within Test Pit 1 located approximately 10m to the south of Trench B. Finds recovered from the single fill of the ditch comprised glass, iron and a large quantity of pottery including a Huntcliff jar dating to after AD360 as well as earlier material such as a 3rd century AD facepot fragment.

A small pit (8148) with an associated flue, which probably represented an oven, was cut into the fill of ditch 8019. It contained a large quantity of burnt clay (8120) and this enclosed a deposit of charcoal (8121), from which a sherd of pottery dating from the late 1st to 2nd century AD and an iron fragment were recovered. The partially articulated skeleton of a small mammal (8149) was identified underlying deposit 8121. Pottery dating to the early 2nd century AD was also recovered from the fill of the flue of this feature.

Ditch 8012 was orientated from north-west to south-east and terminated at the south-east end. The ditch yielded Huntcliff jar sherds dating to the late 4th century AD from its single fill.

Drainage / boundary ditch 8310 was a steep-sided ditch, which ran from the northern baulk to its southern terminus and truncated earlier pit 8365. The ditch contained seven fills from which an assemblage of Roman period artefacts was recovered. The finds included pottery with a date range from the 2nd to the 3rd century AD, a coin dating to the 1st century AD, two iron hobnails, a tack and copper alloy finds comprising a spatula and a terret ring.

Horizon 5 (Fig 23)

Ditch 8036 was the latest feature identified in the sequence within the area of Trench B. It truncated the terminus of ditch 8310 and also ditch 8019. It was oriented north-east to south-west and was traced for a length of approximately 12m to its north-eastern terminus within the trench. Although this ditch was not identified in the geophysical survey it was probably associated with parallel ditches 8040 and 8209 in Trench A, which represented narrow land divisions perpendicular to the accepted line of Dere Street located to the east.

The western-most excavated section of feature 8036 revealed that it had cut an earlier ditch (8157) on the same alignment and a single sherd of Romano-British pottery was recovered from the fill of this heavily truncated feature. The finds recovered from the fills of ditch 8036 comprised iron objects and a large quantity of pottery with a date range from the late 3rd to the late 4th/early 5th century AD.

Feature 8036 was re-cut by a further two ditches (8167 and subsequently 8097), which were both of similar dimensions to the original ditch and were traced over a distance of 5m to their south-western termini. The fills of cut 8167 yielded an iron knife blade, an iron nail and pottery with a date range from the late 1st to 4th century AD. The fills of ditch 8097 yielded a leather fragment, pottery with a date range from the 1st to the early 5th century AD and two pieces of unidentifiable ceramic building material.

The archaeological features within Trench B were sealed by a midden deposit (8002), which had an average depth of 0.4m. This deposit yielded a Roman period finds assemblage, which comprised a copper alloy coin fragment and a copper alloy coin which dated from the 2nd and 4th centuries AD respectively, iron objects and a large quantity of pottery, the latest material of which dated to sometime after AD370.

All of the archaeological features discussed above were sealed by three distinct deposits of subsoil (8008, 8005 and 8001) which dated to the post-medieval period and contained large quantities of residual Roman period finds. The finds assemblage included seven copper alloy coins, a copper alloy pin, a fragment of bone needle, two iron nails and an assemblage of Roman pottery.

The post-medieval element of the assemblage included late 18th century clay tobacco pipe stem. The subsoil was truncated by the gas main trench in Trench A whose backfill (8014) also contained residual Roman finds, including copper alloy tweezers and a large assemblage of both Roman period and post-medieval/modern pottery.

The subsoil was overlain by c 0.35m of modern plough soil (8000) which yielded numerous copper alloy, lead and iron objects which included 117 Roman period coins that ranged in date from the 1st to the early 5th centuries AD, an Anglo-Saxon coin, a square lead weight and four copper alloy fittings.

A number of un-stratified finds were recovered during metal-detecting of the spoil heap associated with Trench B. These included eleven copper alloy coins dating from the 3rd to 4th centuries AD and a copper alloy brooch. These finds were recovered from spoil (8439) resulting from the removal of deposits 8000, 8001 and 8002 by machine.

OTHER LATE PREHISTORIC/ROMAN SITES

The corpus of evidence for later prehistoric activity comprised modest assemblages of hand-made local pottery types that were not closely datable, but resemble wares used locally in the late Iron Age. However, few feature groups were identified that belonged unambiguously to the pre-Roman Iron Age and these elements have therefore been included amongst the following descriptions of the additional Roman evidence identified in the other areas of the scheme (beyond the site at Healam).

Substantial remains were identified in four areas: at Dishforth (Field 1), Humphrey Balk Lane (Fields 23, 25 and 28), Leeming Airfield (Fields 99-105) and north of Leeming Bar.

(Field 123a) Small groups of features were identified on the south side of the A61 junction in Field 20 and west of Baldersby in Fields 33-40. These elements are described in detail below, however, minor isolated features such as a pit in Field 22 and a ditch in Field 58 are not discussed further.

Dishforth (Field 1) (Fig 24)

The main area of archaeological activity in Field 1 was located at the southern end of the balancing pond. The remains comprised the north-western corner of a substantial Roman period enclosure (3215), with an area measuring c 30m by 25m exposed in the stripped area. Finds from the fills of the enclosure ditch and internal features suggest a date range of the mid 2nd to early 5th century AD for its use.

In the north-western corner, the enclosure ditch cut a small external pit (3226) and a shallow internal gully (3265), neither of which yielded datable finds. Within the enclosure a number of small ditches were encountered which may represent internal divisions. The ditches were parallel and perpendicular to one another and appeared to divide the internal space into rectangular areas, which are described below.

Ditch 3273 was orientated north-east to south-west and extended for a distance of c 20m within the stripped area. Its relationship with ditch 3215 could not be determined as the intersection lay beyond the limit of excavation. The fill of ditch 3273 yielded no datable finds. Ditch 3240 extended on a north-west to south-east alignment within the enclosed area and its north-western terminal respected enclosure ditch 3215. It had been re-cut, and its fill contained a quantity of large stones at the north-western terminal, which may have represented post-packing stones indicating the presence of a posthole within the ditch terminal. One sherd of pottery dating from the Hadrianic-Antonine period was recovered from its fill. Ditch 3246 represented the continuation of ditch 3240 to the south and was observed curving eastwards.

A section of ditch 3240 was overlain by a silty sand spread which had gathered within a natural depression. An iron coiled object and a sherd of greyware pottery with a date range of the late 3rd to mid 4th century AD were recovered from it. The spread was cut by refuse pit 3250, the fill of which yielded an iron fitting with rivet, an iron bar, fragments of iron, six iron hobnails, fragments of charcoal, and an assemblage of pottery sherds, also with a date range of the late 3rd to mid 4th century.

To the west, ditch 3227 formed an L-shape and appeared to be contemporary with ditch 3240. This ditch also terminated at its north-western end, respecting enclosure ditch 3215. A fragment of a Traprain Law type hand disc quern was recovered from its fill.

An additional ditch (3219) was identified within the enclosure, orientated east to west. It was narrow and steep-sided in profile and contained a quantity of large stones within its western terminal, which may have been packing stones for a post. The eastern terminal was located in close proximity to ditch 3227, suggesting that the two may have been contemporary.

A large posthole (3297) was located approximately 1m to the west of the western terminal of ditch 3219, which appeared to have part of a shallow ditch extending west from it. It may represent the continuation of ditch 3219 following a break for an entrance. A smaller posthole (3259) was also identified to the south of ditch 3219. No datable finds were recovered from its fill.

A feature that may have been an oven (3292), measuring 2.70m by 2.45m with a maximum depth of 0.96m, was encountered in the north-western corner of the area enclosed by ditch 3215. The feature comprised a large clay-lined pit with evidence for burning *in situ*. Two postholes, (3284 and 3286), were cut into the base of the pit and had evidently been inserted while it was open. The fills of the pit revealed three main sequences of cobble layers overlain by charcoal-rich deposits, but yielded no datable finds. Two additional postholes (3260 and 3263) were identified to the south-west of pit 3292, and may have also been associated with it.

Ditch 3242 was identified within the area of the access road to the south of the balancing pond. It was similar in size and profile to ditch 3215 and ran parallel to the western side of the enclosure at a distance of c. 65m. The ditch was orientated northeast to southwest and was exposed over a length of 5m within the stripped area. No datable finds were recovered from the fill of this feature.

A section of ditch (3238) was identified within the area of the access road to the south of ditch 3242. It was orientated north-west to south-east. No finds were recovered from its fill. A perpendicular feature (3236) was located to the immediate north-east of ditch 3238. It was interpreted as a hedge-line. Its relationship with ditch 3238 could not be determined as their intersection lay outside the stripped area.

Although the exact course of Dere Street is not currently known in this area, it may have extended from south-east to north-west close to the enclosure. Given the probable date for use of the enclosure from the 2nd to the mid 4th centuries, it seems likely that the Roman road was a well-established major route-way and the enclosure was exploiting the communication links it offered.

Field 20 (Fig. 25)

Archaeological remains were identified in the road corridor and in an area stripped for a balancing pond in Field 20. The features identified within the road corridor included

a series of three ditches following the same alignment, which cut through an area of cobbled surface. The only datable finds were recovered from a ditch that crossed the road corridor. The assemblage included Roman CBM, a late 3rd century coin and sherd of Roman pottery.

The main area of archaeological activity within the road corridor included a cobbled surface (803, Plate 38), which measured 9.20m from north to south and 5.10m from west to east, where it extended beyond the stripped area. A small layer of cobbles (1013), which was set into a layer of red clay, overlay surface 803 and probably represented a repair. An additional area of cobbles (1001) was identified approximately 10m to the south-west of cobbled surface 803. It measured 2.35m by 1.25m and was also set into natural red clay. The areas covered by the cobbled surface did not form a recognisable shape such as a linear track or defined area of hard standing.

A series of three ditches was identified orientated from north-east to south-west across the corridor. The earliest ditch (948 – not illustrated) was different in profile from the later ditches (1009 and 1011) and only extended part of the way across the corridor. The later ditch extended across the whole area and one may have been a re-cut of the earlier ditch.

Ditch 948 was roughly V-shaped in profile with a narrow trench running along the base. This trench was filled with a high concentration of cobbles, possibly to assist with drainage. The ditch ran for a distance of approximately 7m from the eastern edge of the stripped area to its south-western terminal within the stripped area. The primary fill of the ditch comprised orangey brown sandy silt with no inclusions other than the cobbles at the base. The secondary fill contained a high concentration of pebbles which had sunk into the soft ditch fill below.

Ditch 1017, which was a re-cut of ditch 948, was U-shaped in profile with a width of 0.40m and a maximum depth of 0.23m. It was orientated from north-east to south-west and ran for a distance of approximately 17m within the stripped area. Its single fill comprised red/brown sandy clay with occasional inclusions of small pebbles. No finds were recovered from the fill of this ditch. Both it and ditch 948 were cut by ditch 1009, which was also U-shaped in profile, with a width of 0.96m and a maximum depth 0.36m. It followed the same course as ditch 1017 and its fill contained a copper alloy Radiate coin dating from AD260-96, one fragment of Roman period CBM, two sherds of Romano-British pottery and a quantity of animal bone. Ditch 1009 also cut ditch 1017 and appeared to be a re-cut of it.

Humphrey Balk Lane (*Fields 23, 25 and 28, Figs 26 to 30*)

Archaeological features were identified extending for over 700m within Fields 23, Field 25 and Field 28 (Fig 1). The site was located to the north of the intersection of the A1 and the A61 and was situated within fields to the east of the existing carriageway. It was

located at, adjacent to Humphrey Balk Lane, some 7.5km (4½ miles) to the south of the Roman period settlement investigated at Healam Bridge and was immediately adjacent to the presumed course of Dere Street. The remains encountered within fields 23-28 represent the largest area of Roman activity after that at Healam Bridge within the scheme corridor.

Field 23 contained the remains of a ditched trackway, two sub-angular and two curvilinear enclosures, a series of south-west to north-east aligned ditches, a cobbled surface and numerous discrete and linear features. Field 25 contained a continuation of the enclosure complex from the south and an extensive series of boundary ditches, occasional insubstantial gullies and numerous pits. One of the pits contained numerous fragments of pottery dating to the Bronze Age suggesting this was the earliest feature on site. Field 28 contained an oven and a length of enclosure ditch. The artefactual material recovered from the fills of the features, aside from the Bronze Age material outlined above, provided a broad date range from the pre-Roman Iron Age/early Roman period to the 4th/5th centuries AD.

The natural subsoil deposits into which all the archaeological features were cut varied from dark orange red sand and sandstone bedrock within Field 23 to mid-orange brown silty sand and gravel with some occasional patches of clay throughout Fields 25 and 28.

Field 23 (Fig 27 and 28)

Stratigraphically, one of the earliest features within Field 23 that contained artefactual material was ditch 1860. This feature was located between the later trackway ditches 1581 and 1801 and represented the redefinition of an undated ditch. Ditch 1860 was aligned south-west to north-east with a rounded terminal to the east. Its single fill contained an abraded sherd of samian pottery dating from AD150 – 250. The ditch was cut to the south-west by the western trackway ditch (1581).

The trackway ditches (1581 and 1801) were exposed for a distance of 85m on a south-east to north-west alignment and were spaced c 5m apart. They continued the alignment of a double ditch response identified by the geophysical survey within the field to the south-east.

The western trackway ditch (1581) appeared to be situated upon the course of an earlier ditch (1679, not illustrated) which contained an undiagnostic fragment of flint. The later ditch (1581) contained numerous silty sand fills which varied throughout the length of the feature. Three of the fills yielded finds which included a fragment from a 1st to 2nd century AD copper alloy trumpet brooch, a 3rd or 4th century AD coin and a possible architectural fragment.

A compacted cobbled surface (1705) was identified c 1m to the west of ditch 1581. It overlay a ditch terminal (1760) and an undated ditch (1762). Ditch 1762 was cut to the

east by the western trackway ditch (1581) Ditch terminal 1760 was 1.4m long and was aligned south-east to north-west, it continued to the west beyond the limit of excavations. Its fills contained no diagnostic artefactual material. The cobbled surface (1705) was sub-square and covered an area approximately 2m x 2m. It comprised sub-angular to rounded cobbles and included an abraded fragment of samian pottery dating from AD150 – 250, a sherd of late 3rd to 4th century AD pottery, and a fragment of iron nail. The surface continued to the west beyond the excavated area.

The eastern trackway ditch (1801) was filled by numerous silty sand deposits which, as with ditch 1581, varied throughout the length of the feature. Two of the fills contained sherds of pottery which dated from the pre-Roman Iron Age/early Roman period to the 4th century AD. Upon excavation a later ditch re-cut (1852, not illustrated) was identified whose fill contained sherds of 2nd to 3rd century AD pottery. The later ditch (1852) was cut by enclosure 1676.

An elongated pit (1757) was identified to the east of ditch 1801. Any relationship between the features had been removed by the cutting of the later enclosure ditch (1676). The pit contained a single fill which yielded two sherds of late 3rd to early 4th century AD pottery.

Enclosure 1676 was 70m long and had a maximum exposed width of 22m, it continued to the east beyond the excavated area. It was not identified by the geophysical survey therefore its overall form could not be appreciated, however the exposed remains appear to suggest a sub-rectangular or 'D'-shape. The enclosure had truncated the majority of the length of the eastern trackway ditch (1801) suggesting that it may have, in part, replaced this feature. The northern circuit of the enclosure had also cut an earlier ditch (1149) suggesting enclosure 1676 represented the re-definition of an earlier feature. Ditch 1149 contained a sherd of pre-Roman Iron Age/early Roman period pottery within its fill. Enclosure 1676 contained numerous fills, many of which contained artefactual material. The finds assemblage included a flint flake, industrial waste and a whetstone. An assemblage of pottery was also recovered which included Black Burnished ware, Crambeck ware and coarse wares which provided a broad date range from the pre-Roman Iron Age/early Roman period to the 4th century AD. Enclosure 1676 was cut by pits 1142 and 1812, and ditches 1791, 1439 and 1411.

Pit 1142 was cut entirely within the northern circuit of the enclosure ditch. It contained a complete Roman millstone (RF28, Plate 39) three iron objects and a fragment of flint within its fill. Another pit (1812) was located c 1m to the west of pit 1142 which cut the edge of enclosure 1676. This pit contained no diagnostic material.

The internal area of enclosure 1676 contained a series of discrete features including eight pits and two linear features. None of the features formed distinct groups. Three of the pits (636, 1408 and 1448) contained artefactual material which included a complete Roman jet finger-ring (from pit 636) and an assemblage of Roman period pottery from pit 1408. Pit 1448 was located centrally within the enclosure and was adjacent to the eastern trench edge. Its fill contained Roman period coarse ware pottery.

and a significant assemblage of charred plant remains which appear to be derived from the later stages of crop processing

A further pit 1912 was located within this area which appeared to be a small hearth or kiln that was associated with a small flue that projected to the south. The fill of the pit contained quantities of slag, cinder and coal but no diagnostic material

The two linear features (1435 and 1778) located within enclosure 1676 both contained artefactual material. Gully 1435 was a sinuous south-west to north-east aligned feature which continued to the east beyond the excavated area. Its fill contained an assemblage of pre-Roman Iron Age/early Roman period pottery. Ditch (1778) was located within the northern area of the enclosure and was aligned south-east to north-west. Sherds of possible 3rd century AD pottery were recovered from one of its fills.

A second enclosure (1917) was identified adjacent and to the north of enclosure 1676 (Plate 40). Enclosure 1917 was sub-rectangular and had maximum exposed dimensions of 30m x 15m. Its northern end continued to the west beyond the excavated area. The circuit of the enclosure contained entrances both to the east and north. An earlier phase of the enclosure (ditches 1104 and 1118) was identified in the area of the east-facing entrance where two earlier terminals were identified. One of these earlier ditches (1104) contained slag from its fill (1103).

Enclosure 1917 was defined by two insubstantial ditches, ditch 1096 formed the northern circuit and ditch 1120 formed the southern. The fills of the enclosure ditches contained an assemblage of pottery which dated from the Iron Age to the late 3rd to 4th centuries AD and included a fragment of samian bowl dated to AD40 – AD85. The southern enclosure ditch was cut by a small pit (1790) whose fill contained no diagnostic artefactual material. No direct relationship was perceptible between enclosure 1917 and trackway ditch 1801 due to truncation by a later south-west to north-east aligned ditch (1122). The northern enclosure ditch (1096) was cut near its centre by another south-west to north-east aligned ditch (1916) and at its western end by pit 1780. The fill of pit 1780 contained no diagnostic artefactual material.

Part of a curvilinear enclosure (1441) was located to the east of the angular enclosure 1917. Enclosure 1441 had maximum dimensions of 39m x 10m and continued to the east beyond the stripped area. It was not identified by the geophysical survey but the exposed plan form suggests that it was sub-circular or 'D'-shaped. Two of the fills of the enclosure ditch yielded artefactual material which included a sherd of 2nd century AD pottery. The ditch had been re-cut to the south by ditch 1412 (not illustrated). Enclosure 1441 was also cut by the south-west to north-east aligned ditch (1916), a curving ditch (1057) and two undated pits (1085 and 1089).

Both the ditched trackway and the enclosures were overlain by a series of ditches aligned south-west to north-east which, from south to north, included features 1791, 1439, 1411, 1122 and 1916. All of the ditches crossed the entire stripped easement other than feature 1439, which was 16m long and terminated with a rounded end to

the west Stratigraphically, these ditches generally represented the latest features on site, only ditch 1491 was later (see below)

The southern, and most substantial of the ditches (1791) represented the redefinition of an earlier undated linear feature (1432, not illustrated) The fills of the later ditch (1791) contained an iron object and a pottery assemblage dating from the pre-Roman Iron Age/early Roman period to the late 3rd to 4th centuries AD

Ditch 1439 was located 6m to the north-west of ditch 1791 and had cut a rectangular pit (1444) at the eastern trench edge Pit 1444 contained no diagnostic material The fills of the ditch contained sherds of pre-Roman Iron Age/early Roman period pottery It was cut by ditch 1491 Ditch 1491 was aligned south-east to north-west and had rounded terminals at both ends The fills of the ditch contained artefactual material which included possible pre-Roman Iron Age and Roman period pottery Ditch 1411 was located 22m to the north-west of ditch 1439 Its fill contained sherds of pre-Roman Iron Age/early Roman period pottery Ditch 1411 had been re-cut at its western end by ditch 1650 which contained sherds of general Roman period coarse ware pottery Ditch 1122 was located 16m to the north-west of ditch 1411 No diagnostic material was recovered from its fill The northernmost ditch 1916 was located 14m to the north of ditch 1122 Its fill contained a fragment of flint and Roman period coarse ware pottery

A curving ditch (1918) was located to the north of enclosure 1441 which demarcated a plot of land with approximate dimensions of 60m x 20m (Fig x) The ditch terminated to the south with a rounded end and continued to the east beyond the stripped corridor at its northern end The fills of the ditch contained a small assemblage of pre-Roman Iron Age/early Roman pottery, suggesting this ditch may represent the earliest feature within Field 23 The internal area of the enclosure contained the remains of three small pits, none of which contained diagnostic material The enclosure was cut by three south-west to north-east aligned ditches including ditch 1070

Two further ditches (1057 and 1689) were located to the west of the main enclosure ditch 1918 The ditches were recorded for a distance of 30m - 35m before continuing beyond the extent of the stripped corridor Both the ditches terminated to the south with rounded ends They had similar dimensions and respected the location of both one another and the enclosure ditch (1918) to the east Neither ditch contained diagnostic artefactual material The westernmost ditch (1057) overlay enclosure 1441 to the south and ditch 1689 was cut by ditch (1070)

A short length of ditch (1827) was located to the west of ditch 1057 It was 10m long and was aligned north-north-west to south-south-east The ditch terminated with rounded ends to both the north and south No diagnostic artefactual material was recovered

A series of medieval/post-medieval plough furrows were identified across the field on a south-west to north-east alignment (not illustrated) The plough furrows had truncated many of the main components of the site Artefactual material was recovered from two

examples which included industrial waste and sherds of residual pre-Roman Iron Age/early Roman period pottery

Ditch 1070 was the latest feature identified. It continued for the full width of the stripped corridor and was located upon the course of the existing hedge line. Its fills contained clay tobacco pipe stem dated to the 17th century AD and late post-medieval brick fragments. The remains of another two undated linear features (1682 and 1693) were identified on the same alignment and to the north. It seemed likely that these ditches were associated with the post-medieval/modern field boundary.

Field 25 (Figs 28 and 29)

The earliest dated feature within Field 25 was pit 1686. It was located within the northern half of the field (Fig 4) and within the vicinity of the northern end of an extensive series of boundary ditches (1587). The pit was sub-circular and contained pottery sherds from two vessels which both appeared to date to the Bronze Age. Another similarly sized pit (1710) was identified 2m to the south-west, although no finds were recovered from this feature.

An extensive ditch group (1587) was exposed for a distance of c 150m on an alignment equivalent to the trackway ditches (1581 and 1801) within Field 23. The group had a complex history and included numerous linear features and 'L'-shaped ditches that had been repeatedly re-defined. The general north-west to south-east alignment of the ditch group could be traced to the south as a faint linear response recorded by the geophysical survey within Field 23.

Stratigraphically, some of the earliest ditches within the group were opposing ditch terminals 1589 and 1585 located at the southern end of feature 1587. It seemed likely that the ditches defined a 5m wide entrance through a boundary ditch, the larger part of which had been fully removed by later ditches. The fills of these features contained no finds.

Subsequently an 'L'-shaped ditch (1067) was excavated which continued from the south-western trench edge to the north-east before turning to the north-west and onto the course of ditch group 1587. Its fills contained pre-Roman Iron Age/early Roman and late Roman pottery sherds. Any continuation of ditch (1067) to the north-west was completely removed by ditch 1921.

A second parallel ditch was identified to the east of the entrance break (1585 and 1589) and the 'L'-shaped ditch 1067, and at the southern end of the ditch group (Plate 41). This parallel ditch comprised the remains of four linear features (1425, 1920, 1493 and 882). Ditch 1425 was the earliest feature and it remained undated. It was recorded for a distance of c 20m before being completely removed by ditch 1920 to the north. Ditch 1920 was identified intermittently for the full length of feature 1587. No diagnostic material was recovered from its fill. Within the southern area ditch 1920 was

cut by ditches 1493 and 882, and to the north it was cut by ditch 1921. Ditch 1493 was recorded for a distance of c 23m. It continued beyond the trench edge to the south and petered out to the north as though truncated by ploughing. Ditch 882 was recorded for a distance of 8.4m and displayed a rounded terminal to the north. No finds were recovered from either of these ditches.

Ditch 1921 appeared to form a linear boundary ditch and was visible in section for the full length of the ditch group to the north. It continued from the western branch of the boundary where it was the latest ditch. Its fills contained a fragment of Roman brick and an assemblage of pottery. The pottery appeared to date from the Iron Age to the late Roman period and included sherds of amphora and mortaria. Ditch 1921 was cut by enclosure ditch 1922.

Ditch 1128 was aligned perpendicular to the ditch group (1587) and was located midway along its length. The ditch continued beyond the limit of excavations. One of its fills contained Roman coarse ware pottery. Ditch 1128 was cut by ditch 1922 and was therefore stratigraphically earlier.

Ditch 1922 was 'L'-shaped in plan and continued from the south-western trench edge to the north-east before turning to the north-west and onto the course of the main ditch group (1587). It continued for the full length of the boundary ditch to the north and cut all features other than gully 1452. The fills of the ditch contained iron nails and objects and an assemblage of pottery sherds which dated from the pre-Roman Iron Age/early Roman period to the late Roman period.

Gully 1452 was c 30m long with a south-east to north-west alignment. The majority of the ditch ran parallel to the ditch group before converging on the same course at its northern end. Its fill contained sherds of Roman period pottery.

A number of pits, postholes and short lengths of ditch/gully were also investigated within northern half of Field 25. The features included ditch 1640, a series of three inter-cutting features comprising pits 1719, 1673 and posthole 1646 (Plate 42), gully 1707 and discrete pits 1031 and 886.

Ditch 1640 was identified to the east of the northern extent of the ditch group (1587). The ditch was 11m long with a south-west to north-east alignment and terminated with a rounded end to the south-west. Its single fill contained no diagnostic material.

Pits 1719 and 1673 and posthole 1646 were located c 30m to the north of the northern end of the ditch group (1587). The earliest feature was pit 1719. It was sub-circular with a diameter of 1.4m and contained an assemblage of charred botanical remains that were consistent with other identified within the Iron Age and Romano-British periods. The botanical remains appeared to represent the later stages of crop processing. Pit 1719 was cut to the south-east by pit 1673. Pit 1673 was a similar size to the earlier feature and contained late 3rd to 4th century AD pottery from both its fills. It was cut to the north by posthole 1646. Posthole 1646 had a diameter of 1.6m.

The fills of the posthole contained fragments of Roman roof tile, a Roman coin dating to AD348 – 350 and late Roman period pottery

A short length of undated gully (1707) was located 1m to the north-west of posthole 1646 The gully was 3m long and was aligned north-west to south-east It contained rounded terminal to both ends

A substantial flat-based storage pit (1031) was identified 7m to the south-east of posthole 1646 The pit was filled by four deposits which contained a large assemblage of late 4th century AD pottery Three of these fills also contained quantities of ironwork which included nail fragments and a bar The upper level of this pit displayed evidence of burning and contained an assemblage of charred botanical remains consistent with others identified from the Iron Age and Romano-British periods which appeared to represent the later stages of crop processing

Another pit (886) was located 5m to the north of pit 1031 The fill of this feature contained daub, fired clay and late 4th century AD pottery

The northern area of the field contained parallel gullies 896 and 1652, and a series of discrete pits The gullies were aligned south-west to north-east and were spaced 26m apart No finds were recovered from the fills of the gullies or any of the pits

All the archaeological features were sealed by up to 0.45m of mid-brown silty sand subsoil which was overlain by a series of medieval/post-medieval plough furrows and a post-medieval/modern cobbled track (not illustrated) These were overlain by up to 0.4m of mid-brown sandy silt topsoil which contained pottery dating from the 2nd to 4th centuries AD

Field 28 (Fig 30)

An oven (1844, Plate 43) was identified at the southern end of the stripped corridor within Field 28 and was located adjacent to the western trench edge It comprised pit 1844 and a small flagged area (1847)

The earliest part of the oven was pit 1844 and a slight linear depression (identified beneath the later flagstones 1847) which probably represented the base of a flue The fills of both the pit and the flue contained significant quantities of fired clay which may have represented the remains of the overlying oven superstructure Four flagstones (1847) had then been laid in a line over the fill of the flue, possibly forming the base of another flue serving a second oven of which nothing else survived

An 'L'-shaped ditch (1798) was located c 80m to the north of the oven It was traced for 17m on an east-north-east to west-south-west alignment before returning to the south for a further 12m The ditch displayed rounded terminals to both ends The fill of the ditch contained finds which included a flint flake, slag, an iron nail, iron objects and

an assemblage of pottery which dated to the 3rd century AD. It seemed likely the ditch formed part of an enclosure.

These features were overlain by mid-brown silty sand subsoil which contained one fragment of flint. This was sealed by the modern plough soil.

Baldersby (*Fields 33 to 40, Fig 31 and 32*)

A series of ditches, pits and gullies were investigated in Fields 33 to 40 to the west of Baldersby. A number were thought to date from the Roman period, while others which were predominantly aligned perpendicular to the A1 may have been the remains of a later field system belonging to the medieval or post-medieval periods. A total of 19 pits were exposed within the area, though none contained any datable finds.

The lack of evidence for structures within Fields 33 to 40 and the general paucity of finds from the fills of all of the features indicate that the archaeological features predominantly represented division and drainage of the land for agricultural purposes, potentially dating from the Roman period until modern day, with no apparent evidence for an associated settlement in the immediate vicinity.

The most substantial features that yielded Roman period finds was a long ditch (1204) that followed the alignment of the A1 and may have been associated with Dere Street. It extended on a south-east to north-west alignment for a distance of approximately 192m within fields 35 and 36 and continued beyond the western limit of excavation. At the southern end of the ditch, at the point where it turned through right angles to the north-east, it was seen to cut through gully 1249 and ditch 3079, which appeared to be earlier components of the boundary, but which produced no datable finds. The only artefacts recovered from the fill of ditch 1204 were a copper alloy copy of a Radiate coin dating from 260-73+ AD, and a quantity of animal bone.

At the southern end of Field 34, ditch 3183 was identified crossing the stripped easement on a south-west to north-east alignment. It contained a quantity of animal bone and one sherd of pottery dated to the Roman period. The ditch was 20m to the north of ditch 1163, which was oriented from north-west to south-east and extended for approximately 10m. It yielded no finds, but its orientation and the nature of its fill suggested that it may have dated from a later prehistoric or early Roman period.

Some 10m south, a heavily truncated parallel gully (1159), ran for a distance of 4.10m from east to west. No finds were recovered from the fill of this feature, but its alignment suggests that it respected the same system of enclosure as the more substantial ditches nearby.

The presence of two substantial ditches in Field 35, 1180 orientated from north to south, and 1175 perpendicular to it, was thought to be indicative of an early phase of activity which may have pre-dated the division of land into agricultural strips respecting the course of the road. Ditch 1242 in Field 36 followed the same alignment as ditch 1180, which may suggest that it belonged to the same phase. Ditch 1242 was cut by ditch 1245, which appeared to broadly follow the probable medieval pattern of field boundaries and subdivisions, described below. Ditch 1175 was orientated from north-west to south-east and extended for approximately 40m across the stripped area. It was V-shaped in profile and the base had been eroded by water. No finds were recovered from its fill but it was found to have been cut by ditch 1180, which was orientated from north-east to south-west and extended for approximately 52m within the stripped area. Excavation recovered sherds of Roman pottery, including examples dating from the Hadrianic-Antonine period.

Two small ditches (1163) and (1191) were identified in Fields 33 and 35 respectively following followed the same alignment as ditch (1175) and may have been part of the same phase of activity. A posthole (1188) was identified some 5-60m to the north-west on the alignment of gully 1191 and may have been associated with it.

Leeming Airfield (Fields 99-105, Figs 33 to 37)

Late prehistoric/Roman features were identified thinly dispersed throughout Fields 99, 101, 103, 104 and 105. The fields were located to the west of RAF Leeming and were situated to the east of the existing carriageway.

Field 99 contained three ditches, two of which formed a trackway, a large elongated pit and a series of pits and stakeholes. Field 101 contained a ditch and an 'L'-shaped gully. Field 103 contained another ditched trackway. Field 104 contained a series of intercutting ditches and Field 105 contained two gullies. On the basis of the results of the earlier geophysical survey, the ditches, gullies and pits identified throughout these fields appear to form a field system sub-divided by ditched trackways. Only a few diagnostic finds were identified during excavations which indicated a pre-Roman Iron Age/early Roman period date for the remains.

Field 99 (Figs 33 to 35)

The most southerly feature group was a series of fire pits comprising features 6080, 6084 and 6088. The pits contained charred hazel nut shell (from pits 6080 and 6084) and fragments of fired stone but no diagnostic material. Pits 6093 and 6095 were also located within this area although neither of the features contained finds.

Ditch 6090 was located 14m to the north of the pit group. It was aligned east-north-east to west-south-west and crossed the entire road corridor for a distance of 26m. The ditch was consistently aligned with a linear response highlighted by the geophysical survey. One of the fills of the ditch contained numerous skull fragments, probably belonging to a horse.

A series of features including pit 6074, a fence line formed by stakeholes 6033, 6035, 6037 and 6039, and an elongated pit 6042 were located to the north and between ditch 6090 and a ditched trackway formed by ditches 6069 and 6076. The stakeholes were arranged in line and were spaced around 1m apart, although the southernmost example was at a distance of c 2m. They appeared to form a fence line orientated south-south-west to north-north-east which was at odds with the modern field boundaries. No diagnostic finds were recovered from any of the features within this area.

Trackway ditches 6069 and 6076 were identified crossing the stripped corridor approximately 85m to the south of the northern hedge line separating Fields 99 and 101. The ditches were exposed for a distance of 27m and were orientated south-west to north-east, and were spaced 5m apart. The ditches were consistently aligned to two linear responses identified by the geophysical survey to the east of the stripped road corridor. Both of the ditches had been re-defined at some point within their history although none of their fills contained diagnostic material.

An irregular shaped elongated pit (6051, Plate 44) was identified centrally within the road corridor some 18m to the north of the ditched trackway. The pit was 4.65m long, 1.32m wide and 0.54m deep and was aligned south-west to north-east. The upper fill of the pit contained a fragment of handmade prehistoric or early Roman period pottery.

Field 101 (Fig 35)

Ditch 6022 was identified at the northern end of Field 101 and corresponded in both its location and alignment with a ditch that formed one side of a trackway identified by the earlier geophysical survey. A second linear anomaly, recorded c 2m to the north of ditch 6022, could not be identified. Ditch 6022 crossed the corridor on a north-east to south-west alignment for a distance of 25m. The ditch had been re-defined at least twice in its history with ditch 6022 representing the latest phase of the feature. Two sherds of pre-Roman Iron Age/early Roman period pottery were recovered from the upper fill of the latest ditch.

An 'L'-shaped gully (6031) was located within the eastern side of the corridor 35m to the south of ditch 6022. It was c 25m in length and was aligned north-west to south-east. A short eastern return at its southern end continued beyond the extent of the excavated area. The gully was heavily truncated and appeared to peter out to the north.

No artefactual material was recovered from its fills. The gully may have represented the remains of an enclosure located within the angle formed by ditch 6022 and the continuation of the trackway ditch recorded by the geophysical survey within the field to the north-east.

Field 103 (Fig 36)

The trackway ditches (6000 and 6003) crossed the road corridor obliquely at its northern end and appeared to represent the continuation of a double ditch response identified by the geophysical survey to the south-east. They were exposed for a maximum distance of 36m on a west-north-west to east-south-east alignment and were spaced c 4m apart. None of the fills of either of the ditches contained diagnostic material. The ditches were sealed by subsoil 6010 that contained a large fragment of late prehistoric or Roman period pottery within the vicinity of the trackway ditches.

Field 104 and 105 (Fig 37)

Ditch 6601 was located at the southern end of Field 104 and was the earliest feature recorded here. It was aligned north-north-west to south-south-east and was 8m long. It was cut to the north by ditch 6603. Ditch 6603 was aligned north-north-east to south-south-west and was completely removed at its northern end by ditch 6605. Ditch 6607 was aligned south-south-west to north-north-east and contained a slight curve within its length. It was cut along its south-eastern edge by ditch 6605 which adhered to the same alignment. No diagnostic artefactual material was recovered from the fills of these features. It seems likely that they represented a continuation of the late Iron Age enclosure system investigated within Fields 99, 101 and 103 to the south.

Three further gullies (6129, 6126 and 6124) were identified within the northern area of Field 104 and Field 105. Gullies 6129 and 6126 were aligned south-west to north-east and were exposed for a distance of c 5m. Both gullies terminated to the north-east. The northernmost gully (6124) was aligned north-west to south-east and was exposed for a distance of 18m. No artefactual material was recovered from any of these features.

Leases Lane, Leeming Bar (*Field 123a Fig 1d*)

The accepted course of Dere Street ran beneath Leeming Bar and was fossilised in the route of the former Great North Road (GNR) at Leases Lane to the north of the village. Groundworks undertaken as part of the motorway upgrade exposed a 180m long section of the Roman road, preserved beneath the remains of an 18th century turnpike. Removal of the tarmac and foundation of the former GNR and the turnpike road beneath revealed the remains of the Roman road surface, however, the width of the area was limited and the presence or absence of side ditches could not be confirmed.

The road had been constructed on a deliberately flattened section cut into an east-facing slope. The existing road surface measured 6m in width and was found to cover a cambered layer of compacted sand and gravel which has been interpreted as a foundation layer or make-up for the Roman road (Plate 45). The layer measured 0.25m thick at the edges and 0.3m at the centre of the camber. Underlying this layer was a deposit of imported coarse and angular stones that measured 0.25m thick which appeared to form the primary foundation layer for the road.

A modest assemblage of finds was recovered from the surface of the foundation layer and this comprised iron nails and sherds of pottery, including Roman colour-coated ware.

MEDIEVAL SITES

Evidence of medieval and post-medieval agricultural activity in the form of ridge-and-furrow and field boundary ditches was frequently identified along the A1 road corridor including fields 4, 22, 31-36, 44, 53, 54, 55, 72, 73, 79, 80 and 112. In the majority of cases the ditches were aligned perpendicular to the A1. One area produced evidence for occupation and possible industrial activity and this located west of Leeming and south of Bedale Beck (Fields 106-108).

Leeming (*Fields 106, 107 and 108*)

Field 106 (Figs 33 and 38)

Two archaeological features were identified within Field 106 cut into a stoney clay natural deposit. They comprised an undated gully (4496) which crossed the road corridor on a south-west to north-east alignment and the remains of a modern hedge line (4156). A small truncated linear feature (4182) was identified adjacent to the feature which was considered to be part of the same boundary.

Field 107 (Figs 33 and 38)

Archaeological features were encountered throughout Field 107, although the more significant features were located within a 70m long zone at the southern end of the field. The remains within this area included eight ditches, one of which, group 4218, represented a linear feature that had re-defined at least four times. One of the ditches (4256) had been identified by the earlier geophysical survey. Numerous pits/postholes were also identified. Almost all of the fills of the features contained quantities of industrial waste with larger assemblages being recovered from the fills of the ditch group 4218.

An assemblage of medieval pottery was recovered during investigations, however, rather than being retrieved from secure contexts within ditch and pit fills this material was almost always identified within the upper levels of the features and at the denuded surface. It is possible that the pottery was intrusive within the ditch fills and had been deposited during subsequent ploughing of the field. Ridge and furrow cultivation was identified over much of the area, which appeared to be associated with two field boundaries, ditch 4156 to the south (Fig 6) and ditch 4124 to the north (Fig 7). All the features were cut into light orange yellow sand natural.

The earliest feature within Field 107 was a short length of curving gully (1962) that was located near the centre of the field and at the eastern trench edge. It was recorded for a distance of 4m on an east to west alignment before returning to the north-west at its western end where it was cut by ditch 1948. It continued beyond the edge of the excavated area to the north. The gully contained industrial waste within three of its fills and was cut to the west by ditch 1948.

Ditch 1948 was exposed for an overall distance of c 50m. To the south it was aligned south-west to north-east before turning to the north-west and cutting ditch 1962. The primary fill of the ditch contained fired clay and the secondary fill contained large quantities of industrial waste and two sherds of locally produced medieval pottery. Ditch 1948 was cut to the south by pit 4101, which contained quantities of industrial waste from its fill, and by ditch 4239 (not illustrated), which formed part of ditch group 4218.

Ditch 4239 (not illustrated) was one of the earlier ditches which formed ditch group 4218 and, as with all ditches forming the group, was aligned west-south-west to east-north-east (Plate 46). Quantities of industrial waste were recovered from two of the ditch fills. The ditch was cut by a later ditch (4052, not illustrated) within the group. Ditch 4086 was another of the earlier ditches within the group (4218) and was the only feature to turn to the north-north-west at the eastern trench edge. Many of the fills of the ditch yielded quantities of industrial waste. The ditch had cut an undated pit 4051 located at the southern edge of the ditch group and near the eastern trench edge. Ditch 4086 was cut by ditch 4090 (not illustrated), which was traced for a distance of 7m within the group before it was cut by later ditch 4052. No finds were recovered from this ditch.

Pit 4249 was located at the south side of the ditch group. It was an elongated feature that was 2m long and was aligned consistently with the main ditch group. Quantities of industrial waste were recovered from its fill which was cut by ditch 4052.

Ditch 4052 (not illustrated) was identified crossing the entire stripped corridor and, although it was aligned consistently with the other ditches recorded as part of the group (4218), appeared quite sinuous. The ditch was filled by a complex sequence of deposits that seemed to represent intentional, yet gradual in-filling. Quantities of

industrial waste were recovered from many of its fills. The ditch was sealed by layer 4059 (not illustrated). This layer was identified overlying the ditch group (4218) and appeared to have been deposited at a time when the feature survived only as a slight earthwork. It contained quantities of industrial waste and a sherd of locally produced medieval pottery. The layer was cut by pit 4251 at the northern edge of the main ditch group which also contained a sherd of medieval pottery.

A further substantial ditch 4256 was located 10m to the south of ditch group 4218. This feature corresponded to a linear response identified by the geophysical survey. The ditch was 15m long on a south-west to north-east alignment with rounded terminals to both ends. It truncated a small undated pit 4176 to the north. The ditch was filled by a complex series of fills comprising up to ten distinct ashy deposits which varied throughout the length of the ditch suggesting localised tipping of material. Finds recovered from the later fills of this ditch included quantities of industrial waste which comprised a hearth bottom, small amounts of hammerscale and large fragments of fired clay. Ditch 4256 contained a possible ditch re-cut 4113 at its north-eastern end. The extent of ditch 4113 (not illustrated) could not be defined as it was cut entirely within the fills of the earlier ditch 4256. The ditch contained another complex sequence of distinctly ashy fills which yielded more industrial waste and fired clay.

Ditch 1959 was located at the northern end of ditch 4256 and was 4.7m long with a south - north alignment (Plate R0011107). It had a rounded terminal to the north and appeared to be connected to ditch 4256 to the south. No stratigraphic relationship between ditches 1959 and 4256 was perceptible due to truncation by an undated posthole 4319. The fills of ditch 1959 contained industrial waste, fired clay and hammerscale. This ditch may have represented a continuation of ditch re-cut 4113 from the south.

Pit 4153 was located adjacent to ditch 4256. It contained seven distinct fills which were very similar in composition to the adjacent ditch fills. Small pieces of industrial waste were recovered from the upper fill of the pit. Another three pits (1981, 1983 and 1985) were identified 8m to the north of pit 4153. They were located at the edge of the ditch group 4218 and contained no diagnostic material.

Gully 4492 was located at the western trench edge some 20m to the west of ditch 4256 (Plate 47). It is possible that this gully was a continuation of ditch 1948 to the north. Gully 4492 was quite sinuous and was exposed for a distance of 13m. It contained no diagnostic material. The gully had cut a small undated pit 6118 which also contained no finds.

Ditch 4143 was located at the southern edge of the field and crossed the entire corridor on a west-south-west to east-north-east alignment. The ditch fills contained no finds and had suffered significant disturbance from burrowing animals and tree roots. The ditch appeared to be overlain in places by a series of plough furrows 1933.

A series of field boundary ditches, including ditch 4124, and a succession of plough furrows (1933, not illustrated) were located within the northern part of the field. The field boundary ditch (4124) was exposed for a distance of 90m on a near north to south alignment. The boundary ditch contained the remains of at least three linear features, the latest contained pottery which dated to the 13th or 14th centuries AD. The plough furrows (1933) both respected and were aligned to the boundary ditch (4124) suggesting they were located within fields defined by this feature. The furrows were generally spaced 6m apart and had shallow irregular profiles. Finds were recovered from the fills of six of the furrows. These comprised sherds of locally produced medieval pottery, quantities of industrial waste and medieval roof tile.

Pit 1964 appeared to be the latest feature within the field. It was located adjacent to ditch 1948 at its northern end and contained the remains of what was presumably a modern sheep/goat.

Field 108 (Figs 33, 40 to 42)

The archaeological features within Field 108 were located throughout the road corridor for a length of 350m and within the area of a large balancing pond. The southern part of the field contained at least one enclosure (4498) that was associated with two further 'L'-shaped ditches (4203 and 4339) which may have formed additional enclosures (Fig 40). The northern part of the road corridor contained the remains of strip fields which appeared to have originated in the medieval period (Figs 41 and 42) and post-dated a series of pits, post-holes and short lengths of gully. These earlier features contained a finds assemblage which suggested that they were associated with domestic occupation. The majority of the features were truncated by a series of later medieval plough furrows (not illustrated). Two of the field boundary ditches (4194 and 4386) were identified by the earlier geophysical survey.

Field 108 South

Ditch 4194 was identified at the southern end of Field 108 on a south-west to north-east alignment. It lay 132m to the south of a similar ditch (4386) which appeared to form the head of a strip field system. Ditch 4194 contained large quantities of modern brick and appeared to have been re-defined quite recently which had removed any earlier phases. The area flanking the ditch had also suffered significant disturbance from activities associated with construction of a tarmac road, located between Fields 107 and 108, and the existing hedge line.

An 'L'-shaped ditch (4339) was identified at the southern end of the field. It measured 52m long and was aligned east to west. The ditch turned to the north within the eastern area of the corridor and continued beyond the eastern trench edge. Ditch 4186 was located 10m to the north-west of ditch 4339. It may have represented a return to

ditch 4339 and therefore formed part of an enclosure. It was 10m long with a near east to west alignment and terminated with a rounded end to the west. It continued beyond the extent of the stripped area to the east. Both features contained sherds of medieval pottery. A short length of ditch 4181 was identified between ditches 4186 and 4339. The ditch was 12m long on a near north to south alignment with rounded terminals to both ends. Its fill contained sherds of medieval pottery. This ditch may have represented internal division within an enclosure formed by ditches 4186 and 4339.

The remains of a further possible enclosure ditch 4203 were identified 10m to the north-west of ditch 4181. The ditch was c 25m in length and was aligned south-east to north-west with a shorter arm aligned south-west at its north-western end. The alignment of this ditch differed slightly from ditch 4339 to the south-east and had more in common with enclosure 4498 to the north. The fill of ditch 4203 contained sherds of locally produced medieval pottery.

Enclosure 4498 was sub-rectangular in shape and covered an area of c 40m by 28m with an apparent entrance on the south-west side. The north-western side was formed by ditch 4430 and the south-eastern side by ditch 1980. Both ditches continued beyond the corridor to the north-east. An earlier phase of the enclosure, ditch 4428, was identified underlying the northern ditch (4430), whose fill contained quantities of slag and an assemblage of charred cereal grain. The later enclosure ditch (4430) contained medieval pottery. The southern enclosure ditch (1980) contained a moderate assemblage of charred cereal grains. The interior of the enclosure contained two postholes (4189 and 4195), neither of which contained finds. The enclosure may have represented a stock control feature.

Field 108 North

The northern area of the road corridor contained the remains of a series of dispersed gullies and pits which appear to have been associated with medieval domestic occupation (Fig 42). Many of the features contained large, unabraded sherds of medieval pottery. Where relationships were evident, these features generally pre-dated the strip field system.

Ditch 1940 was located adjacent to the north-eastern edge of the stripped road corridor. It was aligned north-west to south-east and was recorded for a distance of 10m. The ditch turned to the east at the trench edge and appeared to continue within the balancing pond area as ditch 4091. It was truncated by the remains of an irregular feature (1956) which appeared to represent a post-medieval hedge line. Ditch 4091 was recorded for a distance of 6m and was cut at its northern end by ditch 4083. The fill of ditch 1940 contained an assemblage of charred material which represented food and crop processing remains. The fills of both ditches 1940 and 4091 contained quantities of pottery which indicated a medieval date.

Gully 1942 was located 2m to the north of ditch 1940. It was 5m long with a west-north-west to east-south-east alignment. The gully had rounded terminals to both ends. Its fill contained medieval pottery and a moderate assemblage of charred biological remains. An undated pit (1944) was located adjacent to gully 1942.

Ditch terminal 1954 was identified at the trench edge 4m to the north-west of gully 1942. It was 2m long and was aligned south-west to north-east. It could not be traced to the north-east and into the area of the balancing pond. The ditch contained medieval pottery and an assemblage of charred biological remains.

Gully 1969 was identified 4m to the north-west of ditch terminal 1954. It was 7m long with a rounded terminal to the south. It was aligned south to north and contained medieval pottery.

Four further linear features and a pit were located within the north-western corner of the balancing pond. These included ditches 4080, 4078 and 4075 and an undated pit (4073). Ditch 4080 contained no finds and was likely to have a post-medieval/modern origin. Ditches 4078 and 4075 were aligned south-west to north-east. Medieval pottery was recovered from the fills of both ditches and an iron object was recovered from ditch 4075. Ditch 4075 was cut to the north-east by ditch 4083.

A short length of gully (4081) was located c 35m to the east of ditch 4075 within the central area of the balancing pond. It was aligned south-east to north-west and was recorded for a distance of 3m. The fill of the gully contained two sherds of undiagnostic Roman period coarse ware pottery although these may have been residual as the feature had been disturbed by roots. However, it may have represented the earliest feature identified within Field 108.

A series of nine pits (4327, 4323, 4321, 4344, 4331, 4333, 4335, 4365 and 4362) were located immediately adjacent to a medieval strip field ditch (4385). The features appeared to be associated with the dispersed gullies and pits on the east side of the road corridor representing the remains of domestic occupation. All the features were potentially earlier than the strip field boundary ditch 4385, while pit 4323 cut ditch group 4385. Only one of these features (4321) contained artefactual material, which comprised sherds of medieval pottery.

An 'L'-shaped gully (4310) was located centrally within the stripped road corridor which was earlier than the strip field ditch 4385 and appeared to be associated with the features discussed above. The gully (4310) was 21m long and was aligned north-west to south-east with a return to the north-east. Its single fill contained medieval pottery. The feature was cut centrally by a small medieval pit (4286) which contained an assemblage of charred cereal grains. It was cut to the north-east by a short stretch of medieval linear feature (4312) and to the south-west by gully 4308. It was also cut by

the strip field ditch 4385 and to the north-west by an additional branch of the strip field ditch (4316) which had removed any continuation of the gully to the north

Gully 4308 was exposed for a distance of 13m on a south-west to north-east alignment. The gully had a rounded terminal to the north-east and appeared truncated by later ploughing to the south-west. Its fill contained no finds.

Two other lengths of ditch (4337 and 4370/4406) were identified to the north-west of gully 4286. The two gullies were aligned south-west to north-east and may have defined a parcel of land. Both the features were recorded for a distance of c 30m and gully 4337 continued beyond the south-western trench edge. The north-western gully 4370/4406 appeared to represent a single feature that had been truncated centrally by later ploughing. It contained no finds. The south-eastern gully (4337) contained an assemblage of charred cereal grains and sherds of medieval pottery. No sequential relationship was perceptible between the southern gully (4337) and the central strip field ditch 4316.

An irregular linear feature (4350) was located 7m to the north-west of gully 4370. It was orientated south-west to north-east and was 12m long. The ditch appeared to peter out rather than terminating at the ends and contained no diagnostic material.

The field system identified within the northern half of the road corridor comprised three strip fields with irregular widths of between 25m and 40m which were aligned north-west to south-east. The fields were defined by four groups of ditches (4411, 4385, 4384/4083 and 4096), two of which terminated to the south-east at ditch 4386. The boundary ditches appeared to originate within the medieval period but had been re-defined on numerous occasions. Some had been re-cut within the post-medieval/modern period.

Ditch 4411 represented the south-western-most of the field boundary ditches. It was recorded for a distance of 110m and had cut gullies 4337 and 4406. It had been re-cut at least three times and presumably had a medieval origin. However, only the latest feature contained diagnostic finds which dated to the post-medieval period.

Ditch 4386 was aligned south-west to north-east and formed the head of a strip field that was also defined by ditches 4385 and 4384 (Fig 41, Plate 48). Ditch 4386 represented a group of at least six ditches. The earlier phases of the ditch group appeared to curve to the south-east at the south-western trench edge possibly leading into a further field boundary ditch. Artefactual material was recovered from the fills of many of the ditches which indicated a medieval date. As well as pottery, these finds included animal bone and quantities of slag. Significant quantities of charred cereal grain were recovered from one of the ditches. The latest ditch within the field boundary contained a very mixed assemblage of ceramic building material which dated from the Roman, medieval and post-medieval periods.

Ditch 4385 was aligned south-east to north-west and was recorded for a distance of 195m (Fig 9 and 10) Ditch 4385 contained at least five recuts Evidence that one phase of this feature contained a narrow gap (1m wide) in its length was identified by the remains of opposing ditch terminals located within the vicinity of the earlier 'L'-shaped gully (4310) Gully 4316 was identified diverging from the course of the ditch group 4385 within this area Sherds of medieval pottery were recovered from many of the fill of the ditches including gully 4316 No post-medieval phase was evident in this feature

Ditch 4384 was located c 30m to the east of ditch group 4385 and formed another part of the strip field It was exposed for a distance of c 30m within the road corridor and contained at least four recuts which contained medieval pottery and industrial waste The ditch continued to the north-west within the balancing pond as ditch 4083 A group of pits and short lengths of linear feature were recorded within the north-eastern angle formed by ditches 4386 and 4384 None of these features contained diagnostic material

Ditch 4083 was located within the western area of the balancing pond and appeared to have been excavated within the modern period for the installation of a dram The ditch had substantial proportions and its excavation had removed the majority of any continuation of the medieval ditch 4384 investigated to the south-east, although the cut of an earlier undated feature (4084) was identified at the north-western end of ditch 4083 Ditch 4083 contained large quantities of modern ceramic building material and pottery

The larger area of the stripped road corridor and balancing pond within Field 108 contained a series of plough furrows (not illustrated) which overlay many of the investigated features During excavations medieval pottery was recovered from four examples

POST-MEDIEVAL SITES

The Turnpike Road

Healam Bridge, which latterly carried part of the Great North Road across Healam Beck, is generally considered to have been constructed in the late 18th century However, recording of the bridge undertaken for the present road scheme identified clear evidence that Healam Bridge had been widened, and that the earlier bridge vault must pre-date c 1796, and probably equates with the bridge recorded by Ogilby in 1765

The intact remains of a cambered road surface were identified beneath modern foundation layers and tarmac surfaces of the former Great North Road immediately to

the north of Healam Bridge and at Leases Lane, Leeming Bar (Plate 49) The early road was constructed from stone chippings and measured 5m m width and was approximately 0.3m thick at its apex. The road had been constructed upon a foundation of re-deposited sands and gravels that made up the natural drift geology in the area. No finds were recovered from the fabric of the road or from the layer of re-deposited foundation layer, but it was thought that the road may have occupied a route that was turnpiked in the mid-18th century.

Within both fields the road and its foundation were found to overlie cobble and gravel cambered roads that were found to be Roman in date (see above). At Healam the Roman road may have been an ancillary route that was designed to serve part of the settlement, but at Leases Lane, if not at Healam, the Roman road may have been part of Dere Street. The route was later fossilised by the construction of the Great North Road.

Post-medieval field boundary ditches were encountered along the length of the scheme, representing part of the system of Inclosure which took place principally in the 18th and 19th centuries. The majority were aligned perpendicular to the line of the GNR, although some south of Bedale Beck (Fields 107-8), were parallel with the road and appeared to redefine medieval fields here. In many cases they represented subsurface elements of surviving hedges or fences, but evidence was also found for the modern amalgamation of several fields into one.

A number of buildings were recorded along the route of the scheme prior to their demolition. These included the standing remains of a coaching inn and farm north of Healam Bridge together with two further farmhouses, all constructed in the 18th century. They all lay on the line of GNR and were built as a result of its renewed importance as a turnpike road after AD 1743. The inns were built to service the stagecoach route and cater to other travellers, while the improved road attracted settlement immediately beside it in the form of farmsteads, probably stimulating further agricultural expansion in the area.

DISCUSSION

Early prehistoric sites

The evidence for early prehistoric activity was mainly derived from a scatter of pits, some of which contained datable assemblages of pottery and flint along with burnt materials, while many contained evidence for *in situ* burning and others for the deposition of burnt material such as fire-damaged stones and charcoal, with the occasional nutshell. The pits that contained no datable evidence often shared characteristics with those that did. The only possible structural evidence of early prehistoric date was located in Field 47 at Sinderby, and at present, it is unclear what this represents, or whether it is directly related to the Early Bronze Age pottery found in an adjacent feature.

The number of pits gives some indication of the density of prehistoric activity within the road corridor. It would be tempting to conclude that there was an established prehistoric routeway prior to construction of Dere Street especially given the concentration of early prehistoric pits in the area on the A1 at Dishforth airfield, but the nature of a linear scheme gives a skewed sample.

Significance of results

Establishing the date and nature of the gully in Field 47 would clarify the date of this possible structure and strengthen or remove its association with the adjacent pottery evidence. There are relatively few recorded Early Bronze Age structures from this part of the Vale of Mowbray which are not funerary and this site has the potential to add significantly to this corpus. Given the restricted evidence, the remainder of the identified features and recovered material have limited interpretative value. The results should be considered in the wider context of prehistoric activity in the area, with particular reference to the concentration of early prehistoric pits in the vicinity of the A1 at Dishforth airfield and the ritual/ceremonial centres on the western side of the Vale.

Recommendations for further analysis

The stratigraphic sequences for the prehistoric sites encountered during the course of the project are fully understood and no further work is required on the matrices for these sites. Limited further work should be carried out on the recovered pottery to establish its date fully and on palaeoenvironmental material if it contains interpretatively valuable remains. Radiocarbon analysis should be carried out on selected features to establish their date, including the ring gully at Sinderby (Field 47) and pit group in Field 19. The results of the excavations should be integrated with any subsequent programmes of artefactual and ecofactual analysis which are undertaken, and the results of other fieldwork within the Vale which encountered archaeological remains of this period.

Healam Bridge

The excavation of the site at Healam Bridge revealed extensive archaeological remains representing a Roman period settlement site and associated enclosure systems to the west of the A1 (T) dual carriageway and to the east, on both the north and south sides of Healam Beck. The focus of the settlement as excavated lay to the immediate north of the beck, with further elements lying to the west of the A1 (T), where multiple phases of deeply stratified deposits were identified including evidence for occupation and buildings. The excavated area to the north revealed a system of enclosures containing a number of buildings while to the south of the beck the continuation of the enclosure system and the eastern edge of the settlement was identified. Evidence of a series of

metalled surfaces and possible roadside ditches suggested that the enclosures abutted the east side of a Roman road (possibly Dere Street), the remains of which lay partially beneath the later Great North Road. At least 35 burials were also identified across the site, with a focus to the west side of the A1(T)

Following specialist assessment of the recovered finds assemblage, an overall date range from the late 1st to late 4th/5th centuries AD has been posited. A hiatus of this settlement within the 3rd century AD has been suggested following assessment of the coarse ware pottery assemblage.

A deep and complex sequence of occupation deposits was encountered immediately north of Healam Beck, at the southern end of Field 63. This included multiple phases of building and land reclamation, which was associated with at least two phases of bank-side revetment. This comprised a stake-built structure, which had evidently been replaced by a more substantial stone-built revetment along roughly the same course. The archaeology in this area has been broadly divided into eight stratigraphic horizons, but this will be reviewed following more detailed analysis of the stratigraphic relationships and the finds assemblage.

The excavation confirmed that the course of the beck had moved several times and that it was originally wider, marshier and more of an obstacle than the current beck appears to be. It is evident that the course of Healam Beck has been altered and straightened at some point since the Roman period, and that the original beck would have been a much wider feature. No evidence was found for a bridge over the beck or for the Roman road in this area, but it is possible that the series of north-south aligned ditches along the western edge of the excavated area represent roadside ditches. This would indicate that the course of Dere Street ran to the west of the stripped area and that the Roman river crossing may have been on, or close to, the site of the 18th-century Healam Bridge. Recording of the standing bridge identified several phases of construction, including possible Roman masonry within its foundations.

The buildings encountered in this area showed a variety of construction types. Structure [5009] comprised a cobbled surface with large post-pads incorporated into it. Structure 5977 was represented by a rectangular metalled surface, structure 7951 survived as a heavy stone foundation raft with the remains of possible stone walls, while structures 5129, 5695, 6949 and 7968 were all post-built. It was noted that the larger post-built structures (5695 and 6949) were located higher up the slope whereas the structures with stone foundations were situated closer to the beck. These heavier foundations may have been necessitated by the underlying peat-like deposits in the area of the beck which would otherwise have provided an unstable building platform. The smaller post-built structures (5129 and 7968) were also located close to the beck but may have been of a more temporary nature. Hearths were identified in two of the structures (5695 and 6949) indicating potential domestic occupation of these buildings. Assessment of the recovered pottery has suggested that the first of the buildings was constructed in the 2nd century AD, and that the final structure may have been built in the 4th century or later.

The series of sequential buildings excavated in the area adjacent to the beck indicated that early stone-built structures with heavy stone foundations were replaced by later timber structures. This is a pattern which is generally unparalleled in the Roman period in the region. Excavations at Dalton Parlours (Wrathmell and Nicholson, 1990) and at Crayke (Wood, forthcoming), both revealed early timber-built structures replaced by rectangular stone buildings in the 3rd to 4th century AD. The change in construction methods observed at Healam Bridge may be in response to a shift in the function of the area and could represent the difference between domestic buildings and agricultural storage buildings. The location of the earliest buildings so close to the Roman period beck could indicate a specialist function. Further analysis of the samples recovered from the occupation deposits within the buildings could provide more information on their function.

A series of features were identified which were associated with the various buildings described above. These included four kilns, which analysis of the environmental samples may prove had been used as corn dryers. A number of quern fragments were also recovered from the site, which suggests that the processing of grain had been carried out and a series of trenches terraced into the slope indicated that there had been small-scale cultivation in this area.

Excavations within the northern area of fields 63 and field 64 identified a series of roadside enclosures, which developed over time into a series of south-west to north-east aligned ditches defining plots of land. Many of the land plots in this area contained the remains of timber buildings. Other features investigated included six inhumations, one cremation and a series of pits, hearths, postholes and a further possible corn dryer. The remains were located to the east of a series of metalled road surfaces, which appeared to relate to the former Dere Street. It is possible that a break within the sequence of south-west to north-east aligned ditches may have represented a ditched trackway or driveway, providing access from the metalled road surfaces through the area of occupation and to the east.

Evidence from other excavated roadside settlements provides a number of possibilities regarding internal layout of enclosures and their position in relation to a road. Investigation at Shiptonthorpe in East Yorkshire revealed enclosures of differing sizes on either side of a Roman road, generally running perpendicular to it (Millett, 2006). Four of the plots revealed evidence for an internal enclosure ditch running partway across their widths. Where the enclosures were divided in this way it was found that the area closest to the road was used for habitation and the area beyond was agricultural. This situation was also paralleled at Roman roadside settlement sites at Fenny Stratford and Flagrass (Neal, 1984, Green, 1975 as cited in Smith, 1987). At Baines near Catterick, evidence for enclosures was identified to the east of Dere Street (Wilson, 2002). It comprised linear ditches running both parallel to and perpendicular with the known course of the Roman road. At this site, in contrast with evidence from Healam Bridge, it appeared that the enclosures did not extend right up to the road but were located at a distance from it, beyond a distinct group of buildings (Wilson, 2002).

A total of five post-built timber structures were identified in the northern area. All the buildings were located between the north-east to south-west orientated boundary ditches and were consistently aligned with each other and with the two large timber structures identified near the beck to the south. Structures 5728 and 5730 may represent two phases of construction. The structures were typically built with two rows of six posts, which appeared to be of similar sizes. Three of the buildings measured 12m x 6m, while the other two buildings were slightly smaller at 10m-11m x 4m. The only evidence for domestic occupation within the structures was from a hearth identified internally within the northernmost structure 7252 and quantities of Roman pottery recovered from the excavated sections of the surrounding enclosure ditches. Although few datable finds were recovered from these structures, it is thought that several may have been built during the 2nd century, with one possibly of 4th century construction. The remains of a possible corn dryer and a series of burnt pits were identified within one enclosure and were situated adjacent to Structure 5729.

The post-built structural remains identified during investigations at Healam Bridge compare well with timber structures identified elsewhere, both regionally and nationally, within Roman contexts. They appear to represent simple timber framed rectangular buildings as has been identified at Castleford (Abramson et al 1999) and Bainesse (Wilson 2002) although they may still be interpreted as aisled buildings as has been the case at Ilchester (Leach 1982) and Welton Villa (Mackey 1999). The structures excavated at the above sites provide posthole arrangements and dimensions that are comparable to the Healam Bridge structures.

The function of structure 5729 appears to be agricultural and/or industrial, as has been recognised at Bainesse, which is implied by the location of an adjacent corn dryer and the series of fired pits. Further evidence of this function may be forthcoming following analysis of the soil samples. Although the lack of any floor surfaces limits interpretation, the other excavated structures may have had similar functions. The building form supports this interpretation, although the hearths identified within Structures 7252, 5695 and 6949 may indicate a dual function. There was also no evidence for the partitioning of the internal area, which would be expected if the function of the structures had undergone change (Morris 1979), although any internal walls may have been slight and may not have survived later truncation.

The Healam structures were all located within well defined plots of land divided by ditches and aligned perpendicular to the cobbled road surfaces. The practice of defining building plots by flanking ditches appears quite widespread and is recorded at Ilchester and Welton Villa. This may be indicative of the definition of separate areas for differing activities/functions or could possibly be associated with ownership of the land plots. The location of rectangular structures perpendicular to roads and trackways is also well attested in Yorkshire at Castleford, Bainesse and Shiptonthorpe (Millet, 2006). Their location within areas defined by ditches is typical, as is their situation, fronting a cobbled road, although this is perhaps unsurprising if the structures functioned as working and storage areas.

The excavation of the Roman period road to the immediate west of the occupation area discussed above revealed that it had been upgraded on at least three occasions and widened considerably at the north end of the area. A number of large re-cut ditches were overlain by the earliest of the Roman roads and the eastern part of a Roman period building was found to have been constructed at the western side of the early road, with a later phase of Roman road found to have been built over its demolished remains. Sections of other ditches that ran along the east and west sides of the roads yielded sherds of samian ware dating from the early 2nd century AD, but the evidence from coarse wares and coins found throughout the deposits suggest that the majority of activity associated with the roads took place between the late 3rd and 5th centuries AD with a substantial relaying of the road in the mid 4th century. Some evidence for building material was also recovered from the ditches and may relate to former structures on either side of the Roman road. Prominent wheel ruts and numerous fragments of horseshoes and nails recovered from the road surfaces suggest that the road was used by vehicles capable of transporting people and goods.

A large section of the area was stripped down to the level of the Roman road in order to establish its course. It was thought that a Roman period road corridor was established and later re-used for the route of an 18th century turnpike road and subsequently for the former Great North Road. It is possible that the Roman road may have been a section of Dere Street as it approached the river crossing at Healam Beck.

The archaeological remains identified to the south of Healam Beck represented the rear of the settlement and the edge of fields and paddocks beyond. It comprised an evolving complex of rectilinear enclosures that extended to the east and west of a long-lived ditch boundary. To the west of the ditch was a concentration of pits and postholes that may have belonged to an area of settlement located to the west of the road corridor. Of a total of four human burials identified in the area, a cremation and an inhumation may have been located alongside the putative road. A cremation accompanied by a samian ware bowl was located within the enclosure complex.

Excavations undertaken to the west side of the existing A1(T) at Healam Bridge predominantly exposed features relating to roadside settlement and burial, at the periphery of what was a waterlogged area adjacent to Healam Beck. The only features identified that may pre-date the Roman period were a series of ard marks resulting from ploughing possibly during the Iron Age. Many of the Roman period phases of activity were separated by material deposited during episodes of flooding of the area. One of these flood events, which appeared to have been deposited within the Roman period, sealed a series of human footprints within Trench A.

A series of ditches were identified throughout all excavated areas on the western side of the A1(T). The majority of these features were aligned east-north-east to west-south-west and had an alignment consistent with a series of narrow land divisions identified to the east by the geophysical survey. Two of the features corresponded directly to linear geophysical responses. These enclosures ran perpendicular to the posited course.

of the Roman road and mirrored those encountered north of the beck on the eastern side of the A1(T)

A concentration of at least 22 burials was identified within the excavated area to the west of the A1(T). They comprised nineteen inhumations and three cremations. The inhumation burials were predominantly those of neo-natal infants, although six adults were identified. The remains were interred in various positions and upon different alignments. Three of the adult burials were associated with personal items including bracelets and finger rings, one of them also included the remains of a small dog or puppy. Two of the neonate burials were located beneath a stone surface which could suggest that the graves had been placed within a designated burial area. The prevalence of infant burials is paralleled by a Roman period cemetery excavated at Wattle Sykes (Caffell and Holst, 2010) in which over half of the burials were infants and were buried in ditches, gullies or small pits. Similarly, at Yewden Roman villa a total of 97 infant burials were identified, all of which were found to have died at 40 weeks gestation, around the time of birth (Buckinghamshire County Council)

Evidence for two timber buildings was identified within the area nearest the A1(T). Neither of the structures was fully exposed due to the restricted area of excavation, therefore their overall dimensions were not ascertained. However, it was clear from the size and spacing of the postholes that they supported structures of differing types. The building adjacent to the accepted route of Dere Street (8538) had an internal metalled surface of a high quality suggesting it may have been a domestic building, whereas structure 8541 was evinced by a line of post-holes, a beam-slot and a drip gully. The orientation of the component parts of structure 8541 indicate that it ran parallel with the posited course of Dere Street, which contrasts with the timber structures identified on the eastern side of the road. At the roadside settlement of Hibaldstow in Lincolnshire, the excavated areas indicate a common orientation of buildings perpendicular to the road (Smith, 1987). In comparison, at the roadside settlement of Alfoldean seven definite and ten possible buildings were identified, all of which were located within 10m of Stane Street. Of these buildings those less than 5m in width were orientated perpendicular to the road, whereas those over 7m were parallel with it (Luke and Wells, 2000). This indicates that the situation varies from one roadside settlement site to another and, as with the structures encountered at Healam Bridge, the orientation can vary within a single site.

Further features included a group of waste pits located within the south-eastern area of the stopple pit (Trench A) and the remains of two possible earthen banks which may have defined the edge of the waterlogged area. Further discrete pits were also identified across the site, one of which contained a lower millstone, an undamaged bone needle and a complete Crambeck grey ware bowl.

All the features were sealed by deposits of overburden which may in part have resulted from episodes of flooding but are also likely to include a midden that appeared to have been deposited down slope from the higher ground to the north, once the settlement area to the south had passed out of use. These deposits all included a significant

assemblage of Roman period finds. This was similar to the situation identified on the eastern side of the A1(T), where the earlier series of structures, on the lower ground adjacent to the beck, were sealed by a large midden deposit, presumably resulting from later occupation to the north.

The location of the site at Healam Bridge is notably equidistant from the important Roman centres of Catterick and Aldborough at a point where Dere Street crosses a water course. The recently excavated site at Pool Lane, Green Hammerton (Ambrey, in prep) is similarly situated midway between the Roman fortress at York and the Roman town of Aldborough, standing at a distance of 14km from each, at a point where the principal road between the two centres crosses a stream. Shiptonthorpe in East Yorkshire was located at the point where the Roman road from Brough on Humber to York, the northward continuation of Ermine Street, crosses a stream at a distance of approximately 17km to the south-east of York (Millett, 2006). Millett proposed that the impetus for the creation of this site lay not in a military or local government directive but was more likely to have resulted from a population drift towards a location that was perceived to be advantageous.

Elsewhere in Roman Britain, Alfoldean was one of a number of roadside settlements, including Harding, Dorking and Ewell, which were apparently deliberately established at 12km intervals along the course of Stane Street (Luke and Wells, 2000). This pattern was also paralleled along the Roman road between Chichester and Silchester where the roadside settlements of Neatham and Ipmg were identified at regular intervals of approximately 20km along the route. At the roadside settlement of Alfoldean a number of high status buildings identified towards the north-eastern corner of this site within a large enclosure straddling the road, have been interpreted as a *mansio* (Luke and Wells, 2000).

The establishment of the site at Healam Bridge may have been initiated by a military imperative to consolidate the region but comparison with other similar sites in the area and further afield indicate that its later role may have been as part of a *mansio* system of official travel. The advantageous location of the site at the crossing of Dere Street and a water course could have promoted the subsequent development and expansion of the settlement.

Significance of results

Healam represents the great majority of the excavated evidence and recovered material from the scheme. It lay equidistant between Aldborough and Catterick/Bainesse and is likely to be the largest Roman period site in the area between these two towns. It has the greatest potential for further study of all the excavated remains, both for the quantity of evidence recovered and for a number of specific aspects revealed by the excavation. Summary statements of the potential each category of recovered material (artefacts and palaeoenvironmental material) has for further study and analysis is

presented below. The following discussion draws on this information, where relevant, to express the potential of the site as a whole.

An historical chronology for the Roman conquest and occupation of northern England has been established for some time. A fuller understanding of the chronology of the site at Healam has the potential to amplify or contradict this narrative. Integration of the recovered material into the stratigraphic record will help to establish whether there was pre-Roman occupation on the site, together with its nature and similarly whether occupation continued into the Early Medieval period.

Recovered artefacts have suggested a date for the beginning of activity in the excavated areas (later 1st century). Assessment has suggested that pottery from the early occupation of the site appeared military in character. Clear identification of the features where these early finds derive from and comparison with the other categories of material have potential to identify the extent of the military presence or influence within the excavated areas and help explain the character of the wider settlement as first founded. Pottery assessment has also identified a period of less activity (late 2nd to late 3rd centuries AD), which has not been highlighted in other categories of material. Further analysis of the stratigraphic record and finds assemblages will help to ascertain whether this perceived hiatus is real and may help to establish whether there were other periods of expansion, contraction or shift in the excavated areas or wider settlement.

Undiagnostic local handmade pottery was found alongside imported wares and Romano-British coarsewares, in a substantial number of features across the site. This association has the potential to re-evaluate and refine the dating of the handmade material. Significant quantities of locally-produced coarsewares were found throughout the excavation. Their association with other pottery together with radiocarbon analysis of targeted features, have the potential to refine the chronologies of these fabrics.

As a result of the evaluations which took place from the mid 1990s onwards, a zoned landscape model was proposed for the settlement at Healam and was the basis of its Scheduling as Healam Bridge Roman Fort and Vicus. The proposed model formed in part the basis for the excavation strategy within the Scheduled Monument. The results of excavation give considerable potential for re-evaluating and questioning this model. The model presupposes several conclusions for the date and function of major areas and elements of the site, some of which have been proved incorrect by the excavation, allowing new models to be put forward. The areas in which the original model will be re-evaluated, which also relate to site chronology and function, are discussed in the Updated Project Design.

Given the size and range of the assemblages recovered, there is great potential to examine the economy of the settlement through its lifespan. Was there any evidence for concentrated industry? If not, can the range of craft activities identified by recovered material be used to establish the range and any specialities of craft or agricultural practices. This will lead to a better understanding of Healam's role in its local economy.

and has the potential to better establish what role the settlement had as a production centre (for agriculture, industry or craft activities) or as a marketplace for the local area. The excavated areas are separated from one another by the beck, the A1 (T), or by both. There is therefore potential for evidence of differences in function, economy and relative wealth between the excavated areas to be established. Can the status of the site and of each excavated area be better established through comparison with other sites, within northern England and beyond? Closer study of building types and their evolution over time, of material culture and the level of imported items, has the potential to answer such questions.

The areas to the north of the beck (Fields 63-4), the south of the beck (Fields 60-2) and west of the A1(T) (Field 61a) all contained burials, whether isolated or as parts of discrete burial grounds. At present, at least 35 burials have been identified which affords the opportunity to study Roman burial rites, an area of research previously hampered by the absence of extensive excavation on Roman period cemeteries in the region. Considerable debate has taken place concerning the cultural make up of nucleated settlements in the Roman period and the proportions of incomers from elsewhere in Britain or abroad on various types of site. Study of artefact types such as dress accessories, together with targeted use of scientific techniques such as radiocarbon and DNA analysis, can help establish to what extent those buried were locals and how this changed over time. A relatively high proportion of the inhumations were neonates and further scientific analysis can also answer questions on the subject of infanticide within this population.

The site lies on a major road, equidistant between the towns of Catterick/Bainesse and Aldborough, and may have been the largest settlement lying between the two. It has also been suggested that Healam lay at a crossroads of Dere Steet and a route running between Wensleydale and Malton. The location of roadside settlements midway, or at regular distances between major Roman settlements, has been noted elsewhere in northern England. There is considerable potential to examine the siting of the settlement at Healam with regard to the wider network of Roman roads, forts and towns. Its initial siting may have been influenced by conquest or consolidation of the region, while its later use could have included a role within the *mansio* system of official travel, or other local administrative functions.

While the excavated portion of the entire settlement as known from geophysical survey and fieldwalking is substantial, it represents a relatively small part of the whole site. The previous phases of evaluation, beginning in 1993, investigated a much larger area than the present work and included geophysical survey and trial trenching. They are therefore the principal source of evidence for the majority of the site. The integration and reinterpretation of these results in the light of the present work has considerable potential to inform re-evaluation of the landscape model for Healam and place the main excavated remains within the wider settlement. Similarly, aerial photographic mapping, which has taken place within the vales of Mowbray and York through the National Mapping Programme, has the potential to place the settlement within the

wider area and inform questions relating to agricultural patterns and practices and the potential level of contemporary settlement

Recommendations for further analysis

The primary area where potential for further study lies is the integration of the recovered artefacts and palaeoenvironmental material into the matrix and wider stratigraphic record which has been constructed for the site. A complex sequence of occupation was encountered in each of the excavated areas and significant depths of stratified deposits were excavated to the north of the beck and to the west of the A1(T). The evidence included multiple phases of buildings, waterlogged deposits adjacent to the Roman-period beck, evidence of land reclamation north of the beck, a metalled road within the settlement and over 30 burials. The majority of these remains would, at present, appear to have their origins in the Roman period.

The integration of chronological information, from datable artefacts and radiocarbon analysis, into the site matrix is essential to produce a revised and phased matrix of activity for each site. This is of particular importance for the datable artefacts, which will allow the full chronology and the phases of activity in each area of the site to be established more fully. The pottery and com assemblages recovered from the site will be the primary source of information, but recorded finds of metal and other materials are of considerable importance in this task. The majority of the finds assemblages recovered from the site are substantial, and exhibit relatively wide date ranges which may permit quite refined levels of intra-site phasing to be achieved.

Palaeoenvironmental data, again well represented, will need to be incorporated fully into the stratigraphic records to assist in interpretation of the economy of the sites and evidence of surrounding environment. The palaeobotanical material in particular, may provide an important source of material for the radiocarbon dating of the structural elements of the site, if required.

Further analysis of the finds from the enclosure ditches encountered on all areas of Healam Bridge may enable more detailed phasing of the components of these enclosures by establishing a *terminus post quem* for each ditch and an understanding of how these phases fit into the overall site stratigraphy more accurately. Similarly, closer analysis of the artefacts recovered from the Roman road in conjunction with the stratigraphic record would enable a better understanding of the phases of its construction and the dating of these phases. This would inform conclusions on how the road relates to both structure 9189 and to the enclosures and structures of the adjacent settlement.

Analysis of the finds recovered from the postholes of all of the post-built structures would enable phases of building to be established. Phasing may be aided by radiocarbon dating, where datable artefacts are lacking or thought to be residual. For the larger buildings examination of the various alignments of the postholes would aid

this process and distinction between postholes and post-pads could help inform phasing. Closer analysis of the stratigraphic relationships between the component parts of several structures, including 8538 west of the A1(T) and 5009 north of the beck, would also enable various phases of the buildings' construction to be identified.

Horse skeleton 7613 was encountered beneath the foundation of structure 7951 and appeared to have been intentionally placed in this location, due to the position of one of its front legs over its head. This parallels the deposition of a horse's jaw and teeth between the floor surfaces of structure 8538 on the Healam West site. Further research into such ritual/votive behaviour in settlements is recommended (Petts and Gerrard, 2006, 146) and would clarify whether this was a common practice during the early Roman period.

Further study of the human remains should be carried in order to establish whether more graves, especially cremations or infant burials, can be identified.

Targeted radiocarbon dating of skeletons should be carried out where other dating evidence is unavailable or is contradictory. The limited finds assemblage recovered from the grave fill of skeleton 8351 indicated a provisional date in the 4th century AD, which is much later than that proposed for the neonate burials. Several burials appear late in the sequence or are unrelated to other features. Targeted radiocarbon dating would also examine the chronological relationship of inhumation versus cremation rites, to test the assumption that cremation prevailed in the late Roman military north (Petts and Gerrard 2006, 152).

Analysis of the DNA of the neonate skeletons is a possible avenue of future research (but is not recommended as part of the current programme). This could confirm the gender of the neonates and could clarify whether the group represents a mixture of males and females, indicating incidental death around the time of birth, or a single sex group which would raise questions on the subject of infanticide.

It is recommended that further research into the pathological conditions of skeletons 7303 and 8351 be carried out, as they appeared to have suffered from conditions rarely seen in the archaeological record. Skeleton 7303 was found to be suffering from Trisomy 21 (Down's Syndrome), which is a rare condition in archaeological populations. Only two archaeological cases have been suggested in Britain and both appear to be from the early medieval period, which would make the condition afflicting skeleton 7303 unique in a Roman context.

Late Prehistoric and Roman sites (excluding Healam)

The other evidence for late prehistoric and Roman activity varied in character along the length of the scheme. Part of a substantial Iron Age and Roman period settlement was found adjacent to Humphrey Balk Lane (Fields 23-8) and this is discussed separately below. Elsewhere, a Roman period ditched enclosure at Dishforth (Field 1) may have

been situated close to Dere Street, but no direct evidence for this was available. A cobbled area and series of ditches in Field 20 has no obvious function, but may also have been associated with the Roman road and potentially with the concentrated area of Roman period activity in Fields 23 and 25 to the north.

Archaeological features identified at Baldersby (Fields 33 to 40) appeared to relate to the division of land for agriculture and ditches have been dated provisionally to the Roman period. A long south-east to north-west aligned ditch in Field 35 may have been associated with a parallel linear feature, such as the Roman road, but there was no direct evidence for this.

A large enclosure ditch in Field 58 was perpendicular to the road corridor and may have formed part of a system of Roman period enclosures which fell outside the stripped corridor. Beyond the areas of pre-Roman Iron Age activity near Leeming Airfield (Fields 99 to 105), Roman period activity Humphrey Balk Lane, and Healam Bridge (Fields 60 to 64) (which are all reported on separately), the evidence for agricultural activity was relatively sparse, with the exception of the Roman period ditches at Baldersby (Fields 35 and 36).

The ditches investigated within Fields 99, 101 and 103 at Leeming Airfield, when considered in conjunction with the results of the earlier geophysical survey, appear to represent trackways or droveways defining a field system, probably some distance from any settlement. The features identified further to the north-west and within fields 104 and 105 contained no diagnostic material and appeared to have a different character to those to the south-east, although it is possible that they were associated with this activity.

Significance of results

The Roman period enclosure in Field 1 provides opportunity for examining remains that may be representative of settlement that was proximate to Dere Street but apparently had no connection to a military function. Analysis of the spatial relationships between the putative Roman and later field boundaries at Humphrey Balk Lane will establish a basic sequence of development.

Broad comparisons can be made between the remains identified within Fields 99 to 105 and those investigated at Site CFAT and Site Q during the upgrading of the A1 to motorway status between Darrington and Dishforth (Brown et al 2007). At both sites the remains of trackways were identified, both during excavations and from aerial photographs, which sub-divided enclosures and field system that were maintained from the Iron Age and remained in use through the Roman period.

Recommendations for further analysis

The stratigraphic sequences for this category of sites are fully understood and no further work is required on their matrices. The results of the excavations should be combined with any other analyses which are undertaken, the results of any relevant fieldwork undertaken as part of the evaluation phase of the project, with limited additional documentary research, with a view to producing an illustrated synthetic report on these elements of the scheme to publication standards. Attempts should be made to gain a more accurate date for the prehistoric/early Roman handmade pottery from Leeming Airfield (Fields 99 to 103), in order to refine the site matrix and chronology.

Humphrey Balk Lane (Fields 23, 25 and 28)

Field 23 contained the remains of a ditched trackway, two sub-angular and two curvilinear enclosures, a series of south-west to north-east aligned ditches, a cobbled surface and numerous discrete and linear features. Field 25 contained a continuation of the enclosure complex from the south and an extensive series of boundary ditches, occasional insubstantial gullies and numerous pits. Field 28 contained an oven and a length of enclosure ditch. Many of the features investigated within Fields 23, 25 and 28 were intercutting and had been re-defined at least once indicating multi-phase occupation of the site possibly from the pre-Roman Iron Age and through the Roman period.

The earliest datable material recovered was sherds of Bronze Age pottery contained within a pit located within Field 25 indicating some limited use of the site during this period. The majority of the features yielded material which ranged in date from the pre-Roman Iron Age/early Roman period to the 4th/5th century AD.

The character of the archaeological finds and features suggest that they were located at the periphery of settlement, although the precise location of any settlement core remains unknown. It could lie either to the east or west of the excavated area. The earlier geophysical survey undertaken to the east of the road corridor (NAA 2011a) displayed a degree of correlation with the larger ditches that were exposed, however, it did not identify the slighter enclosures suggesting any subtle settlement evidence may not have been recorded. It is also possible that the focus of the settlement lies to the west of the excavated area, alongside the accepted line of Dere Street, which is assumed to run beneath the existing A1. As such, many of the ditches exposed within Fields 23 and 25 may have defined the rear of settlement plots.

Comparisons can be drawn between the remains investigated within at Humphrey Balk Lane to Site Q investigated during the upgrading of the A1 to motorway status between Darrington and Dishforth (Brown et al 2007). At this site an Iron Age 'D'-shaped enclosure was identified adjacent to a Roman period rectangular enclosure which both flanked a trackway that was maintained from the Iron Age and through the Roman period. Further sites where a continuity of settlement is evident from the Iron Age and

through the Roman period are Bayram Hill (NAA 1994a) and Dalton Parlours (Wrathmell and Nicholson 1990, 279) In both these cases, the evidence suggests piecemeal enclosure of an increasing area through time, which may also be definable within the features investigated within Fields 23 to 28 Evidence of this nature could significantly increase our understanding of how rural landscape and society changed in the region, not only through the Roman period, but also during the transition from the Iron Age It may also address current research priorities posed by the North-East Regional Research Framework for the Historic Environment (Petts and Gerrard 2006) questioning whether recognised changes in the archaeological material date to before, or after the advent of the Roman military

Significance of results

Further analysis of the stratigraphic record and synthesis of specialist information should be directed towards establishing a more comprehensive interpretation of the site record This may allow the identification of distinct phases within the development of the settlement Further analysis of the dateable aspect of the finds assemblage may allow the definition of a pre-Roman Iron Age phase to the site, possibly including at least one of the sub-circular enclosures (1918) within Field 23, from the later Roman activity The site is significant as it represents the largest area of Roman settlement (other than Healam Bridge) encountered on the scheme but its form and purpose are still imperfectly understood

Recommendations for further analysis

Following further analysis as specified above, the results of the excavations should be combined with any other analyses which have been undertaken The results of any relevant fieldwork undertaken as part of the evaluation phase of the project, with limited additional documentary research should be incorporated, with a view to producing an illustrated synthetic report on these elements of the scheme to publication standards A definitive series of phase plans will be drawn up to illustrate the main components of the archaeological remains and their stratigraphic relationships

Medieval sites

The excavations and monitoring have recorded abundant evidence for medieval agricultural activity comprising ridge and furrow and some associated field boundaries It is likely that a number of the post-medieval field boundaries which were identified had medieval antecedents, and many of these were aligned perpendicular to the A1 corridor This evidence therefore has some potential to inform a wider assessment of landscape development in the area

While excavation on the line of the Great North Road/Roman Dere Street at Healam and Leases Lane identified surfaces that could be identified as belonging to both Roman and post-medieval routeways on that alignment, no apparent medieval surface or horizon could be identified at these locations. Whilst it is possible that such evidence could have been removed by construction of the turnpike road, this negative evidence may support the suggestion this element of the Roman road network was not subsequently maintained during the medieval period. It seems that while some diversions were probably made through important towns (Vyner *et al* 2011, 232), parts of the route were retained as significant reference points for division of the land, if not as major routeways also.

A major concentration of industrial waste was recovered from ditch and gully features identified west of Leeming (Fields 106 and 107). Specialist assessment of this material identified a 'remarkable' assemblage of both iron smelting and smithing slags along with numerous fragments of furnace indicating the activity was being undertaken in the immediate vicinity (Volume 2, Appendix P). The assemblage also appeared quite varied suggesting more than one type of furnace may have been used. This could reflect several episodes of smelting over time or perhaps innovation and the development of the industry. An assemblage of medieval pottery was recovered from many of the features although this was almost always recovered from the uppermost level of the features and may have been intrusive from later ploughing.

Possible medieval settlement related features were also identified west of Leeming (Field 108) to the north-west of the area containing the concentration of industrial waste. Evidence was recorded of at least two possible enclosures together with numerous pits and short lengths of gully. Unfortunately, the features were too disparate and insubstantial to determine whether there were remains of structures or plots present. The fills of many of these features contained large unabraded fragments of medieval pottery and an assemblage of domestic food and processing residues which strongly suggest domestic occupation of the site or the immediate vicinity. Many of the features within this area were overlain by elements of a later medieval strip field system. The enclosures were located within the southern area of the road corridor and appeared to be situated within a field that had been set aside from the surrounding strip field system. The enclosures may have represented stock control features.

Many of the field boundary ditches appeared to have their origin within the medieval period and contained cultivation remains. Some had been maintained into the post-medieval and modern periods which indicated a piecemeal approach to amalgamation of the narrow strip fields into larger open areas. Parts of this field system were still evident within the surrounding landscape and had been fossilised in the existing field boundaries.

Significance of results

The excavations appear to have largely confirmed that the apparent absence of medieval settlement along the line of the A1(T) between Leeming and Dishforth airfield is real and not just a result of later settlement and landscape consolidation. The only potential settlement evidence that was identified was located in an area where the new road corridor diverted away (west) from the line of the earlier Great North Road. The settlement evidence that has been identified lies west of Leeming village and is far enough distant not to have been a part of that settlement. The possible settlement evidence is significant because it clearly predates a later medieval arrangement of strip fields and was therefore probably relatively short-lived. It has the potential to shed light on the development of settlement and field systems within this immediate area or parish. The settlement activity may also be related to the production of the industrial waste deposited a little way to the south of it. The assemblage of both iron smelting and smithing slags, and furnace fragments that have been recovered is a 'remarkable' assemblage with considerable potential for further analysis.

Recommendations for further analysis

It will be possible to establish a more comprehensive interpretation of the site record relating to the possible medieval settlement remains through further analysis of the stratigraphic record and synthesis of the associated specialist information. This may allow evidence for features associated with occupation activity to be separated from the agricultural remains and will enable definite phasing to be established for the development of the settlement and the subsequent strip field system. Further analysis of the medieval pottery assemblage and the biological remains is also recommended.

Further analysis of the industrial waste in conjunction with a detailed stratigraphic interpretation of the features with Field 107 may allow an understanding of the chronological development of the industry and the industrial processes being undertaken as represented by the industrial waste and furnace fragments. A series of C14 dates should also be obtained in order to verify the date of the material and the duration of the activity that it represents.

Post-medieval sites

A range of field system elements associated with the post-medieval agricultural landscape, were recorded along the length of the scheme. These included ditched field boundaries and trackways, and represent part of the system of Inclosure which took place in the 18th and 19th centuries. The remains of the Great North Road (GNR) were examined immediately to the north of Healam Bridge and at Leases Lane. The original construction method and subsequent alterations were examined in detail, which lay over Roman period road surfaces at both locations.

Healam Bridge, which carried the Great North Road across the Beck, is generally considered to have been constructed in the late 18th century. However, recording of the bridge identified clear evidence that the bridge had been widened and incorporates several phases of masonry. A number of buildings were also recorded prior to their demolition, including farmhouses and coaching inns. These lay beside the GNR and were built as a result of its renewed importance as a turnpike road from the mid 18th century.

Significance of results

The results of excavation and building recording have the potential to gain a better understanding of the development of how the GNR as a turnpike road, influenced transport and settlement along its length from the 18th century to the present. The inns were built to service the stagecoach and other travellers, while the improved road attracted settlement immediately beside it, probably stimulating further agricultural expansion in the area.

Recommendations for further analysis

The stratigraphic sequences for these category of sites are fully understood and no further work is required on the matrices for these sites. The results of the excavations and building recording should be combined with documentary research, with a view to producing an illustrated synthetic report on these elements of the scheme to publication standards.

5.0 SUMMARY SPECIALIST ASSESSMENT REPORTS (VOL. 2)

The full specialist's assessment reports are presented in volume two of this report. The assessments have been undertaken by material, including flint (Appendix A), early prehistoric pottery (Appendix B), The hand-made pottery (Appendices C and D), Romano-British pottery (Appendix E), Samian pottery (Appendix F), Medieval and later pottery (Appendix G), Ceramic/stone building materials and daub/fired clay (Appendix H), Vessel glass (Appendix I) Beads and glass bracelets (Appendix J), Conservation (Appendix K), Coins (Appendix L) Metalwork and recorded finds of other materials (Appendix M), Querns and other worked stone (Appendix N) Stone axe, stone discs, hones and whetstones (Appendix O), The iron smelting and smithing debris (Appendix P), Human remains (Appendix Q), Biological remains (Appendices R, S and T), Waterlogged wood (Appendix U), and Clay tobacco pipe and modern glass (Appendix V) Summaries, statements of significance and recommendations for further analysis have been extracted from these reports and are presented below

Dendrochronological dating of timber samples retrieved from waterlogged deposits at Healam Bridge was also attempted. Despite there being sufficient tree-ring information present on the samples obtained, and the fact that some of the samples comprised examples of a genus (*Quercus*) which would normally be suitable for such analyses, no matches to the established tree-ring sequence for the UK were obtained. The reasons behind this are somewhat obscure, but not without precedent for such samples obtained in the north of England. The results of this work are presented in this section, but do not appear in volume 2 since there seems to be no point in pursuing this line of analysis any further.

Geophysical survey was a key component in both the identification of the site at Healam Bridge, and as part of the mitigation strategy employed in the scheme as a whole. Whilst the latter surveys were undertaken in relatively recent times, with relatively recent data processing and presentation facilities being available, this is not the case with the most important survey undertaken in the area, which was undertaken in the early 1990s and processed using hard- and software now long out dated. The data resulting from the surveys undertaken at Healam Bridge still exists, and is capable of being reprocessed, and recommendations to that effect are also presented below.

Flint (Appendix A)

Summary

A total of 85 lithics were hand-collected during archaeological excavation for the A1 Dishforth to Barton project. Processing of the samples from the excavations recovered a further 187 lithics. A large proportion of the material recovered from the samples was small fragments of natural gravel (which would pass through a 10mm mesh). The basic composition of the assemblage is set out in Appendix A. All material was inspected by eye and with supplementary use of a hand-lens (x20). Knapped material (including that

from samples) was logged on a Microsoft Excel spreadsheet. Where material was noted to be natural a basic count by context was maintained on a separate spreadsheet.

Significance of results

The principal raw material present is flint. This is usually a light, translucent brown in colour with reduced cream coloured cortex where still present. There is variability with toffee coloured pieces and red-brown items. The flint is consistent with regionally derived material from glacial sources (e.g. boulder clays) or the beaches of the Yorkshire coast.

Black chert was noted on four occasions and three of these within Field 63 with possible Mesolithic associations. The most likely source of this material are carboniferous deposits such as those available in the Yorkshire Dales (Young 1984).

The assemblage as a whole is spread thinly over a large spatial area and in many cases is unstratified (e.g. Fields 4, 16 & 108) or is largely residual (e.g. Fields 61a, 62, 63, & 64). In these cases the lithics serve to indicate a prehistoric presence within the landscape which may otherwise have gone undetected. The Neolithic leaf-shaped arrowhead from Field 16 might represent a 'missed-shot'.

Those parts of the assemblage that have most value are the discrete collections from closed contexts such as the pits in Fields 1 and 21 where the assemblages appear to represent a distinct activity (probably of early Neolithic date) in each case.

Recommendations for analysis

The collection has limited potential for further analysis given the limitations discussed above.

A number of items could be illustrated but those that would be selected are either residual or unstratified. The following is a short list for potential illustration -

Field 16[815]	leaf-shaped arrowhead
Field 19[844]	denticulate
Field 61a [8255]	thumbnail scraper
Field 64[6833]	simple knife

This report should be made available to the relevant Historic Environment Record in order that the more significant stray finds may be logged to inform future research and decision making.

The natural material (separately bagged) should be discarded to streamline the archive
The remainder should be permanently curated to appropriate standards

Early Prehistoric Pottery (Appendix B)

Summary

The two small assemblages were submitted for assessment. These appear to contain pottery of three different periods, the Neolithic, Early Bronze Age and Iron Age or early Romano-British period. The assessment was undertaken in order to obtain preliminary information on the chronology and nature of the pottery assemblages, the range of pottery fabrics present, and to provide information on the extent and nature of any necessary further examination of the material. In some instances identification has been tentative and further information on context and associated finds may allow more certainty regarding chronology. No carbonised accretions have been noted on any of the sherds, and lipid analysis is probably not worthwhile in the light of what is known at present about these ceramics.

Significance of results

Excavations retrieved five small assemblages of pottery of Neolithic to Early Bronze Age date which are important in tending to confirm the impression that the Swale-Ure interfluvium saw only limited prehistoric activity beyond the areas of the monument complexes on the River Ure (Aldbrough/Thornborough) and the Swale (Scorton/Catterick). Slightly larger assemblages of pottery of later pre-Roman Iron Age or earlier Romano-British period were present. The small quantity of this material, however, underlines its relative paucity by comparison with sites in the Vale of Mowbray and Tees Valley further to the east. Whether this paucity is a reflection of a lack of interest in ceramics, as appears to be the case in Pennine areas of West and North Yorkshire, or a disinclination to settle along a route corridor which later became Dere Street is presently unclear and is a question work exploring.

Recommendations for analysis

Within the regional context further examination and reporting is recommended, although it is not envisaged that illustration would be required for the early assemblage, and only limited illustration for the later assemblage is required. It is not considered that lipid analysis would be worthwhile in either case, and no carbonised accretions are thought to be present. Fabric analysis may similarly not be appropriate.

To contribute to the further understanding of the site this pottery should be further examined and analysed leading to production of a short report on each assemblage containing

- The detail of pottery fabrics identified
- Summary catalogue of pottery present

- Note of any contribution from the ceramic assemblage to the interpretation of site status and function
- Identification of sherds for potential illustration
- Brief review of the pottery in the regional context
- Note of any contribution from the ceramic assemblage to the interpretation of site status and function

Hand-made Pottery (Appendices C and D)

Summary

The assemblage consisted of a total of 380 sherds of pottery weighing 5457 grams and represented a maximum of 336 vessels from the bulk of the scheme excluding Fields 23 and 25 was submitted for assessment. Estimated vessel equivalent (EVE) and rim diameter figures will be collected as part of the main phase on the analysis. The hand-made pottery assemblage from Fields 23 and 25 comprised a total of 143 sherds weighing 1592 grams and represented a maximum of 129 vessels. The details are presented in tables produced for the analysis stage and archive only.

The problems surrounding the identification and classification of later prehistoric and Roman period hand-made wares in northern and eastern Yorkshire have been discussed extensively elsewhere and for the purpose of this report the categories used by Didsbury (2004) and Rigby (2004) have been employed, with modifying terms used to more closely define the character of the pottery. The report has also been informed by the provisional results from ongoing work on somewhat larger groups of material from East Yorkshire.

Significance of results

The assemblages of hand-made pottery recovered from the excavations on the line of the A1 are of considerable interest in that in most cases they represent the continuation into the Roman period of traditions of pottery manufacture which date back into the early and Middle Iron Age periods. In general terms the fabrics (with the exception of the small quantity provisionally identified as of early prehistoric date) conform to the patterns seen in more widely in East and North Yorkshire and the quantity of pottery contrasts sharply with the aceramic pattern typical of West and South Yorkshire. At the level of individual vessels and sherds the individual assemblages show the normal range of variation and some significant differences from types found on sites to the east and south-east. This is to be expected given the accepted model of local manufacture using locally procured raw materials. The co-occurrence of datable material of Roman and Romano-British type alongside the hand-made wares offers an opportunity to further investigate the relationship between traditional methods and structures of production and the consumption and use of wheel-thrown pottery, an issue which touches on several debates within later prehistoric and Roman period archaeology. It is

expected that a fuller analysis of the assemblages will contribute to discussions in this area although the size and character of the assemblages makes it unlikely that definitive conclusions will be drawn until the results of excavations on a number of sites can be compared and contrasted

The assemblage from Fields 23 and 25 is too small to warrant an extensive programme of analytical (petrographic and chemical) analysis but such programmes have been proposed for larger assemblages from the region and once completed the results will have implications for smaller groups such as the one described here

Recommendations for analysis

It is recommended that a full report on the pottery assemblages for the bulk of the scheme be prepared to publication standards This will consist of an enhanced fabric and form type series which will include more detailed definitions of the range of fabrics present in the assemblage, a closer definition of vessel types (with recommendations for illustrations of key vessels) and a more detailed consideration of the associations with other groups of finds The latter will, it is hoped, refine the chronology of individual vessel types and contribute to a broader appreciation of the place of hand-made pottery in late prehistoric and Roman period society

The pottery assemblage from Humphrey Balk Lane, however, was too small to allow any definite conclusions to be drawn although it would seem to suggest activity in the area in the pre-Conquest period and perhaps, if the date range attributed to the lid-seated rim sherd from field 23 is correct, in the Middle Iron Age A fuller appreciation of the significance of this assemblage will probably only be possible once larger assemblages from the same area are available for study

Romano-British Pottery (Appendix E)

Summary

There were 10,864 sherds of Romano-British coarse pottery (328,658g) The Romano-British pottery came overwhelmingly from the site at Healam Bridge with another concentration at Humphrey Balk Lane The pottery was examined in context groups and catalogued according to the Guidelines of the Study Group for Romano-British Pottery for basic archiving (Darling 2004) The fabrics were recorded in broad groups and sources are suggested where appropriate Reference was made to the National Fabric Collection where appropriate (Tomber and Dore 1998) Details of fabric variations were recorded where appropriate Forms were described

Significance of results

The pottery assemblage includes a small Flavian element, and given that the number of sherds is very small it is difficult to be sure that the absence of later material is anything other than chance

The samian suggests occupation in earnest began in the Trajanic period and the coarse pottery dating would support this suggestion although the type concerned continued into the Hadrianic period so a Hadrianic start date would seem possible on the basis of the coarse pottery alone

A large amount of material datable to the Hadrianic-early Antonine period was identified with very close ties with York pottery types. Such pottery is rare outside of York and its presence here adds considerably to our understanding of the supply of pottery to sites in this area. Rather less pottery was dated to the late Antonine period and 3rd century though at some point in the late 3rd-4th century the settlement seems to have revived.

In terms of pottery studies, the assemblage is significant at several levels but the two most remarkable aspects are the presence of quantities of material comparable to Ebor ware of the Hadrianic-early Antonine period in fabric, form and decorative technique and of a type found in the Rhineland and the very late group of pottery indicating settlement in the late 4th or early 5th century. Both these aspects of the assemblage bring new information and shed light on our understanding of Roman settlement in this region.

Recommendations for analysis

Reference is given to the Research Framework for the Study of Roman Pottery (Willis 1997) in recommendations which have been identified as national priorities.

- Further study of ware groups GRB1 and GRB6 and OAB1 with some petrographic analysis Willis 1994 section 3.4
- Referral of unusual amphora sherds and amphora stamps to D Williams
- Referral of mortaria to Kay Hartley Willis 1997 section 8.2
- Referral of sherds with graffiti to Roger Tomlin
- Study of all pottery in stratigraphic groups and phases to establish chronology Willis 1997 section 4.4.2
- Incorporation of existing reports on field 23 and 25 into analysis report
- Analysis of pottery from earlier excavations at Healam, Bainesse and Catterick and incorporation into report
- Study of variations in character of pottery from different parts of the excavated areas, different types of structures and zones and within different structures and enclosures Willis 1997 sections 4.2.2, 4.3.3
- Study of changes in status and function over time using stratified group Willis 1997 section 5.6
- Study of changes in patterns of trade and exchange through time Willis 1997 sections 4.3.4, 5.2, 5.5 and 13
- Identification of ethnic characteristics of pottery

- Study of regional setting, particularly links with known pottery industries and ceramic trade patterns at Catterick, York and other forts in the region Willis 1997 sections 9 2 and 13
- Consideration of taphonomy of pottery groups
- Study of conditions such as re-use, burning, sooting and repair of pottery in relation to the features on the site and in relation to the vessel or ware type
- Study of date and characteristics of burials and associated cemetery features Wilhs 1997, sections 4 6, 5 10, 5
- Integration of results from study of coarse pottery with that from samian and other artefact studies Willis 1997 sections 5 8 and 11 3
- Study of latest phase of occupation with reference to latest evidence for dating the latest phases of Roman occupation in the North (Bidwell and Croom 2010) Willis 1997 section 5 12
- Study of characteristics of vicus pottery compared with groups from other vici and forts Willis 1997 section 4

Samian (Appendix F)

Summary

In total the various excavations alongside the A1 route produced some 1632 sherds of samian for a rim EVE figure of 31 865 and a total weight of just over 21kg. The samian assemblages came from a range of occupation contexts - pits, ditches, structures and spreads with a single vessel from a burial context. The greatest majority came from spread layers the significance of which is as yet unclear.

All of the samian vessels were recorded following the methodology and codes used at Museum of London Archaeology (Symonds 1999). The fabric of each sherd was examined, after taking a small fresh break, under a x 20 binocular microscope. Each entry consists of a context number, fabric, form and decoration identification, condition, sherd count, EVEs, rim diameter and weight, notes and a date range. The presence of wear, repair and graffiti was also systematically recorded.

Significance of results

This assemblage forms a large and relatively fresh assemblage with an emphasis on the 2nd century AD, particularly the Hadrianic and Antonine periods. Very little late samian material could be identified - a feature that recalls the relative lack of late Antonine pottery and 3rd century material noticed in the rest of the Roman Pottery assemblage (Leary, this volume).

The most striking feature of this group is the very high percentage of decorated vessels, almost half of the sherd count is made up of mould-decorated vessels. Such proportions of decorated vessels are not unusual for extra-mural military sites (Willis 2005, table 35) but this group has nevertheless amongst the highest. This fact alone warrants further work and publication.

Recommendations for analysis

A full analysis of the decorated samian vessels in the assemblage would achieve several aims. Firstly a better chronological definition by on the one hand better determining the dating of the South Gaulish material and the beginning of occupation on site and on the other hand assess the relative proportion of Trajanic, Hadrianic and Antonine decorated pieces in the Central Gaulish assemblage. Refining the end date of the Central Gaulish group would be useful since there are few late forms and potters and the bulk of it needn't be later than AD 170. Once this analysis is carried out, it would be interesting to compare the potters present in this group with other contemporary assemblages such as the ones from Castleford, Catterick, Carlisle and York. Secondly, a better understanding of the number of decorated vessels represented will help understanding various taphonomic processes and the site's history. Several vessels were clearly dispersed across the site as some decorated vessels occur in more than one context.

Medieval and Later Pottery (Appendix G)

Summary

The medieval and later pottery submitted for assessment comprised 431 sherds of pottery weighing 4739 grams and represented a maximum of 401 vessels. Very few sherds of Anglo-Saxon pottery were positively identified in the assemblage but contexts 5990 (Field 63) and 6883 (Field 64) both produced fine black sherds bearing multiple concentric ring stamps. The pottery from the later medieval period was identified with reference to the standard type series for the area and the wider region. However, although the medieval pottery industries of West and East Yorkshire have been well studied and documented, the same does not apply to North Yorkshire or the Tees Valley. The sherds have been classified as far as possible following Vince & Young (2007) in order to maintain consistency between this report and the volume covering the excavations undertaken in advance of the improvements of the Darrington to Dishforth section of the A1.

In addition to the medieval component, the assemblage also included a substantial later element. This included post-medieval (c 1450 – c 1720), early modern (c 1720–c 1840) and recent pottery (c 1840 – c 1950). The range of wares is set out in the data table by field and context. The identification and classification of the wares was based, for the earlier part of the period on local type series while the later types, specifically those produced in pottery factories from the 18th century onwards have been identified with reference primarily to the collector's literature.

Significance of results

The post-Roman pottery assemblage from the fields investigated in advance of the road improvements consisted of a highly diverse assemblage of material dating from the Saxon period onwards. The quantities from the different fields vary considerably (and represent a variety of formation processes) and while some groups are probably a

record of attempts to improve the land for agriculture through the addition of domestic waste as fertiliser, others would appear to indicate more complex processes. Further work is required to elucidate these patterns and processes and this will entail the preparation of a full report on the assemblages.

Recommendations for analysis

A full report on the pottery will concentrate on the larger assemblages, those from Fields 61A, 62, 63, 64, 70, 72, 73, 107, 108, 112 and 112/113. The full report will include a complete type series and discussion of recent developments in the study of earlier medieval (mid 11th to 13th century) pottery together with closer descriptions and definitions of the local Sandy and Gritty wares in line with the results presented by Vince and Young (2007). The post-medieval, early modern and recent wares will need little further work but a closer consideration of the contexts from which they were recovered and the associations with earlier material may lead to more sophisticated interpretations of these contexts and their significance.

Ceramic, Stone and Associated Building Materials (Appendix H)

Summary

A moderate assemblage of ceramic, stone and associated building materials and daub/fired clay, was recovered from the A1 Dishforth to Barton Improvement Scheme. The assemblage included significant quantities recovered from the processing of the environmental samples.

The majority of the ceramic building material was of Romano-British date. The remainder comprised medieval and post-medieval brick and roof tile and modern land drain. Although evidence for numerous buildings was apparent during the investigation, the size of the Romano-British assemblage does not substantiate that a building/s had a tiled roof/s. It is more likely to represent re-used material within aspects of small 'free-standing' structures such as hearths, ovens, kilns or similar. The assemblage may also have been used for consolidation, metalling or post-packing.

All of the stone building material was considered to be of Romano-British date. Two forms were identified, roof tile[?] and a tessera. As with the ceramic building material, the quantity of the stone tiles does not suggest a building/s with a tiled roof/s.

Small assemblages of daub/fired clay and associated building material, plaster[?] mortar and concrete[?] were also submitted for assessment. No decorated material was present. The mortar[?] could have been incorporated with elements of smaller structures as well as the more substantial structural aspects of buildings, such as foundations. The concrete[?] may be attributed to the Romano-British period but this is very tentatively suggested as a modern date is not discounted.

Several miscellaneous material types were also noted within the assemblage: burnt stone, pottery, stone objects, unmodified stones and residue[?] 'Environmental' material.

was also noted fused ash/sand, heat affected soil and ashy trample (J Carrott pers comm) The miscellaneous material is not discussed within this assessment, however, they are quantified within Appendix H5 (Volume 2)

Significance of results

The archaeological potential of Romano-British ceramic building materials and daub/fired clay is limited due to the quantity and fragmentary nature of the assemblage. Although evidence for numerous buildings was apparent during the investigation, the size of the Romano-British assemblage does not substantiate primary use for a building/s with a tiled roof/s or floor/s and it is more likely to represent re-used materials.

Little information can be gleaned from the assemblage of ceramic building material dated from the medieval period through to modern day. It contributes little in terms of additional information regarding the manufacture and use of ceramic building material within the area during these periods. This assemblage is considered to be the result of casual deposition and agricultural activity in the area.

Overall, the assemblage of ceramic and stone building material was of good quality. Its presence adds emphasis to the hypothesis that these materials were a valued, re-useable commodity. The assemblage may have originated from an affluent/ high status building, within the locale, beyond the limits of the investigation. This would be supported by the variety of forms present within the ceramic assemblage. The paucity of diagnostic features and abraded condition of the assemblage of daub/fired clay, leads to an inconclusive interpretation.

The identification of all of the associated building materials should be treated with extreme caution, therefore the interpretation of the plaster?² mortar?² and concrete?² in relation to the archaeological evidence may be ambiguous. The larger pieces of plaster with a whitewash skim from Field 63, were probably wall-plaster however, the small quantity does not suggest substantial buildings with plastered, internal walls (though further material may have been lost due to later activity). The remainder of the assemblage may have been used within floors, walls or possibly rendering. The mortar?² may have been incorporated within elements of smaller structures as well as the more substantial structural aspects of buildings, as evident within Fields 61a and 63. The concrete?² may be attributed to the Romano-British period but this is very tentatively suggested as a modern date is not discounted.

Recommendations for analysis

Despite the limited archaeological potential of the ceramic and stone building material, they would be worthy of publication within the appropriate journal. Further work should include:

- A full catalogue to include any further CBM and SBM assemblages recovered during the scheme.

- Refined dating and phasing of the assemblages by comparative analysis with any associated pottery
- Fabric analysis (x20 binocular microscope) for comparison within the assemblage to ascertain the number of individual bricks/tiles This may potentially establish the source of the material
- Petrological analysis of the SBM to confirm identification and ascertain source
- Accompanying illustrations

Pending the significance and dating of the contexts, a selective discard policy, as per specialist's recommendations, should be considered. The material should be deposited within the appropriate museum unless the landowner requests its return.

No further work is recommended on the ceramic building material from later periods. It is not considered worthy of retention.

The daub/fired clay should be assessed in conjunction with any similar material recovered from the excavations, by the appropriate specialist. This may potentially ascertain original use and conclude if the material is structural. The plaster/? mortar? and cement? require further research to refine/confirm identification and dating. This should be undertaken by the appropriate specialist/s.

Vessel glass (Appendix I)

Summary

There are nearly 100 bags of glass fragments, all from Roman vessels. Some of the fragments are quite substantial, and can therefore be assigned with some certainty to specific forms. They cover the period from the 1st to perhaps the early 3rd centuries, and include a number of the forms which were popular at this time, providing a good cross-section of the vessels used in Roman Britain, in a remarkably well-preserved condition.

The commonest form is the blue-green bottle, both prismatic and cylindrical, and 35 bags from AIDB09 and 5 bags from AIDB10. These were used as containers to transport a variety of liquids – there are several large fragments amongst this assemblage.

A good variety of tableware is represented, including 13 bags with fragments of drinking cups from AIDB09, and 1 from AIDB10. These include large fragments of popular forms such as a 'Hofheim' cup, a 'pillar-moulded bowl', and several colourless vessels of later 2nd – early 3rd century type. Some fragments appear to have been facet-cut, representing pieces of high quality.

Beads and Glass Bracelets (Appendix J)

Summary

Nine glass beads, four glass bracelet fragments (plus one additional fragment currently with the glass vessel assemblage) and one amber bead were found during excavation as part of the A1 upgrade scheme. All are of Roman period manufacture with the exception of the bead from 5990 which dates to between the 5th and 6th century AD, however some of the forms had a long period of use continuing into the 5th and 6th century. All the items are well preserved and in good condition.

Significance of results and recommendations for analysis

Further work on the bead and bracelet assemblage should be undertaken in conjunction with dress accessories of other materials, largely copper alloy but also iron and worked bone. This suite of finds represents a civilian element of the finds assemblage. The need for more research into Roman artefacts of the region has been highlighted as a key research theme in the Regional Research Framework (Petts and Gerrard 2006, 150). The presence of material of 5th/6th century date and finds that continued in use into this period has considerable potential when examining the Roman-early medieval transition and, again, this is one of the key research agenda themes (Petts and Gerrard 2006, 153).

A full report and catalogue is required for all the items presented in Appendix Table J1 and some warrant illustration. A single bangle fragment has been identified amongst the vessel glass and needs to be incorporated within this report.

Conservation Assessment Report (Appendix K)

Summary

A total of 2303 objects from A1DB09 and 10 were received for conservation assessment and X-radiography. The majority of the iron objects were moderately or highly corroded when examined, and most were in a stable condition, with just a few pieces showing some surface cracking or spalling (eg 09 SF425). Coins, copper alloy and lead objects were also mainly moderately to highly corroded and found to be stable.

The dry, non-metal artefacts (bone, glass) were also stable, with many pieces in good condition. Some organic material was received packed wet (leather and wood). This was also found to be in good condition when examined.

Significance of results and recommendations for analysis

The 2303 objects assessed included 663 copper alloy, 2 tin, and silver objects and included coins, 1247 iron objects and 393 objects of other materials (lead, glass, bone, jet/shale, leather and wood)

Numerous objects would benefit from investigative conservation. Selection was made without regard to the archaeological importance or context of the object, and refers to a recommendation for elucidation of the object's form and/or surface detail by means of selective removal of obscuring soil and loose corrosion products, where X-radiography alone has proved insufficient.

Eight pieces of wood were received for microscopic wood species identification. Samples were cut and slide specimens prepared for identification by light microscopy. Where a species identification was made, this has been added to the database.

The pieces of waterlogged leather and wood and the solitary jet/shale object (RF319) require conservation before they can be deposited with the site archive.

The material was received well packed for medium to long term storage. The metalwork should continue to be stored in airtight containers at a stable temperature and below 20% RH for ironwork and below 40% RH for copper alloys, to inhibit further corrosion. The RH should be controlled by active silica gel, which is regularly monitored and regenerated as necessary.

Non-metal objects may be stored in conditions of ambient temperature and relative humidity, avoiding extremes of both.

The waterlogged material should remain packed wet and stored in cold, dark conditions until conserved or recorded and discarded.

Coins (Appendix L)

Summary

Some 398 coins recovered either by excavation or by metal-detection during site work and submitted for assessment. This is a clearly a very considerable and potentially-valuable assemblage, fully deserving further investigation. The manner in which the data has been gathered - through excavation and the controlled use of metal-detectors - has already been proven valuable (see, for example, the Catterick Metal-Detecting Project, YAJ 79, 2007, 65-153). The sheer size of the assemblage increases its value, in that it can more readily be compared with other coin lists, locally, regionally and nationally.

Significance of results and recommendations for analysis

It is recommended that a full analysis of the coins assemblage is undertaken in order to produce a publication report. The full report on the coins will aim to analyse the finds.

in comparison to other local finds (from Healam Bridge, etc), to compare the finds to those from previous A1 road-widening phases (especially the immediately preceding stage between Walshforth and Dishforth but also those further south), to compare the finds to other nearby assemblages compiled through salvage excavation and/or metal-detection (Catterick, Scorton, Aldborough, etc), and to place the assemblage in its wider regional and national context by relating it to, and analysing it in conjunction with, prominent sites in the vicinity, especially those along Dere Street (most importantly Catterick and Piercebridge, to the north, and Roecliffe and Aldborough, immediately to the south)

Metalwork and Recorded Finds of Other Materials (Appendix M)

Summary

The total number of finds submitted for assessment was 1770 items. The quantification of material from A1DB09 is as follows: iron 1202 objects, copper alloy 153, lead 127, worked bone 11, wood 1, jet/shale 1 and several items of leather. A1DB10 yielded 138 iron objects, 64 of copper alloy, 61 lead, 3 of worked bone, several leather fragments and a plaster cast of a series of footprints. The leather still requires cleaning and detailed cataloguing. Objects were studied with reference to the X-rays to facilitate identification and to permit recommendations for further work to be formulated. All of the finds were appropriately packaged for short- to medium-term storage in accordance with museum and conservation guidelines.

A strict process of triage was employed during this assessment giving preference to stratified items. Objects with ambiguous intrinsic dating have been passed over if unstratified, but given more serious consideration if from stratified contexts.

Significance of results

This assemblage provides an extremely rich collection of material reflecting the everyday life of a Romano-British settlement. Although the North-East region has seen significant work on both civilian and military sites there are still gaps in knowledge in terms of civilian settlement, road network and the relationship between towns and vicus; this especially the case for the area south of the Wall along Dere Street. The burial assemblages are important given the absence of any extensive excavation on a Roman period cemetery in this area. There is a large body of nails, mostly structural, some at least of which preserve details of timber thickness etc. Other fittings and personal artefacts, mostly domestic but including some military objects, have the potential to provide insights to the material culture of Roman settlement in the region and can usefully be compared with other regional and national assemblages.

Recommendations for analysis

The majority of the finds will require a detailed catalogue for archive purposes with a selection made for publication once cleaning, freeze drying (as required) and refinement of identification has taken place. The stratified nails can usefully be

measured and tabulated whilst the other stratified finds should be illustrated and reported upon as indicated in the summary catalogues. This work will also incorporate those finds from earlier evaluation work to be brought to publication. Leather items will be passed to a qualified consultant, Quita Mould. Casting waste and lead melt should be examined in conjunction with the industrial residues by Jane Cowgill. The diploma fragment (RF 462) will be reported on by Paul Holder.

Querns and Other Worked Stone (Appendix N)

Summary

The current collection weighs over 0.25 tonne and the original weight of the stones examined comfortably exceeded 0.5 tonne, with 55% of that weight coming from the six mill-stones.

Significance of results

The collection of querns is of significance in regional terms. The project has yielded the full range of quern types. Its collection of hand querns is typical of a small R-B settlement, with the relatively high proportion of lava querns hinting at military, or high status connections. The project has produced a comparable number of hand querns to those so far measured for many of the excavated military sites in and around Hadrian's Wall.

The large number of powered millstones from the scheme, are a significant addition to the regional picture and mirror the similar concentration around the military site at Catterick and which seems typical for that found within a relatively small area of Yorkshire, focused on the Permian Limestone. However, when compared with the rest of England, sites from this limited area seem to 'punch above their weight' for their cereal processing capability. As such, this regional concentration is probably of national significance. Such Roman mill-stones have been shown to be archaeologically associated with at least three water-powered mills from Ickham, Kent (Spain and Riddler, 2009), two vertical water-power mills at Fullerton, Hants (Cunliffe and Poole, 2008) and an assumed commercial mill in structure XVIIIA 3 at Silchester, of unknown motive power, where a iron spindle (for a geared mechanical drive) was also found (Boon, 1974, 289).

To date, the design of a millstone cannot be unambiguously linked to its power source, but study of the recently excavated Yorkshire material may throw up some new links.

Recommendations for analysis

Chronology

The presence of saddle and beehive querns could indicate late Iron Age/early Roman period activity although they also occur in later Roman contexts. The preponderance of large diameter hand querns and millstones is likely to indicate significant activity during the later Roman period and provision of data on the dating of contexts will enable these comments to be expanded.

Fragmentation

Analysis of the fracture patterns for hand querns and millstones could show that each type had different life histories, i.e. with the larger (and later?) Roman examples being less fragmented.

Beehive and hand querns

There is scope to further investigate their regional parallels in both cases. In addition, several of the hand querns have grooved grinding surfaces, but their patterns are atypical as the two of non-local stone have no preference for rotational direction and the lava quern rotated clockwise. Normally querns, especially of lava querns, were grooved for anti-clockwise rotation and further research could elucidate the reasons behind this non-conformity.

Millstones

Further research is required to determine what, if anything, this local concentration of millstones tell highlight about local/national cereal processing requirements. Similarly additional research have the potential to identify any diagnostic features in the millstone design which might differentiate between drive by animal power, slave power, vertical water-wheel or horizontal water-wheel. Further research on the double feedpipe types is required to identify their purpose.

Illustration

A total of 17 artefacts have been selected for illustration.

Stone Axe, Stone Discs, Hones and Whetstones (Appendix O)

Summary

Assemblages of stone artefacts from a number of sites throughout the scheme were submitted for assessment. These date from the Neolithic period onwards, and include a series of artefacts considered to belong to the Roman period on contextual grounds.

Significance of results

RF 18 is a Group 6 polished stone axe, attributable to the Neolithic period, which has had a complex history. Manufactured as a highly finished, Cumbrian club variant axe, it was then modified for hafting, re-ground and re-polished, before again being re-flaked for another form of hafting. At some point (possibly in the Early Bronze Age) it was deposited in Field 42. After incurring modern damage, which presumably disturbed its original context, it was recovered as an unstratified find. The presence of the stone axe, only c 5km from the late Neolithic/early Bronze Age complex at Thornborough, adds to the evidence that this complex was a focal point for the exchange of polished stone axes.

The three, intact 'pot-lids' are an artefact-type which is periodically found on Romano-British and early Medieval sites. There is no obvious use-wear to indicate their function. In comparison to other examples, whose 100-150mm diameters could well seal openings in pottery vessels, these 50-90mm diameter examples seem somewhat small. If contemporary vessels are found to have larger openings, these discs may be 'counters'.

Five of the six hones were all from around Healam Bridge and it is possible that this limited area probably acted as a focus for local metalworking. Similar hones have been found elsewhere from both Romano-British and early Medieval contexts. The hones were made from a wide variety of stone, including some from the North York Moors and some probably from erratics.

Recommendations for further analysis

Further analysis of the finds should be undertaken once more detailed post-excavation data becomes available.

The Implement Petrology Group recommend that the axe (RF 18) is petrologically examined by a polished thin section, as it could usefully contribute to their national research agenda. As an important artefact, it should be fully illustrated, showing a) both surfaces in plan, b) side section and c) cross section of the blade. It is also suggested that the intact examples of hones RF 135, 136(?), 265 and 763 are drawn to show examples of both the rectangular and the split pebble types and that a typical example of the stone discs (eg RF 764) are similarly illustrated.

The Iron Smelting, Smithing Debris and Some Associated Finds from Field 107 (Appendix P)

Summary

The assemblage of industrial material submitted for assessment is very large, consisting of some 1270 pieces weighing c 142kg (considering the fact that only a percentage of the features were excavated), and includes 21kg (134 pieces) of furnace fragments, which is an exceptional amount. The assemblage contains both iron smelting and smithing slags and therefore provides evidence for both the production of iron in a bloomery furnace and the smithing of the resultant metal. This may have been primary smithing (the refining of

the bloom to bar iron) or secondary smithing (the forging of a bar into an object or making repairs) or both, although the former is thought to have occurred at the smelting site or where ever the smelters resided. This, in turn, suggests that the furnaces were undoubtedly located within, or in proximity to, the excavation area.

Significance of results

The evidence for the smelting technology employed at this site is confusing. This is apparent from the sheer size of the pieces recovered, their form and the lack of the common types of debris usually associated with a bloomery furnace. To illustrate this tap slags would be expected to dominate the assemblage and usually include very large numbers of small flows and 'plate' fragments, all generally fragmentary and small in size. This site has produced 262 pieces of tap, weighing c. 37kg, giving an average weight of 141.5g – well in excess of that which would be expected. The hearth bottoms also tend to be very large and although these are usually considered to be the by-products of iron smithing, it is quite possible that some of these are some type of furnace slag (ie cooled inside the furnace structure) and therefore actually represent smelting debris. This all indicates that the assemblage from Field 107 is not a 'normal' assemblage. There is, however, some variability and a lack of consistency which suggests that more than one type of furnace may have been used, this could reflect several episodes of smelting over time or that it might represent innovation and the development of the industry through time.

Recommendations for further analysis

This is obvious a very significant assemblage of slags and establishing their date and the technologies employed is of primary importance. The presence of these smelting and smithing slags will not only help us to interpret the site but also the landscape in which it was set.

The slags should be fully described and reported upon so that their variability is fully appreciated and the possibility that more than one technology was employed will be reflected in their descriptions.

It is essential that the iron smelting technology/ies employed at this site are dated and therefore it is recommended that a number of charcoal samples are submitted for radiocarbon dating. The date of the technology/ies is very uncertain. It could be Roman period activity, but it is certainly not what would be expected for smelting assemblages of that date. A late Iron Age date is a possibility but there is little evidence from the site to even hint at this, or Anglo-Saxon/Scandinavian. The reoccurring problem is that smelting sites tend to be located in woodlands, in isolation, away from occupation sites and they are often dated by local field walking evidence, the dates from which may have no bearing on the site if it is tested by radio carbon dating.

At least four pieces of this assemblage will require multiple photographic illustrations for publication (from contexts 1970, 4056, 4166 and 4250).

Human Skeletal Remains (Appendix Q)

Summary

The remains of 28 skeletons, nine cremations and seven disarticulated human bone assemblages from the excavations undertaken in 2009-10 were submitted for assessment. The remains of an adult male, and the disarticulated remains of a further adult recovered during trial trenching in 2006 are also considered as part of this report.

Only one skeleton had been interred in a coffin, as suggested by ferrous nails lining the edge of the cut. Burial position and orientation varied for almost every individual. Cremation burials were also present within the cemetery, nine separate cremated bone assemblages were assessed, the remains of which ranged in weight from a few grams to in excess of 800 grams. The cremation burials yielded a minimum of eleven individuals, five of whom were adults, two perinates and two adolescents. The presence of both cremation burials and inhumations suggests that the cemetery's longevity spans the period of transition between the earlier cremation rite and the later funerary custom of inhumation, which has often been associated with conversion to Christianity.

Osteological analysis revealed that the inhumed skeletons represented a mixed group, including fourteen peri-natal skeletons and four juveniles. The majority of individuals buried at this site were children (64%), half of whom (50%) had died at or near to the time of birth. Ten adults ranged from young adults to mature adults and included two females and five males. A wide range of pathological conditions were observed in the Healam Bridge population. Mild congenital abnormalities were noted, which would not have caused the affected individuals any concern. The partial congenital dislocation of a hip, belonging to a female old middle adult would have caused the individual to walk with a limp. A juvenile aged between ten to eleven years of age may have had the skeletal dysplasia trisomy 21 (Down's syndrome), and may have required a more intensive level of care and attention from its family and community than other children of its age group.

A number of individuals suffered from infections which included chronic sinusitis and two cases of lung infections. Degenerative changes of the joints and spines amongst the middle and mature adults might indicate a physically demanding lifestyle. Trauma was also observed amongst the adult population, with rib fractures, avulsion fractures and trauma to a shoulder. Juveniles did not exhibit the same evidence of trauma and may therefore not have been expected to carry out the same hazardous activities as the adults.

A number of individuals seemed to have suffered from childhood stress, which would have included poor nutrition and disease. Enamel defects were observed in the teeth and attest to environmental stresses during early childhood. The presence of *cribra orbitalia* may be further evidence of environmental stresses that the population was placed under.

The dental health of the population was generally poor, with a higher than average incidence of calculus and caries observed for the time period. The prevalence of dental abscesses was, however, lower than expected for the Roman period.

Significance of results

The excavations have produced a highly varied collection of individuals displaying a range of potentially unusual burial practices and pathological conditions. The number of infant and peri-natal burials is also unusual in a Roman cemetery as infants have previously been considered to have been excluded from cemeteries before the 4th century. The excavations have also identified the possibility that some infant remains were reinterred with adult inhumations. The appearance of cremations which are apparently late in the stratigraphic sequence is also unusual in that inhumation is generally considered to have been the dominant burial rite by the 4th century.

Recommendations for analysis

Although this report constitutes an examination of the human remains beyond what is normally required for an assessment, there is still the potential for the further study of several individuals. It is recommended that some specifically selected skeletons excavated at Healam Bridge undergo radiocarbon dating. Targeted radiocarbon dating of the skeletons would provide accuracy in assigning them to a specific period. This would establish how unusual the burial practices encountered at this site are for the period, and therefore aid in interpretation of the site.

Further research into the pathological conditions affecting Skeleton 7303 and Skeleton 8351 is recommended. Both individuals appear to have suffered from conditions rarely seen in the archaeological record.

Biological Remains (Appendices R, S and T)

Summary

Over 500 sediment samples were taken from various archaeological features along the route of the length of the road improvement scheme. Flots from the samples processed by NAA, additional biological remains recovered from the sample residues and hand-collected organic remains (principally animal bone amounting to around 104 museum boxes mostly of 14.25 litres capacity, i.e. an approximate total of 1500 litres) were submitted for assessment.

Significance of results

For the purposes of the assessment the results from individual Fields have been grouped (largely following the initial groupings established by the specialist background information reports prepared by NAA) as

- Group 1 Fields 1 to 77 (excluding Fields 23 and 25 and those associated with the Healam Bridge site – see below – and discounting those fields which lacked archaeology)
- Group 2 Fields 23 and 25 (features including two substantial parallel ditches representing a possible trackway, enclosures, boundary ditches, a cobbled surface and numerous pits, related to late Iron Age/Romano-British activity)
- Group 3 Fields 60 to 64 (those fields associated with the Healam Bridge site included within the original excavation specification)
- Group 4 Field 61a (also part of the Healam Bridge site but an additional excavation area given the site code A1DB10)
- Group 5 Fields 78 to 123 (again, discounting those fields which lacked archaeology)

In terms of the biological remains (other than human remains which are to be considered by other specialists), the groups of Fields may be placed in one of three categories (Field numbers not mentioned in the following lists either lacked archaeology or provided no biological remains from the archaeological features present)

- Category 1 Those yielding no significant concentrations of interpretatively valuable biological remains – Group 1 (Fields 19, 20, 21, 28, 32, 33, 37, 42, 52, 55, 58 and 73) and Group 5 (Fields 103 and 104) Ancient biological remains recovered from these fields were largely confined to small quantities of indeterminate charcoal, with very occasional other poorly preserved charred plant macrofossil remains (e.g. cereal grains, charred 'seeds' of wild/weed plants) from the sediment samples and trace quantities of poorly preserved bone
- Category 2 Those with occasional concentrations of interpretatively valuable biological remains – Group 1 (Fields 1, 35, 36 and 47), Group 2 (Fields 23 and 25) and Group 5 (Fields 99, 107 and 108) In the second category the ancient biological material recovered from the fields (1, 23, 25, 35, 36, 47, 99, 107 and 108) was predominantly as described Category 1 but with occasionally more valuable concentrations of remains from particular deposits
- Category 3 Those forming the Healam Bridge site, which provided multiple concentrations of valuable biological remains from the sediment samples and the vast majority of the substantial hand-collected vertebrate assemblage – Group 3 (Fields 60 to 64) and Group 4 (Field 61a) Excavations in the fields associated with Healam Bridge revealed the only significant concentration of archaeology yielding quantities of biological remains that might be considered together as a 'site'

A moderate number of the deposits, notably in Fields 61a, 62 and 63, gave valuable assemblages of plant and invertebrate remains, predominantly preserved by charring (largely the plant remains) but also including macrofossil remains preserved by waterlogging. Here, some large and extremely large charred cereal assemblages were recovered analysis of which would provide not only individually valuable records but also direct comparanda for other smaller assemblages from these fields which would also repay some further study.

Waterlogged plant remains within some deposits were rather eroded (wood fragments were mostly quite heavily decayed and largely unidentifiable – although occasional pieces of roundwood, some with bark, may be determinable to further study) and 'seeds' were typically those of plants which produce robust 'woody' forms of these structures (e.g. elder, bramble, sedges).

Invertebrate remains were predominantly of heavily fragmented beetle sclerites. Some of the deposits gave slightly larger numbers of more 'useful' beetle remains which would almost certainly reward further study and other interpretatively valuable invertebrate remains such as cladoceran, ephippia, land and freshwater snails and fly puparia and bug wing fragments were sometimes also present.

The hand-collected vertebrate assemblages from the Healam Bridge fields accounted for the vast majority of the bone recovered from the entire project and totalled around 100 boxes.

The deposits from Field 61a yielded a moderate assemblage of hand-collected vertebrate remains totalling 3616 fragments, of which 179 were measurable and 50 were mandibles with teeth in situ useful for providing age-at-death data. Initial assessment of the preservation of the remains indicated that much of the material was in good condition, there was little surface erosion and the angularity of bones butchered or broken in antiquity had been mostly maintained. Overall, the vertebrate assemblage was characterised by low species diversity and the prevalence of domestic animals, cattle and caprovid bones dominated in most contexts, with smaller numbers of pig and dog remains, and horse bones being quite numerous. Further study of the assemblage may help to clarify whether any biases in the collection are primarily anthropogenic in origin (i.e. related to husbandry and dietary practices) or whether they are due to differential preservation.

Fields 61 and 62 gave approximately 11 boxes, Fields 63 and 64 approximately 59 boxes of faunal remains. Although some of the remains were of medieval, post-medieval or modern date, most were from Roman features provisionally dated to the 2nd to late 4th centuries AD. Generally, the vertebrate assemblages were moderately well preserved, although, as might be expected, certain areas and features produced material that showed poor or variable preservation. As a whole, bones from Fields 61 and 62 were less well preserved than those from Fields 63 and 64, with fragments being fragile and more liable to fresh breakage damage.

Fields 61 and 62 produced several larger assemblages, and whilst other species (e.g. cattle, caprovid and pig) were present in the deposits in these fields, horse remains appeared to be numerous and, within some features, bones from this species seemed to

be prevalent. Large accumulations of vertebrate material were also encountered in Field 63. Deposits in the southern part of this field provided a number of interesting assemblages. Features in this area which gave prolific quantities of animal bone included two middens, and a horse skeleton was revealed beneath the foundation of a building. In the northern part of field 63 the greatest concentration of animal bone was encountered in the enclosure ditches.

A fairly restricted suite of species was identified from the deposits at Healam Bridge showing a reliance on the major domestic mammals. Cattle remains were predominant, but caprovid and pig bones were consistently present, albeit in somewhat smaller quantities. Horse remains were again relatively numerous, being prevalent in some of the deposits. Occasional fragments of dog were noted throughout. Evidence for the exploitation of wild species was rather scant and remains of birds were not particularly numerous. The midden deposits and the ditch fills produced more varied assemblages, generally with a greater mix of remains of the four major domestic species and appeared to represent concentrations of refuse which, on the basis of preliminary observations, appeared to be dominated by butchery refuse, both primary and secondary.

Recommendations for analysis

The further analysis of the material from selected contexts could potentially provide additional information relating to crop processing, animal husbandry, the exploitation of natural resources, and local environmental conditions in the periods under consideration.

The full analysis of all of the larger charred and waterlogged plant assemblages recovered from deposits in the Healam Bridge fields should be undertaken provided that these can be reasonably closely dated, the former to provide information on crop processing and arable husbandry regimes and the latter for interpretation of the past environments of the site as a whole. Similarly, the larger and somewhat better preserved invertebrate (non-mollusc) assemblages should be recorded to provide supporting information for the waterlogged plant assemblages, for these the remaining sediment should be processed to 300 microns and paraffin flotation employed. Where both charred and waterlogged remains representing similar ranges of plant taxa were present it would be of interest (with regard to the formation of the deposits and their archaeological security) to determine if the differently preserved remains are contemporary which could indicate the deliberate clearance of scrubland by fire in advance of the expansion of cultivated areas. Further study of a few charcoal assemblages, may provide some additional information regarding locally available woodland resources and the selection of wood for use as fuel. The land and freshwater snail assemblages present were rather too small for interpretation in isolation but some perhaps warrant a degree of additional study where they can be considered in tandem with the evidence from other classes of biological remains. Full analysis of the vertebrate assemblage from all well-dated and archaeologically secure deposits, including the recording of all available biometric and age-at-death data, evidence of butchery and pathologies and skeletal element representation, should be undertaken to

provide information regarding animal husbandry, the diet of the inhabitants of the site and possible other uses for domestic animals (e.g. for traction or secondary products such as milk and wool) and any changes in these through time

It is recommended that all of those deposits at the Healam Bridge site (Fields 60-64, including Field 61a), 'Category 3', identified by the assessment as containing interpretatively valuable assemblages of charred plant remains, waterlogged plant and invertebrate macrofossils and vertebrate remains, should be subject to full analysis. To a large degree, the value of detailed recording of the biological remains from these deposits will be dependent on the determination of the archaeological security of the deposits and the chronological resolution achievable, however. Given the timescale available for completion of the analysis, it should be borne in mind that it is likely that at least some deposits with interpretatively useful assemblages of remains will have to be recorded prior to the finalising of the site phasing/dating and that some of these may, therefore, ultimately prove to be of less value than their intrinsic composition would suggest.

Full analysis of the biological remains from those deposits specified in the bullet point section under 'Category 2' above (from Fields 1, 23, 25, 35, 36, 47, 99, 107 and 108) should be undertaken, subject to the stated caveat regarding dating. No further study of the biological remains from Fields listed under 'Category 1' in the preceding section is warranted – i.e. Fields 19, 20, 21, 28, 33, 37, 42, 52, 73, 103 and 104.

Waterlogged Wood (Appendix U)

Summary

An assemblage of excavated timbers was submitted for assessment. Wood was recovered from two fields, no. 62 and no. 63 and this division is followed here. Dating and stratigraphic associations follow those presented in Fell (2010) for Field 62, Ross and Ambrey (2010) for Field 63.

Each piece of wood was in turn unwrapped, washed under cold clean running water, examined and recorded, sampled for species identification, then repackaged. Species identification was done via a transmitted light microscope at x40, x100 and x200 magnification as appropriate. All species identifications follow Schwemgruber (1982). All observations were written into a notebook and transferred into a Microsoft Access database for cataloguing and future analysis.

Significance of results

All of the wood species are native to the British Isles and could have grown locally. Some of the species – *Salix* and *Alnus* – are associated today with wetlands and the margins of watercourses but this need not necessarily mean that the trees were growing along the Healam Beck, as they will tolerate drier ground.

The major element of technology represented in the assemblage is the cutting of points on the lower ends of stakes/piles. Different techniques were in use, resulting in different point forms and cross sections. Further analysis could be undertaken to determine if there are any spatial or sequential patterns to the form of tip used. Those tool signatures present, show the work was done using a variety of axes.

There are only two pieces of timber which exhibit more than the simplest level of woodworking. The first, peg 7348 is an unusual object both in this context and regionally, since wooden pegs of this size and of Roman date are not common finds. The second is the morticed timber 7545. This is the only joint from the site and represents a simple form of through mortice which appears only infrequently in the archaeological record, due to the vagaries of preservation.

Unsurprisingly, the finds of waterlogged wood are confined to those areas that were generally at or below the local permanent water table and any wood used elsewhere in the site has not survived. The wood from field 62 is very limited in quantity and little can be said about its function. In contrast, the stake groups 7191, 7518, 7847 and 7627 are positioned on the outside bend of a meander of the Healam Beck, the bank along which the current flows fastest and where the bank is in consequence more prone to erosion. The recognition during the excavation that this was an informal revetment is almost certainly correct and it perhaps encouraged the deposition of sediment and stopped the northward movement of the beck into the adjacent enclosures.

Recommendations for analysis

Further work is required on this assemblage in order to achieve its research potential, and the results of this analysis would merit publication. Several aspects of the assemblage warrant further consideration and these include,

Conservation

Two of the objects merit retention for archive or display purposes- the morticed timber (7545) and the peg (7348). The stakes do not have any potential for display or further research after any dating process has been completed. Unless there is a particular local significance to the stakes it is not recommended that they are conserved.

Illustration

Many of the objects have been recommended for illustration. The assemblage is quite repetitive and if all the pieces so marked are drawn there will be a significant amount of duplication. The morticed timber 7545 and the peg 7348 should be drawn as unique objects from the assemblage but it is recommended that only representative pieces from the collection of stakes are drawn, perhaps just to illustrate the different point types and the nature of the material employed. Stakes (7211), (7300), (7474), (7510) and (7893) would be good examples.

Dating

There is potential here for scientific dating. Some dendrochronological samples have been taken and it is suggested that a slice from 5154 should be added to the list of candidates. Any or all of the remaining wood could be dated by 14C dating though care will need to be taken to ensure that only the outermost surviving annual rings are sampled.

Future of the assemblage

Once any sampling and illustration work has been completed the material not required for conservation should be discarded.

Dendrochronology (Ian Tyers)

Summary

Two timber samples from Healam Bridge were submitted for assessment, both being oak with a reasonable numbers of rings, 134 and 158 respectively, 2671 has sapwood. These do not match prehistoric, Roman or medieval and later data from across the UK. The lack of positive result means it is not possible to separate which of the following possibilities hold true: that these are good trees but there is currently no nearby data, or that these are bad trees, and dendrochronology will never work. The major Roman era reference data sets are from London (1000 timbers) & Carlisle (400 timbers) with scattered data of much lower replication, and thus correlation, strength from everywhere else (only ~100 timbers from the rest of England that are Roman period). Settlements such as York and Vindolanda are the nearest geographic sets to the site, and they primarily consist of material from 1st century AD contexts, which have 1st century AD and earlier tree ring sequences. Indeed most of the data outside the south-east only covers the 1st century AD and earlier. Since individual trees may only match relatively short distances these parallels may not be near enough to help. However from a positive perspective these 2 samples have decent numbers of rings, and don't look 'bad' in that they do not obviously have stunted growth rings or sequential periods of poor growth which might be management or environmentally induced. But as they don't match each other it is not possible to tell if they are even contemporary, although the negative result is not proof they are not contemporary. Given the nature of their context one or both may be trees from wet conditions anyway, which are obviously more likely to be preserved but relatively unlikely to be growing very happily, so they may have extremely localised patterns in their tree-ring sequences.

However if dendrochronology is to work in these areas and periods, accumulating additional data is an important consideration in the hope that a local data series develops which will be of use in the future.

Recommendations for analysis

No further work is possible on this material

Clay Tobacco pipe and Modern Glass (Appendix V)

A small assemblage of clay tobacco pipe stems and modern glass was hand collected during excavations along the A1DB09 road widening scheme. An assessment report has been prepared in accordance with English Heritage MAP2 guidelines (1991)

The collection of clay pipe stems and glass dates to recent times with the earliest items being 17th-century clay pipe stems. Recently manufactured glass bottle fragments were retrieved from features which also contained medieval and post-medieval pottery

Recommendations for analysis

No further work is recommended on this material

Geophysical Survey

The geophysical surveys undertaken for the scheme in 1994 and subsequently in 2005-2009 were a key component in both the identification of the site at Healam Bridge, and as part of the mitigation strategy employed in the scheme as a whole. The surveys undertaken as part of the construction mitigation measures should be re-presented to publication standards for dissemination in the final report for the scheme in order that the results of these surveys can be compared directly with, and discussed alongside, the excavated evidence from these areas

However, perhaps the most important campaign of geophysical survey, and the one that contributed significantly to the working paradigm for the site at Healam Bridge, was undertaken by Geophysical Surveys of Bradford in 1994. The data originating from this survey, would have almost certainly been processed and presented in a then 'industry standard' graphics package, which operated in a DOS computer environment. As a result of the memory limitations imposed by such an environment, it would have been impossible to process all of the survey data in a single episode, and present the results of that survey as a single graphic for either side of the A1(T)

It is recommended that the existing survey data for the Healam Bridge area be reprocessed and presented to publication standards for inclusion in the final publication report. This may facilitate reassessing the present explanatory paradigm for the site, and assist in proposing alternative models if appropriate

6.0 UPDATED PROJECT DESIGN

INTRODUCTION

This report presents an Updated Project Design (UPD) for further analysis and publication of the results of archaeological excavation, monitoring and building recording, as part of the A1 Dishforth to Barton Improvement scheme, North Yorkshire

This UPD sets out the aims, objectives and areas of further analysis and publication and the methods which will be employed to carry out this work. The format of this UPD is based on *Management of Archaeological Projects*, second edition (EH 1991)

AIMS AND OBJECTIVES OF THE ASSESSMENT

The aims and objectives of this project included the routine assessment of the stratigraphic record and artefacts recovered during the excavations. Of primary importance was the assessment of the potential for the various sets of information to add to the existing regional and national archaeological records and contribute towards current research priorities, themes and agendas

Scope of the Post-Excavation Assessment

The principal stages of the post-assessment programme were

- Record consolidation, including preparation of preliminary phasing information, plans and catalogues
- Provision of background information for specialists
- Specialist assessment of the artefact and environmental assemblages
- Preparation of assessment report and production of an Updated Project Design (UPD) for the full analysis and publication of the archive

The summary results of all of the excavated sites, and of all of the artefactual, ecofactual and human remains encountered during the course of the project, are presented above

SUMMARY STATEMENT OF POTENTIAL

Excavation along the A1 between Dishforth and Leeming Bar in the Vale of Mowbray, has uncovered a substantial range of archaeological remains. These cover a time period from the Mesolithic to the post-medieval, but with a pronounced concentration in the Roman period. Extensive remains of Roman date were encountered at Healam Bridge, which is a Scheduled Monument and lies equidistant between the Roman towns of Catterick and Aldborough. Significant assemblages of a range of artefactual and palaeoenvironmental material were recovered during the excavations. Assessment has identified a number of categories of evidence where further work is required to fully understand the results of the excavation and produce a final report on the work. The potential which each main category of evidence has for analysis is set out below.

Stratigraphic record

The principal area where there is potential for the further analysis of the stratigraphic record, is Healam Bridge. Here, a complex sequence of occupation was encountered in each of the excavated areas and significant depths of stratified deposits were excavated to the north of the beck and to the west of the A(T). The evidence included multiple phases of buildings, waterlogged deposits adjacent to the Roman-period beck, evidence of land reclamation north of the beck, a metalled road within the settlement and over 30 burials. The great majority of the stratigraphic analysis work will therefore be carried out on the stratigraphic record and matrix produced for the site. This will include linking the excavated areas where possible.

More limited stratigraphic analysis is required on the results of excavation at Humphrey Balk Lane (Fields 23-8), west of Leeming and Leeming Airfield (Fields 99-108) and at Field 1 near Dishforth.

Assessment has identified little or no potential for further analysis of the stratigraphy for the remainder of the excavated features on the scheme.

Further study will involve detailed analysis of the stratigraphic and spatial interrelationships of all of the features identified at each site. The results of this analysis will be fully integrated with the results of the analysis of the pottery, other datable artefacts and from radiocarbon dating (see below) and will enable a fuller understanding of the date and development of each site and the types of activity occurring.

The site at Healam Bridge has been discussed in this document as a series of stratigraphic horizons. These should not be viewed as chronological episodes, although *phasing* should be possible when site matrices are integrated with specialist dating information. Attempting to chronologically-link activity across the site is considered to be an important goal and if possible will assist in formulating an integrated narrative. This is despite the fact that there are significant gaps in horizontal stratigraphy that would otherwise link the areas – these being the beck and the A1(T).

Assessment has identified that a number of contexts at Healam Bridge which contain potentially or certainly late Roman finds, are from features which have been assigned to relatively early horizons. The nature of this occurrence will be examined as part of the detailed analysis of the stratigraphic matrix and integration of chronological information. Analysis will seek to identify occurrences where features can be assigned to later horizons. It will identify material which is intrusive and why this material occurred earlier. It will also examine whether the late material could indicate a high degree of residuality within the excavated sequence, as this would have significant implications to the dating and interpretation of the excavation.

Artefactual and palaeoenvironmental record

Further analysis will be carried out on selected artefacts and palaeoenvironmental material as described in Section 5.0 above. The results of this analysis will be synthesised with the stratigraphic record.

Comparative studies

Research on the results of other excavations, surveys and recovered artefacts from both the local and wider areas will be undertaken. The existing landscape model of the settlement at Healam Bridge suggests the presence of a fort and vicus, with Dere Street running through the centre. This model will be re-evaluated through study of similar sites in northern England and elsewhere in Britain.

A number of Roman roadside settlements have been investigated in Britain, including at Bainesse to the south of Catterick and at Stamford Bridge and Green Hammerton, both near York. They are seen increasingly as a distinct site type, with a number of possible functions, including as local markets and centres for craft, industry or agricultural production. Some are thought to have included a role in local administration or have been part of a system of official travel. The influence of Roman road construction on pre-existing settlement patterns has also been studied at a number of places in northern England, allowing comparison with the results from Humphrey Balk Lane (Fields 23-8).

Further research will enable the direct comparison of individual site elements, including buildings, and of artefact and palaeoenvironmental assemblages to be made. Such research will also highlight contrasts and similarities at site-specific level, and assist in establishing the significance of these excavations in the local, regional and national contexts.

Radiocarbon analyses

Large assemblages of stratified pottery and coin assemblages were recovered from excavation at Healam, while more limited pottery assemblages were also recovered from a number of other sites. These will form the primary means of dating and phasing activity for the majority of the remains. Significant but undated remains were however

also encountered, which included a possible Neolithic or Bronze Age pit group (Field 19), possible Iron Age roundhouse (Field 47) and ironworking remains of potential medieval date (Field 107) In addition, targeted radiocarbon analysis will establish whether there are phases of activity which pre or post-date the pottery and com assemblages at Healam and Humphrey Balk Lane

SIGNIFICANCE

The linear nature of the scheme allowed the examination of a narrow but continuous corridor of over 21km in length The road corridor, from Roman Dere Street to the present day, forms the dominant influence on both its immediate vicinity and the wider area Apart from its use as a routeway, it influenced the location of settlement in many periods, and has acted as one of the principal land divisions through the Vale of Mowbray Excavation revealed a pronounced concentration of archaeological remains in the Roman period A large assemblage, of a wide range of materials, was also recovered, again principally dating to the Roman period

The extent of the excavated evidence and range of material recovered give the work considerable potential to contribute to addressing a number of broad research themes and individual questions As the great majority of the excavated evidence and recovered material dates to the Roman period and specifically to the remains at Healam Bridge This evidence strongly reflects the research themes and agendas and the excavations have the potential to address several of these These are discussed below by period and broad topic

Prehistoric Potential

Only limited evidence, both in terms of excavated evidence and recovered material, was found for activity dating to the prehistoric period (the late Iron Age evidence is discussed below) Evidence was mainly characterised by a thin scatter of discrete pits and linear features found along the length of the scheme Only one possible structure was identified at Sinderby

Given the small quantity of excavated evidence, the results have only limited potential to contribute to published research themes and questions Despite this, the material does contribute further to the existing corpus of knowledge regarding the level of activity in the northern Vale of York, away from the known late Neolithic/Early Bronze Age complexes at Catterick and between Thornborough and Boroughbridge

Late Iron Age and Roman Potential

Chronology and transition

A number of issues have been identified in dating Iron Age and Roman period sites A basic chronology for the Iron Age in most of Yorkshire is understood only in outline

(WYAAS 2009, 5) There are also important gaps in the chronologies of both individual sites and the region as a whole during the Roman period (Brennand 2007, 57, WYAAS 2009, 6-7) Traditional dates for the founding of forts and settlements are based on relatively few historical references such as the works of Tacitus (WYAAS 2009, 6) Similarly, uncertainty exists on the dates of abandonment of many sites, while archaeological evidence of the immediate post-Roman period is rare (Roskams and Whyman 2007, 32) The continuity and change associated with the Roman conquest and with the withdrawal of centralised control are both seen as key transitions in the archaeological record and their study as research priorities (EH1997, PC4 *Briton into Roman*, PC5 *Empire to Kingdom*, Hazlegrove 2001, B *Chronological Issues*, Petts and Gerrard 2006, R1 *Iron Age to Roman Transition*, Rx *Roman to Medieval Transition*, EH 2010, Topic 25 *Key Transitions in Prehistory*)

Early chronologies

The excavations have the potential to establish when the excavated settlements at Healam Bridge and at Humphrey Balk Lane were founded. Assessment has identified a probably pre-Roman phase of activity at Humphrey Balk Lane, but it is unclear how early in the Iron Age this began. No certain pre-Roman activity has been identified at Healam, although pottery of late Iron Age character was found. There is therefore the potential to identify a pre-Roman phase of settlement or other activity on the site.

Impact of the conquest on a settlement

The site at Humphrey Balk Lane has the potential to study the direct impact of the Roman conquest on part of a settlement. Further analysis at Healam can gain a better understanding of how the establishment and growth of the settlement affected the pre-existing pattern of settlement in the area (see also *landscape studies* below). The assessment has identified Flavian (AD 69-96) material from the excavation and the establishment of an accurate chronology of the site could aid in understanding the Roman advance into the region.

Date of the Roman road

Dere Street and its successors form the focus for the whole of the present work. A greater understanding of the development of the Roman road system is seen as a priority (Petts and Gerrard 2006, R11 *Roads and communication*). It is still largely assumed that the network of Roman roads was constructed soon after the conquest. Excavation at Roecliffe near Boroughbridge suggests that Dere Street in that area may have been constructed before the end of the 1st century AD (Bishop 2005, 218-9). However, evidence from Shiptonthorpe in East Yorkshire, which also lay on a major route, suggests that this may have been constructed as late as the mid 2nd century (Millett 2006, 305). While construction of metalled roads in the Roman period is thought to have replaced a system of earlier trackways, they represented the imposition of new routes associated with the Roman military and often cutting across pre-existing boundaries. As the site at Humphrey Balk Lane appears to show significant alteration

following the Roman conquest and possibly after construction of Dere Street, determining the date at which this change occurs, is of importance in understanding how and when the road was built

Artefact chronologies

The dating of some artefact types may be refined by the excavation. Handmade pottery was found alongside imported wares and Romano-British coarsewares in a considerable number of features at Healam Bridge. The pottery represents the continuation into the Roman period, of pottery traditions dating back to the early or middle Iron Age. This association has the potential to re-evaluate and refine the date range of this handmade material.

Abandonment of the sites

Pottery of late 4th to early 5th century date was recovered from both Healam Bridge and Humphrey Balk Lane, while some of the graves at Healam Bridge are stratigraphically late within the excavated sequence. In addition, a small quantity of Anglo-Saxon material was found at Healam. This latter material suggests some level of Anglo-Saxon activity on the site or the vicinity. Continued Sub-Roman occupation in the 5th century and the nature and date of Anglo-Saxon activity are poorly understood in this area and it is a priority to attempt to address this.

Healam Bridge settlement model

The importance of the Healam Bridge site was recognised during the evaluations which have taken place since 1993 and as a result of this work, a zoned landscape model was proposed for the settlement. This formed the basis for scheduling the site as *Healam Bridge, Roman Fort and Vicus* (SM no 34736/2). Broadly, the settlement was thought to lie to north and south of Healam Beck and on both sides of the Roman road and the model proposed eight zones of activity within the site. A large rectangular enclosure, identified as a fort, lay immediately south of the beck, with the road running through its centre.

Excavation, undertaken as part of this scheme, sampled five of the zones identified in the proposed model, namely Vicus (zone 3) to the south of the fort, flanking Dere Street with semi-agricultural areas (zones 4 and 5) beyond, industrial area (zone 6) to the north of Healam Beck and areas of possible burial (zones 7 and 8) alongside Dere Street beyond the edges of settlement to the north and south. No work was undertaken within the Roman fort (zone 1), to the south of and overlooking Healam Beck, or within the 'penumbra' around it (zone 2). These excavations have provided the opportunity for the first major examination of the proposed model and has the potential to re-evaluate and reinterpret the model in a number of ways. There is considerable potential to re-evaluate the evidence regarding the size and internal organisation of the settlement and to better understand the character and date of its initial occupation and its subsequent development.

The area north of the beck (zone 6) was found to comprise an area of intensive occupation, with little evidence of industry or concentrated craft activity. The depth of stratified deposits which were encountered close to the beck included multiple buildings and waterlogged deposits. To the north of this lay a complex, multiphase series of buildings and enclosures. The excavated evidence from north of the beck matches that from west of the A1(T), which is seen as part of the *mam vicus* settlement. Given the intensity of occupation to the east of the A1(T) road, it is possible that a similar level of occupation also lay to the west of the A1(T), for an unknown distance north of the beck. Reprocessing results of the earlier geophysical surveys in the light of the current results has the potential to reveal previously unknown areas of occupation and detail within known areas.

Date and function of the 'fort'

The settlement model was adapted following further trial trenching in 2006, with the enclosure seen as a pre-road fort or marching camp (NAA 2006a). This would accord with results from both Baines near Catterick and also with Roecliffe, west of Aldborough. Here, a Flavian fort was established at a crossing of the River Ure, abandoned when Aldborough and Dere Street were constructed some distance to the east (Bishop 2005, 214-8). This sequence of the abandonment of early forts and establishment of new sites several kilometres away has been proposed for several sites in this part of Yorkshire (Wilson 2002, 447-8). An alternative model can also be proposed, as the layout of the Healam settlement can be paralleled elsewhere in Roman Britain. A number of roadside settlements in the midlands and the south of England each have a substantial enclosure bisected by a road. Where the sites have been investigated, the enclosure is usually seen as contemporary with the road, rather than preceding it. On some sites, the enclosure contained a *mansio* as part of the *Cursus Publicus* system of official travel and such enclosures have been seen as late developments of administrative rather than military function (Smith 1987, 11-19).

The interpretation and dating of this feature is of the first importance in interpreting the site as a whole. The earliest material may have derived from a short-lived Flavian fort or marching camp, with a civilian settlement founded after the fort or camp was abandoned and Dere Street constructed. If the enclosure represents a longer-lived fort, the excavated settlement could have been part of a *vicus* established outside. If the enclosure had a non-military function, the settlement may have developed due to its location between Catterick and Aldborough approximately a day's travel between the two towns, and the enclosure may be a later addition, as suggested for a number of sites along Watling Street (Smith 1987, 224, 229).

The earlier evaluations, together with geophysical survey carried out for the present work, are the only means of placing the excavation results within the context of the wider site. Re-interpretation of the original model is limited in that no work was carried on the 'fort' enclosure as part of the excavation. Previous investigation of the enclosure was carried out via two trial trenches across the defences and into its interior in 1994. The report of this work provides no usable information to date the feature however,

beyond dating the latest pottery to the 3rd or 4th centuries (BUFAU 1994) Re-interpretation of the archive and recovered material may allow a better understanding of the enclosure and therefore aid in interpretation of the wider site

The military character of the excavated site

Assessment of the pottery has suggested a military character to the early assemblage (late 1st and 2nd centuries AD), and foundation dates for the site in the Flavian (AD 69-96) to Hadrianic (AD 117-138) periods. Assessment of other categories of material has not however highlighted any concentrations of military finds, although many types of objects were used equally by military or civilian groups (Allason Jones 2001, 22-3). Further analysis of the recovered pottery may show characteristics typical of military or of civilian sites elsewhere in the north (Evans 2001, 34-5). Study will consider whether the suggested military character could be a result of pottery supply, rather than indicating a long-term military presence here. Elsewhere, garrisons and attached *vici* are now seen as more physically and culturally connected than previous interpretations have allowed (James and Millett 2001, 80-2). Full integration of the datable finds with the stratigraphic record will clarify whether the earliest material represents occupation in the late 1st century or could be largely residual. Further study and integration of the artefactual assemblages will aid in establishing the nature of any military connections with the excavated areas and wider settlement, especially in the 1st and 2nd centuries. Parallels will also be sought through study of published *vicus* sites and other, non fort-related settlements, to identify similarities or differences to the excavated remains.

Settlement location

Healam Bridge lay equidistant between Catterick and Aldborough, approximately a day's travel from each, and at its height was likely to have been the largest settlement between the two towns. It has also been proposed that Healam lay at a crossroads of Dere Street and routes running towards Wensleydale and Malton. The site was part of a network of nucleated settlements along Roman roads, which have been identified through Roman Britain. Within northern England, these include sites at Baines near Catterick, at Pool Lane and Stamford Bridge, both near York and Shiptonthorpe north of Brough on Humber.

The location of roadside settlements midway, or at regular distances between major Roman settlements, has been noted elsewhere in northern England and elsewhere in the country (e.g. Millett 2006, 321). There is potential to examine the siting of the settlement at Healam with regard to the wider network of Roman roads, forts and towns. Healam's relationship with the towns of Catterick and Aldborough is of particular importance. Its initial siting may have been influenced by conquest or consolidation of the region (see *military character of the excavated site*), while its later use could have included a role within the *mansio* system of official travel, or other local administrative functions.

Economy of the settlement

Given the size and range of the assemblages recovered, there is great potential to examine the economy of the settlement through its lifespan. The study of nucleated settlement in the wider rural society of the Roman period has been identified as a priority, including questions of agricultural practice and economic relations of these settlements with the surrounding area and local towns (James and Millett 2001, *Rural Society in Roman Britain*). Assessment has not identified any evidence for industrial activity on the site, contrary to the original settlement model. Identification of the range of craft activities identified by recovered material, will be used to establish the range and any specialities of crafts carried out. Analysis of closely-dated palaeoenvironmental material will provide valuable information concerning crop processing and animal husbandry practices. Analysis may also reveal evidence of distinctive dietary consumption, helping to identify early 'military' occupation or changes in levels of activity.

Assessment has suggested the possibility that some 1st and 2nd century pottery may have been produced locally. Further analysis will seek to establish whether this is likely and if so what proportion could have been locally manufactured. Analysis of pottery in conjunction with other categories of material will explore the possibility of a reduced level of activity on the site in the late 2nd and 3rd centuries. Spatial analysis of pottery and other finds may identify particular functions or specialisms for particular excavated areas. This will lead to a better understanding of Healam's role in its local economy and has the potential to answer questions relating to the importance of agricultural production to the settlement, what role the site may have had as a marketplace for the local area, and how these aspects may have changed over time.

Assessment has identified limited information which can be gleaned concerning the economy of the settlement identified at Humphrey Balk Lane. This has some potential to contrast aspects of this site with the much larger nucleated settlement at Healam Bridge.

Trade and contacts

The range of artefactual and palaeoenvironmental materials recovered will be further studied to better establish the extent of trade and other contact the settlement may have had. This will include examination of the level of imported material from Britain and abroad to determine to what extent the site was a marketplace for local or imported material. It will also examine the diet of the inhabitants and will consider how its position on a major north-south route may have affected its relative wealth and range of contacts.

Building studies

Little evidence has been found for stone buildings on the site. The structures, including those on the series of cobble foundation rafts near the beck, appear to have been all

constructed of timber. At several other roadside settlements, for instance Baines near Catterick, some timber buildings were replaced by stone structures during the course of the Roman period (Wilson 2002, 150-2). Others, for example at Shiptonthorpe, were all constructed of timber. The architectural traditions identified may reflect date, function, comparative wealth, or might reflect the cultural affinities of the settlement's inhabitants. Further study of published parallels may also address the uncertainties as to whether the excavated structures were aisled or not.

Cultural affinities

The site at Healam Bridge appears at the present time to have no Iron Age precursor and there is uncertainty as to whether the site was a military foundation. There is considerable debate concerning the cultural and ethnic origins of the inhabitants both of vicus settlements and of other sites, and how this altered through the course of the period (Brennand 2007, *Military Activity*). For instance, the cultural identity of a possible military garrison and their dependents may be reflected in the archaeological record (James and Millett 2001, *9 Soldiers and civilians*). Study of selected categories of finds, such as personal ornaments, may identify non-local preferences, suggesting a non-local element to settlement's inhabitants (James and Millett 2001, *3 Material Culture and identity*).

Mortuary studies

Burials on the site included several apparently isolated inhumations and cremations, but also what seem to be parts of a discrete burial ground. Burials also lay on the edge of the settlement, for example to the south of the beck (Field 62), but also within the main area of occupation, as found to the west of the A1(T) (Field 61a). The mix of isolated burials and discrete areas, and burial within settlement has been noted in Catterick and further study will help to establish what was local practice and therefore identify unusual and non-local influences (Wilson 2002, 467). Radiocarbon dating of selected individuals will establish the full date range for the burials and will help identify burial practices thought to be unusual for their date.

The excavated human remains show a number of unusual features, which can be studied further. Part of a discrete burial ground for peri-natal infants was found to the west of the A1(T). This was stratigraphically early and the inclusion of infant burials in cemeteries is unusual before the 4th century (Appendix Q, this report). One child, buried in the sequence of deposits on the north bank of the beck, may have had Down's Syndrome, which is rarely seen in the archaeological record. Remains of infants were found in graves, indicating the possible deliberate reinterment of infant remains in the graves of adults. The individuals buried at the site also show a wide range of pathological conditions, some of which may elucidate the lifestyles of those individuals.

Landscape studies

The need to examine individual sites within their wider landscapes is a recurring theme for both the Iron Age and Roman periods (e.g. EH 1997, T3 *Rural Settlements*, T4 *Relict Field Systems*, Petts and Gerrard 2006, Rix *Landscape and environment*, WYAAS 2009, 3 *Landscapes, land-use and land allotment*). The settlements would have been linked to arable fields, stock enclosures and natural resources and it is evident that the site at Healam Bridge had an agricultural component to its economy. The forms of field systems and trackways in the Vale of Mowbray are not as fully understood as other areas, for instance at the southern end of the Vale of York and the degree of arable as opposed to pastoral farming is still unclear (Bridgeland et al. 2010, 224).

The linear nature of the scheme has enabled elements of field systems of late Iron Age and Roman date to be excavated at several places along the scheme, including at the rear of the settlement at Healam Bridge (principally Fields 60-2), at Humphrey Balk Lane and at Baldersby (Fields 33-40). The previous evaluations have included extensive areas of geophysical survey and fieldwalking. The wider area has also recently been included in English Heritage's *Thornborough Henges* and *Yorkshire Henges* surveys as part of the National Mapping Programme (NMP).

Study of the excavated evidence, in conjunction with previous geophysical survey and aerial photographic data, has considerable potential to place the excavated sites within their wider landscapes. It may help characterise field system forms in the area, inform questions relating to agricultural practices and animal husbandry, the potential level of contemporary settlement. It also has the potential to show how the construction of Dere Street affected this pattern, how the development of Healam Bridge altered the existing pattern and to what extent it integrated into its surrounding landscape. Current land use and the presence of extensive medieval rigg and furrow remains at Healam suggests that the immediate area of the site was probably agriculturally productive during the Roman period too.

Medieval potential

The potential for sub-Roman and early Anglo-Saxon occupation at Healam Bridge has been discussed above.

A substantial quantity of iron smelting and smithing debris was recovered from a series of ditches west of Leeming (Field 107). Pottery of medieval date was found in the upper fills of these features and in layers sealing them, indicating the metalworking debris was earlier. On the basis of this, it is considered that the metalworking debris is most likely to be of medieval date. No other iron smelting sites are known in this part of the Vale of Mowbray. The quantity and nature of the material recovered are unusual for smelting sites in general and the date of this assemblage is not apparent from its form. Given the lack of comparable local sites and the size and nature of the assemblage, it has considerable potential to gain insight into the types of smelting technologies that were used, the range of ironworking activities and the effect of these on the surrounding

landscape (Bayley et al 2008, *Multi-period themes*, Roskams and Whyman 2007, 2.8 *The High Medieval period*) Study of the overlying pottery will provide a *terminus ante quem* for the remains Radiocarbon analysis to establish the date of the metalworking remains may be possible if charred grains or charcoal fuel remains survive

The medieval enclosure in Field 108 immediately south of Bedale Beck may have been used for stock control, and the remains suggest settlement in the immediate area As the enclosure was overlain by medieval field system, this site has potential to help understand local changes in agriculture and land use during the medieval period Further study of pottery will determine the date at which this change is likely to have occurred

Dere Street is thought to have been a minor route during the medieval period It formed parts of parish boundaries for a considerable distance through the Vale of Mowbray however, demonstrating that it was still a significant landscape feature in this period Elsewhere, medieval pottery was recovered from a number of boundary ditches along the length of the scheme, confirming the presence of settlement in the general area, but with little potential for adding to our understanding of settlement patterns The general lack of excavated evidence attributable to this period would seem to support the view that the road was not a primary focus for settlement in the medieval period

Post-medieval potential

Elements of the post-medieval system of enclosed fields were identified at a number of points along the road, although they add little to our understanding of agricultural development in the area Recording of the various surfaces of the Great North Road, has provided a full picture of the development of the road, from the Roman period to the present day Recording of the standing Healam Bridge structure has identified several phases of construction and possible Roman masonry Further consideration of this structure will assist in our understanding of this bridging point over the lifetime of the road Review of the results of the programme of recording post-medieval buildings undertaken in advance of their demolition, including the New Inn coaching inn at Healam, will allow a fuller picture of how the 18th century turnpike developed as a major route after this time

AIMS AND OBJECTIVES OF THE ANALYSIS

The principal aim of the analysis is to undertake sufficient additional work to enable the project to be brought to completion through dissemination by publication, and archive deposition

The objectives of the analysis are

- the integration of chronological information, from datable artefacts and radiocarbon analysis, into the site matrix for each of the excavated sites

- to undertake programmes of specialist analyses that will contribute to the above objective
- to undertaken additional research into known parallels to the excavated sites, structures, individual features and artefacts
- to prepare an analysis report on the findings of the project which will form the basis of a report for publication

METHODS STATEMENT

Assessment has identified that further work is required on a number of categories of evidence, to fully understand the results of the excavation and produce a final report on the work for publication. It is proposed that the following areas of analysis be carried out: structural analysis, comparative studies, artefactual analysis, integration of previous fieldwork and preparation of final, illustrated report.

Further analysis of the excavation results will be carried out in accordance with the recommended model set out in Appendix 7 of *Management of Archaeological Projects*, second edition.

Recommendations

The following work will be carried out on the site archive, which in places, is currently imperfectly understood.

Stratigraphic analysis

The integration of chronological information, from datable artefacts and radiocarbon analysis, into the site matrix for each of the excavated sites. This is essential to produce a revised and phased matrix of activity for each site.

Given the size and complexity of the remains at Healam Bridge, the majority of such work will deal with this site. However, excavation at Humphrey Balk Lane and near Leeming (Fields 99-108) also produced remains of some complexity, and more limited analysis will also be required here.

Palaeoenvironmental data and other categories of recovered material will be incorporated fully into the stratigraphic records to assist in interpretation of the economy of the sites and evidence of surrounding environment.

Reassessment of the proposed settlement model of Healam Bridge will be carried out. Geophysical survey at Healam carried out in the 1990s will be reprocessed, to integrate these with results of more recent surveys to provide a more coherent model for the settlement.

The integration of information from previous fieldwork into the stratigraphic record will be carried out where possible to place the excavated areas within their wider identified contexts

The integration of building recording undertaken as part of the scheme will be carried out, to elucidate the development of the road corridor, which is one of the major communication links in the UK through time

Documentary research

Research into known parallels to the excavated sites, structures, individual features and artefacts will be carried out. This will facilitate the identification of common aspects and explore the nature and causes of differences. It will allow the results to be placed within their appropriate local, regional and national contexts

Aerial photographic and artefactual surveys of the Vale of Mowbray and the wider vicinity will be studied. These will include the NMP surveys *Thornborough Henges* and *Yorkshire Henges* and the *Yorkshire Quern Survey*. This will allow the excavated sites to be better placed within their landscape settings and establish where possible the extent and density of settlement

Research into technologies identified on site, for instance ironworking, milling and agricultural and animal husbandry practices, will be carried out

Synthesis

Following analysis and integration of information, a full site narrative and parallels, with accompanying illustrations, will be produced for each excavated site. In areas where no further analysis is required, narratives of the results of excavation will be produced

A final report will be prepared, following the format set out below, for dissemination by publication

Artefactual analysis

The full specialist's assessment reports are presented in volume two of this report. The assessments have been undertaken by material, including flint (Appendix A), early prehistoric pottery (Appendix B), The hand-made pottery (Appendices C and D), Romano-British pottery (Appendix E), Samian pottery (Appendix F), Medieval and later pottery (Appendix G), Ceramic/stone building materials and daub/fired clay (Appendix H), Vessel glass (Appendix I) Beads and glass bracelets (Appendix J), Conservation (Appendix K), Coins (Appendix L) Metalwork and recorded finds of other materials (Appendix M), Querns and other worked stone (Appendix N) Stone axe, stone discs, hones and whetstones (Appendix O), The iron smelting and smithing debris (Appendix P), Human remains (Appendix Q), Biological remains Appendices R, S and T),

Waterlogged wood (Appendix U), and Clay tobacco pipe and modern glass (Appendix V) Summaries, statements of significance and recommendations for further analysis have been extracted from these reports and are presented above. The further analysis of this material will be undertaken in accordance with the recommendations of the specialists concerned.

Upon completion of these works an integrated post-excavation analysis report (technical report) will be prepared. A version of the report will also be prepared to publication standard.

The technical report shall contain

- A summary of the project background
- All site location information
- A methodology
- A summary of the results including phasing
- An interpretation of the results in relation to other sites in the region
- A post-excavation analysis, integrated with radiocarbon dating evidence, of the stratigraphic and other written, drawn or photographic records
- A post-excavation analysis of the pottery and other artefactual material recovered during the excavation
- A catalogue of each category of artefact recovered during the excavation
- A catalogue of faunal remains recovered during the excavation
- A catalogue of the results of the soil sampling programme
- Catalogues and post-excavation analyses and/or summary reports of all scientific dating procedures or other analyses carried out
- A summary of the contents of the project archive and its location
- Appendices and figures as appropriate
- References and bibliography for all sources used

Post-excavation analysis report preparation will conform to the standards set out by MAP2, Phase 4 (appendices 6 and 7) and this will form the basis of a publication volume in the form of a monograph. The analysis (technical) report will be produced in

a form as close to the publication format as possible. The form of the proposed publication report, together with details of those responsible for producing each element of the site narrative and illustrations and report editing, is presented below

Workshop

During the analysis works two workshops will be held to bring the project specialists together to discuss the phasing evidence and the results of their analyses and to formulate a consensus prior to submission of the final reports that will be used in the production of a synthetic account. (It is accepted that it may not be appropriate for all specialists to attend both workshops). Other specialists in the region will also be invited to the second workshop to discuss the significance of the findings and the overall site interpretation.

Archive

Subject to finalisation of discard policies on completion of the analysis works, it is intended that an archive of the data collected during the excavation, including artefacts, will be prepared for long term storage with the Yorkshire Museums Trust. The archive will be presented in an ordered and indexed format to enable access to the data for future researchers. NAA will liaise with the museum curator regarding requirements for ordering, boxing and labelling the site archive.

The archive will consist of all original records, documentation and retained artefacts/ecofacts relating to the project.

The archive will comply with the Society of Museum Archaeologists document *Towards and Accessible Archive* (1995), the Institute for Archaeologists' *Archaeological Archives* (2007) and to the requirements of the Yorkshire Museums Trust. The archiving of any digital data arising from the project will be undertaken in a manner consistent with professional standards and guidance (Richards & Robinson 2000).

Reproducible elements of the archive will be copied and submitted to the National Monuments Record (Swindon).

Publication

Due to the multi-period nature of the material to be reported on and the number of illustrations likely to be generated by the artefact studies it is considered that the report should be a single synthetic document. Breaking up the report into several distinct articles for publication in specific journals would be undesirable and would detract from the importance of the project and the overall aim of presenting an holistic account of the landscape development within this important communications corridor.

The report has been planned to reflect the archaeological significance of the A1 corridor, with specific reference to the Roman sites at Healam and Bainesse. It will

concentrate on the development of the routeway through time and its relationship to the settlements adjacent to it. It is suggested that a stand-alone publication through *Oxbow* or the *Yorkshire Archaeological Journal* is the preferred option.

Report Format

Acknowledgements

Contents and Lists of Figures, Plates and Tables

Chapter 1 Introduction

Topographical and environmental background

Landscape and topography (includes short section on pre-Enclosure and Post-Enclosure landscapes and the field evidence)

Chapter 2 Overview of evaluation work (mid 90s and 2000s)

Fieldwalking survey

Geophysical survey

Trial trenching

Chapter 3 Early Prehistoric

Background

Geophysical survey and fieldwalking

Excavated evidence

Chapter 4 Later Prehistoric and Roman

Background

Geophysical survey and fieldwalking

Settlement and fieldsystems

The Roman site at Healam Beck

Background

Geophysical survey and fieldwalking

The provisioning centre

Dere Street and the river crossing

Other components

Bainesse and Catterick

Background

Geophysical survey and evaluation

Chapter 5 Post-Roman and Medieval activity

Background

Leeming area

Fieldsystems

Chapter 6 Dere Street and the Great North Road

Landscape setting

Early communications routes

Dere Street

The Great North Road

Buildings along the road

Chapter 7 Finds reports

Flint

Early prehistoric pottery

Later prehistoric pottery
Roman pottery
 Coarsewares
 Amphora
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Medieval and post-medieval pottery
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Worked bone and wood
Leather
Industrial slags and residues
Ceramic and stone building materials
Querns and worked stone
Human remains
Charred and waterlogged plant remains
Animal bone
Worked timber
Peat deposits
Radiocarbon dating

Chapter 8 Synthesis and Discussion
Chapter 9 Conclusions

Resources and programming

NAA Staff:

Richard Fraser	Quality Reviewer
Paul G Johnson	Project Manager
Gail Hama	Project Manager (specialists co-ordinator), metalwork, glass, worked bone and worked wood specialist
Catherine Ambrey, David Fell, Stuart Ross, Greg Speed, Philip Wood	Archaeologists
Gary Brogan	Archaeologist, Roman specialist
Giles MacFarland	Archaeological Technician, preparation of CAD Illustrations
Roger Simpson	Archaeological technician, small finds and pottery illustrations

External Specialists

Sue Wrathmell	Buildings
Peter Rowe	Flint
Blaise Vyner	Early prehistoric pottery
Christopher Cumberpatch	Later prehistoric, medieval and post-medieval pottery
Ruth Leary	Roman coarsewares
David Williams	Amphora
Kay Hartley	Mortaria
Gwladys Monteil	Samian
Roger Tomlin	Graffiti sherds
Jane Young	Anglo-Saxon pottery
Denise Allen	Glass
Jennifer Jones	Conservation
Richard Brickstock	Coins
Paul Holder	Diploma
Leather	Quita Mould
Jane Cowgill	Industrial slags and residues
Sophie Tibbles	Ceramic and stone building materials
John Cruse	Querns and worked stone
Malm Holst	Human remains
John Carrott (PRS)	Charred and waterlogged plant remains
Deborah Jaques (PRS)	Animal bone
Ronald Dixon	DNA analysis (horse)
Ian Ranter	Worked timber
Jim Innes	Peat columns
SUERC	Radiocarbon dating

Timetable

The enclosed Gantt chart illustrates the proposed timetable. In summary, with an agreement to commence work in October 2011 the project would be completed by the end of November 2012.

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Map of Healam Bridge 6" 1856 1st Ed <http://www.old-maps.co.uk/maps.html>

A1D2B Post Excavation Analysis

