# ARCHAEOLOGICAL INVESTIGATIONS A684 BEDALE, AISKEW AND LEEMING BAR BYPASS, NORTH YORKSHIRE

## Post-Excavation Assessment Report

## Part 1: Text

**August 2017**

PRE-CONSTRUCT ARCHAEOLOGY

# Archaeological Mitigation in Association with the A684 Bedale, Aiskew, and Leeming Bar Bypass

## Post-Excavation Assessment Report. Part 1: Text

## *Site Code: BALB 14*

***Commissioning Client (on behalf of North Yorkshire County Council):***


**Prospect Archaeology**
Prospect House
Garden Lane
Sherburn-in-Elmet
Leeds
North Yorkshire
LS25 6AT


***On behalf of:***

**Wills Bros Civil Engineering Ltd**
Maxim 3, Floor 2
Suite 1 Parklands
Avenue
Eurocentral
Motherwell
ML1 4WQ

***Archaeological Mitigation Design and Management:***

**Jacobs**
1 City Walk
Leeds,
LS11 9DX

***Contractor:***


**Pre-Construct Archaeology Limited**
Northern Office
Unit N19a Tursdale Business Park
Durham
DH6 5PG

Tel: 0191 377 1111

***DOCUMENT VERIFICATION***

# ARCHAEOLOGICAL MITIGATION IN ASSOCIATION WITH THE A684 BEDALE, AISKEW, AND LEEMING BAR BYPASS

# POST-EXCAVATION ASSESSMENT REPORT

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| Text prepared by: | Aaron Goode, Jennifer Proctor and Scott Vance | | May 2015-May 2017 |
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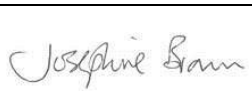
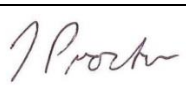
| Graphics prepared by: | Mark Roughley |  | July 2015-May 2017 |
| Graphics checked by: | Josephine Brown |  | May 2017 |
| Manager sign-off: | Jennifer Proctor |  | 11 May 2017 |

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|---|---|---|---|
| 1 | 09/08/2017 | Jennifer Proctor | Jennifer Proctor |

**Pre-Construct Archaeology Limited**
**North Regional Office**
**Unit N19a Tursdale Business Park**
**Durham**
**DH6 5PG**

# 1. NON-TECHNICAL SUMMARY

## 1.1 Background

1.1.1 A series of archaeological investigations were undertaken during the construction of the Bedale, Aiskew and Leeming Bar (BALB) bypass in November 2014 to April 2015. Pre-Construct Archaeology Limited were commissioned to undertake this work by Prospect Archaeology on behalf of Wills Brothers. The project was designed and managed by Jacobs UK Ltd on behalf of North Yorkshire County Council, the detailed method statement being set out in a Written Scheme of Investigation (WSI) prepared by Jacobs in 2013.

1.1.2 Redesign of some of the levels of the road scheme resulted in the impacts from construction being removed for five of the original fourteen sites identified for mitigation. A further one site was determined to have been previously excavated and was therefore removed from the scheme of works. This report therefore presents the results of the investigations undertaken at the remaining eight sites (referred to as Sites 12, 43, 58, 68, 110, 111, 122 and 123).

1.1.3 At Sites 58 and 122 areas beyond the limit of the road corridor were identified for excavation to place the results in context. These additional areas are referred to as the 'Licensed Areas'.

## 1.2 Results: Sites 12, 43, 68, 110 & 111

1.2.1 No significant archaeological remains were identified during mitigation of Sites 12, 68, & 111. The southernmost extent of Site 68 has been amalgamated with Site 122 North as only a small area adjacent to 122 North was machined to the level of the archaeological horizon. Sites 43 and 110 required photographic survey only.

## 1.3 Results: Site 58 Bedale Enclosure

1.3.1 As a result of the massive difference in the depth and width of the Bedale enclosure ditch to that identified in evaluation, the original excavation strategy for Site 58 was adapted from 100% excavation of the entire feature to the excavation of 24 regularly spaced slots through the entire sequence of ditch cuts and recuts and 100% excavation of the final recut only for artefact and human remains retrieval.

1.3.2 A long sequence of occupation was identified with the earliest (Phase 2) comprising ditches or field systems predating the Bedale enclosure. Artefacts included handmade Iron Age tradition pottery, briquetage, animal bone and industrial residues including hammerscale, indicating that metal working had taken place nearby.

1.3.3 At least three phases of possible boundary definition have been identified at the Bedale enclosure. The earliest was a narrow V-shaped ditch (Phase 3.1), which only survived truncation by the subsequent phases of ditch within the location of the entrance into the enclosure, therefore interpretation as the earliest incarnation of the enclosure is not

secure. Two AMS dates (408 to 212 cal BC and 380 to 202 cal BC) indicate a Middle Iron Age date for this feature.

1.3.4 The subsequent phase of activity (Phase 3.2) saw the construction of a substantial ditch and bank. The full circuit survived and this defined a sub-square enclosure with internal dimensions of *c*. 54m north–south by 45m east–west and a total internal area of 0.24 hectares. On the eastern side was a 2.40m-wide entrance. The ditch was at its most substantial in the south-east corner where it was up to 6.50m wide and 2m deep. A few postholes on the northern side are the only surviving internal features, presumably as a result of ploughing and natural erosion. Small quantities pottery and animal bone were recovered and iron-smithing debris indicates metal working. An AMS date of 337 to 197 cal BC was obtained.

1.3.5 The enclosure ditch was recut (Phase 3.3) as a narrower and shallower U-shaped ditch (the only element identified in the evaluation). Two crouched human burials were placed within the base of this latest phase of ditch. Large quantities of occupation debris and manufacturing waste, including handmade Iron Age tradition pottery alongside occasional Romano-British pottery and jewellery were recovered from the final fill. The Roman pottery demonstrates that material was reaching the site in both the late 1st and 2nd centuries and the absence of any of the later Roman material found at the Aiskew villa site suggests that activity ceased before the middle of the 3rd century.

1.3.6 The substantial faunal remains assemblage recovered is of regional significance due to the scarcity of sizeable assemblages in the region. Represented were cattle, sheep, pig and horse with bones from very young calves indicating animal husbandry. Wild species included red deer, goose, mallard, crow and environmental samples produced small rodents, freshwater eel and cod. The latter is of particular significance as fish are rarely found at indigenous sites of this period. As well as evidence for butchery, the bone assemblage included waste from bone and antler craft working. The assemblage of bone small finds recovered from the enclosure, along with the evidence for large-scale craft working, is of **regional and national significance**.

1.3.7 Crucibles, hammerscale and smithing hearth bottoms along with offcuts from copper-alloy sheets and rods indicate copper-alloy and iron working having taken place nearby. The copper-alloy sheets and rods indicate the presence of a craftsperson(s) working at the site producing metal objects. It is also possible that lead working took place at the enclosure. The metal small finds and evidence for large-scale metal working is also considered to be of **regional and national significance**.

1.3.8 Following the backfilling of the latest phase of the enclosure, a double-ditched trackway was constructed (Phase 3.4) running north-eastwards from Bedale Beck up to the west side of the enclosure. The track ran around the west and north sides of the enclosure, using the enclosure as one side of the track, demonstrating that it still survived as an earthwork feature. In one area, a patch of metalled surface survived within the trackway ditches.

## 1.4 Results: Site 122 and 122 North the Aiskew Villa and Field System

1.4.1 The excavation area as proposed extended beyond the limits of the bypass route to provide context to the remains that would be affected by the road corridor. However, upon removal of the plough soil it was immediately apparent that survival of the structure was excellent, far exceeding the suggested quality of the remains as interpreted in the evaluation, with intact floor surfaces and, in one room, collapsed wall plaster on top of an *opus signinum* floor. Due to the exceptional preservation of the villa building, it was agreed that archaeological remains located within the Licensed Area were to be physically preserved *in situ*. This area was subject to hand cleaning and archaeological recording of the upper strata. Only features at risk from destruction were removed from the Licensed Area, specifically discrete patches of tessellated floor within a corridor and the wall plaster which had collapsed onto the concrete floor in the north-east part of the villa.

1.4.2 Elements of ditches and field systems predating the villa at Site 122 (Phase 3.5) produced small quantities of 2nd-century pottery. Interconnected fields and enclosures in Site 122 North (Phase 4), were evidently long-lived, possibly established before the construction of the villa building excavated at Site 122.

1.4.3 Two large clay extraction pits partially exposed within the road corridor to the south-west of the villa exploited the boulder clay for construction of the villa.

1.4.4 The structural remains comprised a 4m-wide north–south aligned corridor with a complex of projecting rooms at each end. The building was exposed for a maximum distance of *c*. 48m north-south by *c*. 20m east-west and continued to the east and south beyond the limits of excavation of the Licensed Area. Although most of the walls of the villa had been robbed, there was limited survival of the westernmost wall of the northern wing. Here the 1.10m-wide wall survived up to two courses high and was faced with roughly hewn sandstone blocks with a stone rubble core, built onto a substantial cobble and clay foundation up to 1.40m wide 0.90m deep. The deep foundations of the walls of the villa indicate that this was to support a two-storey structure. The two main rooms at the northern end had *opus signinum* floor surfaces and patches of tessellated floor surfaces survived within the corridor.

1.4.5 Successive floor surfaces and associated levelling and consolidation deposits (recorded as demolition layers in the evaluation) were recorded within the westernmost room to a maximum combined depth of *c.* 0.70m, with a final degraded *opus signinum* floor surface sealing the sequence. Added to the western side of Room 1 was a small square room furnished with a hypocaust heating system. Inside the room, the bases of pilae stacks constructed with sandstone slabs survived to a height of 0.32m.

1.4.6 The ashy debris from stokeholes had been used to backfill the upper parts of the quarry pits and villa boundary ditch. This deposit also contained large quantities of domestic debris. Another boundary ditch located much closer to the northern side of the villa also contained large quantities of occupation debris and pottery from this feature dates to

AD360–400+ demonstrating that the final backfilling of this ditch is contemporaneous with the latest phase of villa occupation.

1.4.7 The artefactual and ecofactual assemblages recovered from Site 122 provide insight into many aspects of the construction and use of the villa. Stone tiles, *tegulae* and *imbreces* were used for roofing material. The walls of the heated room were jacketed with stacked columns of box-flue tile. A wide variety of flooring materials was recovered, including tesserae, Elland flagstones, and *opus signinum* concrete. Painted wall plaster was recovered from demolition deposits as well as collapsed onto the concrete floor of one room. Numerous iron nails and other iron fittings provided evidence for the timber elements of the villa such as doors and fragments of window glass demonstrated that the villa had glazed windows.

1.4.8 In addition to the three main domesticates of cattle, sheep and pig, hare and deer were exploited alongside a variety of game birds with poultry also relatively well represented. Resources form the coast, and presumably obtained in nearby markets at sites along Dere Street, included mussel, oyster, lobster/crab and plaice/flounder. The recovery of fish is of great significance as fish are rarely found on rural sites of this date.

1.4.9 The ceramic evidence indicates a 3rd-century foundation for the villa with activity continuing into the late 4th century AD, although the site also produced an interesting collection of 2nd-century samian vessels. Amongst the mortaria assemblage were two sherds from a handmade mortarium, only the second known example of a handmade mortaria in the United Kingdom. A small group of North African amphora fragments was notable, with one stamped example probably from Tunisia. The small finds assemblage included items of personal adornments, textile working equipment and fixtures. The only tools recovered were knives, including a cleaver.

1.4.10 The presence of a very large number of frog bones in the deposits inside the heated room demonstrate that the hypocaust system remained intact for some time after it had gone out of use.

1.4.11 A few sherds of medieval pottery were recovered from one robber trench as well as fragments of potentially 17th or early 18th century date.

### 1.5 Conclusions

1.5.1 The stratigraphic data and ecofactual and artefactual assemblages recovered from the Bedale enclosure (Site 58 ) and the Aiskew villa (Site 122 ) and associated field systems to the north (Site 122 North) are considered to be of regional significance, with some of the artefactual assemblages considered to be of national significance. It is recommended that further analysis is undertaken on many of the assemblages and the stratigraphic data leading to publication. Ideally the results of the fieldwork should be reported on in as comprehensive a manner as possible, preferably in monograph format.

1.5.2 The Bedale enclosure is unique to the region; no indigenous enclosure has produced artefactual and ecofactual assemblages of this range or size. The scale of the evidence

for the manufacturing of bone artefacts and metal-working is also unique; this was evidently production beyond domestic use within the enclosure.

1.5.3 The national importance of the villa and its hinterland has been recognised by its urgent inclusion as a Scheduled Monument, awarded in April 2015 (SM 1426407). The Historic England listing states that the villa is considered to be exceptionally large, rich and complex in a northern context with very good preservation of deeply stratified deposits overall. The listing also notes that the main building displayed a particularly wide range of features, and was set in large complex including further buildings in turn surrounded by an extensive area of enclosures with a wide range of further features considered to relate to the villa's exploitation of its wider estate. It concludes that the scheduled monument has considerable archaeological potential to inform about a significant Roman villa in 3rd- and 4th-century Yorkshire.

## 2. INTRODUCTION

### 2.1 General Background

2.1.1 This Post-excavation Assessment Report (PEAR) details the methodology and results of a scheme of archaeological mitigation undertaken by Pre-Construct Archaeology Limited (PCA) November 2014-April 2015 ahead of the construction of the Bedale, Aiskew, and Leeming Bar Bypass (BALB) in North Yorkshire (Figure 1). This final phase of archaeological fieldwork comprised a range of mitigation work at several areas along the route of the bypass commissioned by Prospect Archaeology for Wills Bros Ltd who carried out the groundworks on behalf of North Yorkshire County Council (NYCC). The work was overseen for the council by Jacobs UK Ltd who designed and managed the archaeological mitigation.

2.1.2 Planning permission (NY/2010/0126/ENV) was granted to NYCC for the construction of a new road to bypass the existing A684 Bedale-Aiskew-Leeming Bar Road on 28th August 2012 (Decision No. C2/10/00791/CCC). Attached to the planning permission were a number of Conditions relating to archaeological mitigation (Nos 9-12):

9. *Prior to the commencement of any development within the area of the Romano-British villa site (including ground preparation), as shown within the submitted 'Cultural heritage Desk Based Study' (dated November 2009a), the applicant shall submit to the County Planning Authority a supplementary Desk Based Assessment to include the results of a review of the geophysical survey, detailed comparanda of the main enclosure and villa site, and consideration of the option for additional trial trenching at the villa site.*

10. *No development shall commence until a written scheme for a programme of archaeological investigation and/or recording has been submitted to and approved by the County Planning Authority in writing. The scheme shall include:*

    *Site investigation in accordance with the agreed scheme and programme;*
    *Community involvement and outreach proposals;*
    *Proposals for post-investigation assessment and analysis of the results;*
    *Proposals for post-investigation analysis, submission of a publication report, preparation of site archive and deposition at a store approved by the County Planning Authority.*
    *Thereafter, the investigations and analysis shall be carried out entirely in accordance with the approved written scheme of investigation.*

11. *The applicant shall formally notify the County Planning Authority in writing within 14 days of completion of archaeological fieldwork.*

12. *Within 24 months of completing the archaeological field investigations required by condition 10 (above), a report which shall comprise of an assessment of the archaeological remains recovered from the site and an outline of the subsequent programme of analyses, publication and archiving shall thereafter be carried out in*

*accordance with the details thus approved, and in accordance with a timetable agreed in writing with the County Planning Authority.*

2.1.3 The project was for the most part carried out according to a Written Scheme of Investigation (WSI) prepared by Jacobs (2013) and a site-specific Method Statement for Sites 58 & 122 (PCA 2015a & b). Both were approved by the Development Management Archaeologist of NYCC. The project was designed according to the guidelines set out in *Management of Research Projects in the Historic Environment* (MoRPHE) (English Heritage, 2006). However, changes to the mitigation strategies for Sites 58 and 122, the Bedale enclosure and Aiskew Roman villa, were necessary due to the misidentification of archaeological deposits and features during the evaluation phase of work; the modified methodologies are detailed in Section 4.1 of this report. In line with MoRPHE guidelines, this PEAR sets out a formal review of the data collected during the fieldwork.

2.1.4 Changes to the construction levels made during the early stages of the project reduced the impact on the potential archaeological resource; ground levels were built up at Sites 13, 55, 56, 82 and 115 therefore archaeological mitigation was not required. This report comprises the post-excavation assessment of the BALB investigations for the areas recorded during construction (Sites 12, 68, & 111), detailed excavations (Sites 58, 122, & 123) and the photographic survey (Sites 43 & 110.)

2.1.5 At the time of writing, the Site Archive, comprising written, drawn, and photographic records and all artefactual material recovered during the investigations, is housed at the Durham Office of PCA, Unit N19a Tursdale Business Park, Durham, DH6 5PG and at the offices of PCA South,Unit 54 Brockley Cross Business Centre, 96 Endwell Road, Brockley, London SE4 2PD. When complete, the Site Archive will be deposited with Yorkshire Museum, under the site code BALB 14. The Online Access to the Index of Archaeological Investigations (OASIS) reference number for the project is: preconst1-284674.

## 2.2 Scheme and Site Location

2.2.1 The site lies within the Vale of Mowbray (NCA 24; Natural England 2015) which is situated in gently undulating landscape, the broad Vale bordered by the Yorkshire Dales to the west, and North Yorkshire Moors to the east. The River Swale flows through the area from the Yorkshire Dales via the Pennine Dales Fringe and the River Wiske from the Tees Lowlands in the North, while Cod Beck rises in the North York Moors. The rivers sustain a mixed agricultural base of arable, dairying and livestock rearing which becomes predominately arable to the south.

2.2.2 The BALB Bypass begins on the A684 north-west of Bedale at SE 2633 8865 and arcs to the north-east, crossing the course of the A1, rejoining the A684 approximately 1km east of Leeming Bar at SE 2996 9078 (Figure 1). Archaeological mitigation was undertaken at nine locations along the BALB bypass (Figure 2 and Table 1).

| Site Number | Description | NGR |
|---|---|---|
| 12 | Field system (geophysical survey) east side of A684 | SE 26356 88690 |
| 43 | Section of the Northallerton–Leyburn Railway, Bedale | SE 26608 88932 |
| 58 | The Bedale enclosure; rectilinear ditched enclosure north of Aiskew Bank Farm | SE 26762 89112 |
| 68 | Field System (earthworks), north of Sand Hill Farm | SE 27271 89871 |
| 94 | Dere Street Roman Road (Course of) Leases Road | SE 28312 90767 |
| 110 | Section of the Northallerton to Leyburn railway, Scruton | SE 29526 90846 |
| 111 | Field System north of Holmfield Farm | SE 29647 90812 |
| 122 | The Aiskew Roman villa | SE 27186 89896 |
| 123 | Romano-British trackway | SE 26462 88815 |

*Table 1: Site locations*

2.2.3 Site 12, which covered an area of 2.5 hectares, was located at the westernmost extent of the road corridor to the east of the A684 and was targeted to record the remains of a field system identified by geophysical survey. The site is bounded by arable fields to the north, the A684 to the south-west, a field of pasture to the south-east.

2.2.4 A photographic survey was undertaken at Site 43, a stretch of the Northallerton to Leyburn railway. The site is bounded by arable fields to the north-east and Rectory Wood and Bedale beck to the south-west.

2.2.5 Site 58 was situated within a large arable field on the western side of the road corridor and contained the remains of a ditched enclosure (the Bedale enclosure) first identified as a cropmark on aerial photographs. The Bedale Beck flows around the western boundary of the field below meandering to the north-east. The Northallerton to Leyburn railway is located to the south-west, with further arable fields in all other directions. The area of detailed excavation extended beyond the Compulsory Purchase Order boundary to the east and the extension was investigated under license with the total area recorded covering 0.8 hectares.

2.2.6 Site 68 was within a field of pasture, bounded by fields to the north-east and south; the Scurf Beck flows to the west. Site 68 adjoined Site 122 to the south. The 0.7 hectare area was targeted over a field system that was still visible in the form of earthworks.

2.2.7 Site 94 was located to the east of the A1(M), within an arable field, and was bounded to the west by Leases Road, to the east by Low Street, to the north by Roughley Corner Farm and to the south by Pembroke Caravan Park. The area was targeted over the projected line of Dere Street; a major Roman road built in the 1st century AD, although in

this area following the line of an earlier communication route established in the Iron Age, connecting the legionary fortress and town at York to the northern borders of the Roman Empire.

2.2.8 At Site 110 a photographic survey was undertaken of the railway line after the track passes through Bedale and Leeming Bar and on towards Northallerton.

2.2.9 Site 111 was located to the south-east of Site 110 within an arable field north of Holmfield Farm. The 1.4 hectare site was targeted over a field system.

2.2.10 Site 122 was located on the western section of the road corridor to record the remains of the Aiskew Roman villa and was split into detailed excavation area Site 122 and strip and map areas Sites 122 North and South. The area of the villa originally designed to be subject to detailed excavation extended beyond the Compulsory Purchase Order boundary to the east and the extension was investigated under license, with the total area covering 0.5 hectares. The adjoining strip and map site of Area 122 South was not investigated as the ground level was built up during the construction of the road. Site 122 was located within a field of pasture with upstanding ridge and furrow earthworks until very recently, only being put to plough when the route of the bypass was confirmed, with arable fields to the north and south. The Scurf Beck flows NE-SW across the western boundary of the field.

2.2.11 Site 123 was located at the western end of the road corridor and comprised an excavation area of 0.3 hectares on a potential trackway. The area was surrounded by Site 13 and to the west was Site 112.

### 2.3 Geology and Topography

2.3.1 The solid geology of the area comprises a mixture of bedrock. At the western extent of the road corridor (Sites 12 & 123) the bedrock is Cadeby Formation Dolostone, formed approximately 251 to 271 million years ago in the Permian Period. The solid geology beneath Site 58 is Edlington Formation Mudstone, a Calcerous sedimentary bedrock formed approximately 251 to 271 million years ago. Below Site 122 is Brotherton Formation Limestone, with Roxeby Formation Mudstone around the A1(M) motorway and Sherwood Sandstone Group at the eastern half of the road corridor.

2.3.2 The superficial geology also reflects the mixture of types of strata in the area: Glaciofluvial Devensian deposits at the westernmost extent; alluvium along the course of the Bedale and Scurf Beck; Devensian-Diamicton Till along the central section of the western end of the road corridor; Glaciciofluvial deposits along the course of the A1(M); and River Terrace deposits and Alne Glaciolacustine Formation clay and silts located at the easternmost extent of the road corridor (*British Geological Survey* website).

2.3.3 The topography of the road corridor is characterised by gently undulating hills, generally at an elevation of between 30m AOD and 50m AOD. Land around the vicinity of Bedale Beck slopes gently towards the river channel which is at an elevation of around 32m AOD.

2.3.4 In the central section of the development, the A1(M) runs along the road embankment at an elevation of 50m AOD, with land to the west undulating between 35m and 50m AOD. To the east of the A1(M) the ground level falls reasonably steeply to a level of 43m AOD on Leases Road before undulating between 30m and 35m AOD to the east of Low Street.

2.3.5 The land is predominantly arable farmland with the occasional field of pasture around Site 122. The town of Bedale and Aiskew is located at the western end of the road corridor with Leeming Bar at the eastern end.

## 2.4 Archaeological and Historical Background

*Information in this section is largely extracted from the Cultural Heritage Desk-Based Study (Jacobs 2009a) and the Yorkshire Archaeological Research Framework (Roskams & Whyman 2005 & 2007). The research and writing of those responsible is acknowledged. Supplementary information has been added from various sources. North Yorkshire Historic Environment Record (HER) entry numbers are distinguished by the MNY prefix.*

***Prehistoric***

2.4.1 The Yorkshire Archaeological Research Framework (Roskams & Whyman 2005 & 2007) notes that the Palaeolithic period has been given only cursory treatment in synthetic discussions of Yorkshire, despite the overall potential of the region being recognised. Upper Palaeolithic flint artefacts are listed on the Resource Assessment of the Yorkshire region (Roskams & Whyman 2005) as having a sparse distribution across the eastern and south-western margins of the area, this patterning being a function of concerted collection policies associated with projects concerned with other periods (e.g. in relation to Star Carr or Cresswell Crags). These finds form part of a wider distribution extending from the Pennine uplands and Lancashire to the Peak District and Trent Valley, part of the re-colonisation of Britain which took place form the North Sea into Yorkshire around the resource rich margins of Lake Humber.

2.4.2 With the lowlands of the Vale of Mowbray, only a handful of Mesolithic findspots are known with most finds recovered around river channels. This particular character of the main waterways across the Vale, with deep channels cut by the rivers in the early Holocene and subsequently infilled with sediment, may mean that Mesolithic artefacts, strata, and perhaps in places, surviving ground surfaces, may be concealed at depths of several metres along these corridors.

2.4.3 A scatter of flints was recovered during fieldwalking at Little Holtby, *c*. 1.1km north from the central section of the BALB road corridor (MNY36039).Subsequent excavation recovered more than 3000 flints, all early Mesolithic in the Deepcar style, associated with a hollow that may have had a shelter constructed on one side. A concentration of flint recovered during field walking at Aiskew Grange on the western slope of the ridge on which the A1 now stands indicated the presence of early Mesolithic settlement (MNY38197). To the west of the A1, south of Little Holtby, another concentration of flintwork was recovered (MNY38200). To the east of the A1 near Warren House,

Mesolithic flint was found across the field and two small clusters were identified which may represent occupation sites (MNY38198).

2.4.4 The evidence for Neolithic activity within the landscape around the BALB bypass is relatively sparse with only a single possible example of a monumental Neolithic feature being evident. The closest of these to the study area is a reference to a Standing Stone that gave name to a field on a 1595 map, and was situated *c*. 610m north-east of Site 58 within the road corridor. Maps of 1769 and 1838 record the name continuing and in 1772 four fields within the vicinity have the name 'Standing Stone' Field (MNY25789).

2.4.5 Within the wider landscape of the Vale of Mowbray there is a remarkable concentration of Neolithic monuments. The Neolithic monument complex of Thornborough (Scheduled Monument 1004912) lies *c*. 9 km south of Site 58; an elongated rectilinear enclosure known as the Thornborough Cursus is likely to date to the later 4th millennium BC with construction of three henges from around the mid-3rd millennium BC. There is cropmark evidence of a further cursus adjacent to the northern henge, and in the near vicinity are probably contemporary monuments of a possible long mortuary enclosure and a double-ditched round barrow which contained a burial that has been radiocarbon dated to around 3600BC. Collectively they form one of the most important groups of prehistoric monuments in the county and lie within a rich archaeological landscape.

2.4.6 A probable barrow is noted on historical mapping *c*. 240m north-east of Site 58, as Hunger Barrows (MNY25779) and is labelled as early as 1595 and until 1838. The name may imply the existence of a prehistoric barrow, although no earthworks are visible on the site today. A possible prehistoric barrow (or medieval windmill mound) was noted to the north of Cobshaw Farm (Atkins 1992). The site is located *c*. 2.5km north-west of the central section of the road corridor (MNY24271).

2.4.7 Site 58, the Bedale enclosure, was first observed as cropmarks indicating a sub-square ditched enclosure north of Aiskew Bank Farm with a boundary or trackway leading towards Bedale Beck to the south-west (Deegan 2005). A geophysical survey (ASWYAS 2005) was followed by a trial trenching evaluation with four trenches targeted over geophysics anomalies (ASDU 2009). Trench 4 was sited over the trackside ditches to the south-west of the enclosure and a 1.30m-wide and 0.35m-deep ditch was recorded. Trench 5, located on the western side of the sub-square enclosure, recorded a ditch at least 1.35m wide by 0.40m deep. Trench 7 was targeted over the enclosure ditch and an outer ditch to the north; the inner ditch as excavated was 2.50m wide by 0.90m deep and the outer ditch as excavated was 2.80m wide and 0.60m deep.

2.4.8 The Bedale enclosure is comparable in shape and dimensions to an enclosure at Potgate Quarry, North Stainley. The Potgate enclosure dates from around 130BC, but was not completely infilled until the 3rd century AD (MGA 2013, cited in Jacobs 2013, 8). Both the Potgate enclosure and Site 58 are related to trackways.

2.4.9 The Cultural Heritage Assessment and Geophysical survey (ASWYAS 2005, Section 4.9) noted that earthworks relating to the enclosure were observed, however, during a

reconnaissance visit in 2009 (Jacobs 2009b), no surface features were visible at the site. During the production of the Environmental Statement, (2013) Jacobs contacted the authors of the original report and established that there were no earthworks at this site and that the description was the result of confusion between site numbering (Alastair Webb pers comm, cited in Jacobs 2009b).

2.4.10 A feature interpreted as a possible Iron Age square barrow, outside the road corridor, was also identified by geophysical survey, south-east of Site 58 (ASWYAS 2005).

***Roman & Romano-British***

2.4.11 The 2005 geophysical survey identified the presence of a field system at Site 122 which evidently predated the upstanding ridge and furrow earthworks which survived in this single field of pasture set amongst arable fields. Following a re-alignment of the road scheme, further geophysical survey and trial trenching to inform a new Environmental Statement led to recognition of the site as a probable Roman villa (ASDU 2009). The geophysical survey data was re-processed and reinterpreted in July 2013 (Jacobs 2013 and ASDU 2013a). Further trial trenching in 2013 confirmed the high status of the site (ASDU 2013b). The combined geophysical surveys, which covered over 6 hectares, revealed what appeared to be an integrated and probably multi-phased landscape of ditched tracks with enclosures and fields (ASDU 2013a Figs 2-8). On the western edge of the landscape, several rectilinear negative anomalies were identified and interpreted as indicative of stone walls or their remains. The pattern to emerge from the negative anomalies was of a main villa block aligned north-south, between 35m and 60m in length and 17m wide with a possible corridor 5-6m wide (ASDU 2013a, 8 and figs 2-8). Trial trenching (ASDU 2009 and 2013b) identified the robber trenches left when walls were removed, the bases of hypocaust pilae stacks in one room and deposits interpreted as demolition debris in another room.

2.4.12 The majority of villas are located in southern England and the Midlands, with only a small number identified in Yorkshire, at sites such as Middleham and the villa complex at Bainesse Roman settlement just outside of Catterick. There are two other high status Roman sites on the west side of the Vale of Mowbray and north of the River Ure. The villa at Snape, known from air photographs (Moorhouse 1979), is about 5km south of Site 122 and some 4.5km west of Dere Street and the site at Well (Gilyard Beer 1951) is a further 3km south and 5km west of Healam Bridge. In recent years the Tees Valley has also emerged as a focus for significant rural buildings with a small group of villas identified along the southern banks of the Tees at Quarry farm, Ingelby Barwick, Holme House near Piercebridge and at Chapel Farm, Dalton on Tees. All appear to have had Late Iron Age origins and the evidence suggests that they were occupied by the local indigenous population.

2.4.13 The BALB bypass crosses the line of the Roman road of Dere Street (MNY33135), on the present site of Leases Road (Site 94), one of the main north–south routes through the territory of the Brigantes during the Roman period. The road ran between York

(*Eboracum*) and Bo'ness in Scotland (*Veluniate*), and in this region is known to have earlier origins. Excavated sections have been recorded at Healam Bridge, Aldborough, Leases Road (Leeming Bar), Bainesse Farm, north of Brompton on Swale, and Cliffe/Piercebridge.

2.4.14 A Roman burial was recovered to the east of Leases Lane (Site 93) in the eastern extent of the road corridor in 1834 (MNY25673). The burial was said to be of a Roman soldier and the remains of two epaulettes and a scabbard was recovered.

2.4.15 An excavation on land to the south of Freemans Way in Leeming Bar (MNY24934), revealed a number of linear ditches, gullies and pits. The close proximity to Dere Street suggests that these could have been parts of a road side settlement (ASDU 2007).

***Early medieval***

2.4.16 The name 'Bedale' has its origin in a personal name, meaning *Beda's nook of land,* while 'Aiskew' derived from *Echesol,* the Old Norse for 'Oak Wood' (Jacobs 2009a). Both villages were in existence in the late 11th century and are named in the Domesday Book; Bedale has been a market town since 1251. Leeming appears to have later origins, and is first recorded in 1285 as Lyming (ASWYAS 2005).

2.4.17 It has been suggested that there was an early medieval church located within Bedale on the current site of St Gregory's Church from the 9th century (*ibid*). Recent archaeological work however, has failed to find any trace of an earlier church on the site.

***Medieval***

2.4.18 In the medieval period both Bedale and Aiskew were surrounded by open arable fields, as well as woodland, waste and marsh, with repeated attempts to reclaim unproductive land. There is extensive evidence for field systems connected with medieval arable cultivation throughout the area of the BALB road corridoor in the form of ridge and furrow ploughing (Jacobs 2009a). Further areas of probable medieval ploughing have been recorded on aerial photographs as crop and soil marks (e.g. Site 115). A large proportion of the ridge and furrow accords with the locations of the medieval open fields, for example Benton Field to the north-east of Aiskew village, while some can also be seen in demesne land either side of Rand Way (the present A684 to Crakehall). Later field names may also point to the existence of ridge and furrow ploughing, for example a field on the east side of Bedale Beck is named as 'North Ridges' on a map of 1769 (Site 53). The earthwork remains of ridge and furrows survive infrequently across the area (Sites 67 and 68), often with associated ditches and field boundaries. In other areas, modern agricultural methods have destroyed any above ground remains with ridge and furrows only being evident in geophysical surveys (Sites 12, 13, 55 and 111 Jacobs 2009a).

2.4.19 It has been suggested that there was a medieval castle at Bedale, supposedly constructed by Brian Fitz-Alen, Earl of Arundel, during the reign of Edward I (1272-1307) (Baines 1875, cited in ASWYAS 2005). However, there is little evidence to support this. Foundations of a substantial stone building uncovered in the garden of Bedale Hall and continuing into the field to the north-west of St Gregory's Church are claimed to be part of

this medieval castle (Langdale 1822 cited in ASWYAS 2005). However, other commentators have suggested that a castle never existed at this site (King 1983, 533) and that the foundations may have belonged to a medieval hunting lodge; a deer park located to the north-west is known to have existed in 1251 (Jackson 2001).

2.4.20 A ditch of probable medieval date was recorded on the west side of Leases Road during a watching brief in 2004 (MNY24531; On Site Archaeology 2004). Several ditches, pits, and postholes of medieval origin were recorded at Leeming Lane (On Site Archaeology 2012). The pottery assemblage dated from between 11th-14th centuries, which perhaps suggests a medieval farm complex in the near vicinity (MNY37203).

2.4.21 A deserted medieval village has been identified at Holtby, *c*. 1.8km to the north-west of the central section of the road corridor (Atkins 1992). The earthworks are visible on aerial photographs of the site and include trackways, enclosures, possible tofts, a fish pond/moat, and ridge and furrows (MNY24243).

***Post-medieval***

2.4.22 Land in the vicinity of the BALB road corridoor continued in agricultural use throughout the post-medieval period with the site of a potential 17th-century farmstead being identified on the north side of Bedale Beck, where two probable building platforms survive as earthworks, with associated ridge and furrow earthworks in the nearby vicinity (identified in a walkover survey by ASWYAS 2005). The field boundaries surrounding this site are noted to have remained largely the same since the 17th century (*ibid*). The 1634 map shows that the present boundaries to the west and north of the farmstead platform were in existence by this time.

2.4.23 Many of the other field boundaries in the vicinity of the road corridoor are depicted on a plan of 1772 or the 1838 Tithe map (ASWYAS 2005, figures 9 and 11), although considerable field amalgamation and boundary removal is noted since then. Some of the field boundaries correspond to anomalies identified by geophysical survey (Sites 12 and 66). Although some areas of Aiskew and Bedale had been divided into smaller fields and enclosed during the later medieval period, the large communally-farmed medieval fields were not enclosed until 1596 when an agreement was made between the lords of the manor and the inhabitants of Bedale and Aiskew. The tenants were awarded land in these new fields in place of the strips that they had previous common rights over, although this also limited their rights over remaining areas of common pasture such as on Aiskew Moor (Rudd 1975, 64 & 66). This process coincided with a shift from arable to dairy or mixed farming, with the result that more land was laid down for pasture (*ibid, 66*). This change towards a more pastoral form of farming may account for survival of earthwork remains of ridge and furrow ploughing across areas of the BALB road corridoor.

2.4.24 This route of Dere Street is marked on Ogilby's Map of the Principal Roads of England 1675. It became a Turnpike Road in the 18th century and became known as the Great North Road and then later the A1 (the old A1). Leases Road at Leeming Bar runs along

the alignment of Dere Street. The turnpike road still survives in sections under Leases Road (NAA 2011).

2.4.25 The agricultural landscape was further re-organised in the 18th and 19th centuries, when some of the earlier fields were re-defined and the remaining areas of common and pasture land were enclosed. This final phase of enclosure also caused changes in the settlement pattern, with the gradual establishment of new farms in previously communal areas and the rebuilding or re-organisation of the existing farm complexes.

2.4.26 It was during the late 18th and early 19th century that the majority of the farms within the area were established (such as Aiskew Bank Farm, Sand Hill Farm, Aiskew Grange Farm, Thoroughway House and Fairfield Farm). It is also probable that the farms in the eastern section of the development, such as Blow House Farm, Ham Hall, Field House and Spring House also originated during this period.

2.4.27 The Wensleydale railway crosses the road corridor twice, at its western and eastern ends (Sites 43 and 110 respectively). Originally the Northallerton-Bedale line, it was the first part of a branch that would eventually stretch 34 miles to Hawes at the head of Wensleydale. Authorised by the Great North of England Railway (GNE-) Act of 26 June 1846, it was actually opened by the York, Newcastle & Berwick railway (YN&B) in 1848 (Hoole 1974, 110). This section was open to freight traffic on 24 November 1855 and to passengers on 19 May 1856. The main traffic over the single-line Wensleydale branch was milk and stone, the former from the rich pastures in the valley and the latter from the hills lining each side (*ibid*). The line was closed to passengers in May 1954, and almost half its route mileage by the early 1960s, with the line surviving until 1992 by carrying limestone to the smelters on Teesside. When the freight traffic abandoned the railway, the Ministry of Defence decided to use the line for the occasional transport of military vehicles until the Wensleydale Railway Association (formed in 1990) eventually form a company to take a 100 year lease on the 22 miles of line from Northallerton to Redmire.

2.4.28 The Wensleydale Railway Association reopened to passenger traffic from Leeming Bar to Leyburn in 2003, the following year the section to Redmire was also opened and in 2014 a station was opened at Northallerton West. The line now serves Northallerton West, Leeming Bar, Bedale, Finghall Lane, Leyburn, and Redmire with a station at Scruton currently in the process of restoration.

## 3. PROJECT AIMS

### 3.1 Project Aims

3.1.1 As stated in the WSI the purpose of an archaeological investigation is to determine and understand the nature, function, and character of an archaeological site in its cultural and environmental setting. The general aims of the archaeological investigations were to ensure that all archaeological remains were identified and to mitigate the impact of the development on any such remains by making a record of them (Jacobs 2013, 22).

3.1.2 The specific aims of the archaeological investigations were to:

- to identify, investigate and record any such archaeological remains to the extent possible by the methods put forward in the WSI;
- to determine (so far as possible) the stratigraphic sequence and dating of the deposits or features identified;
- to disseminate the results through deposition of an ordered archive at the suitable repositories for both physical and digital material, the deposition of a detailed report at the Historic Environment Record and publication at a level of detail appropriate to the significance of the results.

3.1.3 Specific aims and objectives for each archaeological site are presented below.

***Site Specific Aims & Objectives***

3.1.4 Aims specific to Site 58, the enclosure north-east of Bedale Beck were:

i. To understand the development of the site and establish a date range for its occupation.
ii. To determine whether there were any structural features within the enclosure or elsewhere.
iii. To record the spatial distribution of artefacts and ecofacts in order to elucidate the location of differing processes at the site.
iv. To understand the different processes at the site.
v. To investigate the nature of any relationship with Site 122 (the villa), so far as possible within the constraints of the available investigation area.

3.1.5 Aims specific to Site 94, Leases Road, were:

i. To determine whether any surfaces or substructures associated with either Dere Street Roman road or the 18th/19th century turnpike road survived under the existing Leases Road;
ii. To locate, expose, investigate and record the best preserved length of any surviving stretch of either or both of the Roman road and/or the turnpike road;
iii. To identify any buried soils and pre-Roman road archaeological features preserved under the Roman road, to investigate and record any such features and to sample the buried soils to investigate the pre-road environment;

iv. To determine by trenching whether there are any roadside ditches or quarry pits or other remains associated with the Roman road in the fields to either side of Leases Road, and if there are any areas of interest to investigate them.

3.1.6 Aims specific to Site 122, the Aiskew Roman villa were:

i. To understand the development of the site from its inception. As discussed by Roskams and Whyman (2007), is there a continuum from the Iron Age or the late-pre Roman Iron Age through to the time when stone buildings were erected or was there a clear break between sequences;

ii. To determine when occupation and activities ceased on the site and whether they continued into the 5th century or later;

iii. To elucidate whether main domestic, agricultural and other activities remained static in one building or whether they moved to other structures around the whole site over time and if so to record that movement;

iv. To establish the contemporary arrangements of each structure (and structural phase) across the villa estate and the wider hinterland, so far as possible within the constraints of an investigation confined within the road corridor;

v. To maximise the potential to understand the spatial use and function of individual structures, rooms, features and areas and thereby the site as a whole through a rigorous sampling programme for artefactual and palaeobotanical evidence;

vi. To investigate the relationship with sub-square enclosure at Site 58, about 800m to the south-west. At present there is no visible connection between the two sites but Site 58 may be part of the estate around Site 122. Site 58 is connected by a trackway to the Bedale Beck.

3.1.7 Aims specific to Site 123, the apparent trackway south-west of Bedale Beck, were:

i. To confirm the nature of the site and establish its date, so far as possible;

ii. To investigate and confirm the nature of other features within the excavation area and determine their date and relationship with the trackway, if any.

# 4. ARCHAEOLOGICAL METHODOLOGIES

## 4.1 Fieldwork

### 4.1.1 General

4.1.1.1 The WSI set out the aims and objectives of the project and, in a series of detailed method statements, described the techniques and approaches to be employed to achieve them (Jacobs 2013). The table below details the proposed mitigation for each site as set out in the WSI and the actual mitigation which did take place; due to factors such as changes in construction levels, at some sites no archaeological work was required.

| Site No. | Site Name | Proposed Mitigation | Actual Mitigation |
|---|---|---|---|
| 12 | Field system, east side of A684 | Record during construction | Record during construction |
| 13 | Field system, west side of Bedale Beck | Record during construction | Change in construction levels. No mitigation required |
| 43 | Section of Northallerton – Leyburn Railway, Bedale | Photographic survey | Photographic survey |
| 55 | Ridge and Furrow north of Aiskew Bank Farm | Record during construction | Change in construction levels. No mitigation required. |
| 56 | Allotments, east of Rectory Wood | Record during construction | Change in construction levels. No mitigation required. |
| 58 | Ditched enclosure, north of Aiskew Bank Farm | Photographic survey<br>Detailed excavation<br>Strip and record | Photographic survey<br>Detailed excavation<br>No strip and record required. Change in construction levels |
| 68 | Field system, north of Sand Hill Farm | Photographic survey<br>Level 3 earthwork survey<br>Recording during construction | Record during construction<br>Earthwork survey (Jacobs 2009b) |
| 82 | Field system south of Thoroughway House | Recording during construction | Change in construction levels<br>No mitigation required. |
| 94 | Dere Street Roman Road, Leases Road | Photographic survey<br>Detailed excavation | Record during construction |
| 110 | Section of the Northallerton to Leyburn railway, Scruton | Photographic survey | Photographic survey |
| 111 | Field System north of Holmfield Farm | Recording during construction | Recording during construction |
| 115 | Field System south of Field House | Recording during construction | Change in construction levels No mitigation required. |
| 122 | Roman villa at Aiskew | Photographic survey<br>Detailed excavation<br>Strip and record of 122 north and south | Photographic survey<br>Detailed excavation<br>Strip and record of 122 north<br>No mitigation for 122 south |
| 123 | Romano-British Trackway | Photographic survey<br>Detailed excavation<br>Strip and record | Photographic survey<br>Partial strip and record |

*Table 2 Archaeological Mitigation*

4.1.1.2 The archaeological fieldwork was undertaken from November 2014 to April 2016. All fieldwork was undertaken in accordance with the relevant standard and guidance documents of the Chartered Institute for Archaeologists (CIfA 2014a, 2014b, and 2014c). PCA is a CIfA-Registered Organisation.

4.1.1.3 Overlying deposits were removed by tracked *c.* 13-tonne 360° excavators, using wide toothless buckets. The topsoil was stripped down to the natural sub-stratum, or the first archaeological horizon; whichever was encountered first.

4.1.1.4 A Trimble Global Navigation Satellite System (GNSS) was used (supplied by Wills Brother Ltd) to map all observed remains. The Smart Rover GNSS provides corrected Ordnance Survey co-ordinates in real time, to an accuracy of 1 cm. No overall 'site survey grid' was set out.

4.1.1.5 The majority of the investigation of archaeological remains was by hand, with cleaning, examination and recording both in plan and in section, where appropriate. Cleaning was restricted to portions of probable and certain archaeological features identified during machine removal of overburden. Investigations followed the normal principals of stratigraphic excavation and were conducted in accordance with the methodology set out in PCA's site manual (PCA 2009).

4.1.1.6 Subject to any particular requirements in the detailed site methodology below, the archaeological features identified during the investigation were excavated as detailed below:

- 100% of all positive features likely to obscure earlier archaeological features;
- discrete negative features (less than 1m diameter): at least 50% by area in addition to all stratigraphic relationships (usually half section);
- discrete negative features (less than 1m diameter): at least 50% by area in addition to all stratigraphic relationships;
- discrete negative features containing good assemblages: 100%
- non-structural linear negative features: at least 20% by area in addition to all stratigraphic relationships and termini;
- structural negative features: 100% unless otherwise agreed with the Client's Representative and the Curator;
- hearths: 100%;
- graves and cremations: 100%;
- in addition to the above, all intersections between features and all terminals of linear features; 100%;
- other features: 25%, unless otherwise agreed with the Consultant and the Curator. Consultant and the Curator.

4.1.1.7 Sections excavated through archaeological features were located using the GNSS and recorded as appropriate, using a single context recording system utilising *pro forma* context recording sheets. Plans were drawn at 1:20 and sections at 1:10.

4.1.1.8 A photographic record of the investigations was compiled using SLR cameras with 35mm monochrome negative film, illustrating in both detail and general context the principal features and finds discovered. The photographic record also included 'working shots' to illustrate more generally the nature of the archaeological operation mounted. All record photographs included a legible graduated metric scale. Digital photography was used to supplement the main photographic record.

4.1.1.9 Where site specific sampling strategies were not required, deposits were selected for sampling in line with the following guidelines

- Samples comprising at least 40 litres per context or 100% of smaller contexts for the recovery of charred plant remains, small bones and fines shall be taken from appropriate contexts were recovered based on the following:
    - Basal/primary fills of at least 50% of all cut archaeological features;
    - 50% of all positive features i.e. anthropogenic soil deposits not contained within a cut feature;
    - 10% of all buried soils/old ground surfaces;
    - 50% of organic rich deposits;
    - 25% of all other anthropogenic soil deposits (secondary fills etc), including all deposits containing any visible charcoal or other carbonised material and all deposits considered to be of particular interest on the basis of artefactual content or other characteristics, or which are considered to be of meeting the aims and objectives of the Archaeological Investigations;
- Samples were not taken from the intersection of features;
- Where good conditions for the preservation of bones were observed, all large bones were collected by hand and sieving of soil samples of up to 100 litres was undertaken as appropriate.

4.1.1.10 The Leica Smart Rover GNSS was used to establish Temporary Bench Marks (TBMs) on the site. The height of all principal strata and features were calculated relative to Ordnance Datum using the TBMs and indicated on the appropriate plans and sections.

4.1.1.11 Wills Brothers Limited were responsible for the backfilling and reinstating of the Licensed Areas at Sites 58 and 122.

### 4.1.2 Record during Construction

4.1.2.1 From the original eight sites defined in the WSI (Jacobs 2013), only three (Sites 12, 94 and 111) were subject to Record during Construction as the construction levels were raised in the other areas. Only part of Site 68 was monitored due to changes in the road elevation; the southern extent of this site has therefore been amalgamated with the strip and map area Site 122 North as the features recorded at this location formed part of the field systems associated with the villa complex. Record during Construction was also undertaken at Site 94, originally designed to be subject to a Detailed Excavation.

4.1.2.2 Recording during Construction took place during the early stages of the main construction works and comprised archaeological monitoring of the removal of topsoil and, where

appropriate, the subsoil. All stripping was supervised by an archaeologist with no further construction in the area until either:

- they were satisfied that no remains of archaeological interest were present in the specified areas;

or

- they were satisfied that all remains of archaeological interest in the specified area have been identified, investigated and recorded in accordance with the requirements set out below.

4.1.2.3 Hand-cleaning of features and selected areas was undertaken to clarify the extent of features and deposits. Discrete features were to be half-sectioned, with one or more cross sections across linear features. All excavated contexts were fully recorded by a descriptive written context record for each stratigraphic unit, together with full photographic records and drawn plans and section at appropriate scales.

### 4.1.3 Strip and Record

4.1.3.1 Three areas were defined for strip and record; part of Site 58; Site 122 North; and Site 122 South. As with the Recording during Construction areas, the need for archaeological investigation was mitigated within the strip and record areas of Site 58 and 122 South as the construction levels of the proposed road were to be higher than the present ground levels therefore any archaeological remains would not be impacted upon by the road scheme. Only Site 122 North was archaeologically monitored and this has been grouped with Record during Construction Site 68 as the features observed in this area relate to the overall landscape of the villa complex.

4.1.3.2 Site 122 North was undertaken prior to the excavation of Site 122. The topsoil and subsoil were removed under archaeological supervision to the level of the natural sub-stratum, the level at which the archaeological deposits were visible. All archaeological features were marked by spray paint as they were exposed by machine excavation.

### 4.1.4 Detailed excavation

4.1.4.1 Four sites were identified for detailed excavation, Sites 58, 94, 122 and 123. As it was determined that Site 94 (Dere Street) had previously been excavated, no mitigation was required

*Site 58 Bedale enclosure*

4.1.4.2 Detailed excavation of Site 58 was undertaken as set out in the WSI (Jacobs 2013). A Method Statement for the archaeological excavation was also produced by Pre-Construct Archaeology Ltd (2015a) to supplement the WSI. The eastern part of the site was excavated under licence to enable the full extent of the enclosure to be excavated. The site was originally interpreted as a double-ditched enclosure, but the trackside ditch and outer enclosure ditch formed a droveway around the main enclosure.

4.1.4.3 Overburden was removed by machine under archaeological supervision to expose the archaeological horizons. The exposed features were then mapped by real-time GPS and/or TST and a pre-excavation plan was produced.

4.1.4.4 The methodology in the WSI for the 100% excavation of the enclosure ditch was based on the results of the trial trenching evaluation which had identified a ditch measuring c. 0.90m deep and 2.50m wide. However, on commencement of the excavation phase of work it very quickly became apparent that only the final upper fill of the latest re-cut of the ditch had been recognised in the evaluation. The ditch proved to be much more substantial, with a complex history of silting, recutting and backfilling.

| **Trench Number** | | **Enclosure Ditch** | | **Outer Ditch** | |
|---|---|---|---|---|---|
| | | ***Trial trench*** | ***Actual dimension*** | ***Trial trench*** | ***Actual dimension*** |
| **5** | Width | 1.35m | 4.06m | | |
| | Depth | 0.40m | 0.94m | | |
| **7** | Width | 2.5m | 3.86m | 2.80m | 3.16m |
| | Depth | 0.90m | 1.14m | 0.60m | 1.10m |

*Table 3: Summary of the evaluation findings (ASDU 2009)*

4.1.4.5 As illustrated in the table above, the dimensions of the ditches at Site 58 were vastly underestimated with the maximum width and depth of the enclosure ditch being 6.52m x 2.12m in the south-eastern corner. As such, the 100% target was unattainable and agreement was reached with the consultant and the local planning authority to excavate 2m long slots through the enclosure ditch at 4m intervals within the road corridor and representative sections within the licensed area. In total twenty-four 2m slots (2m at base) were excavated through the enclosure ditch. Following the recording of sections of each slot, the remaining artefact-rich upper fill of the final recut between each excavated slot was removed by hand for finds retrieval, particularly as human remains had been recovered from this final recut. Both the droveway ditches (known in earlier works as the outer enclosure ditch and the trackway ditches) were excavated 50%.

4.1.4.6 Two human burials were exposed within the base of the latest recut of the enclosure ditch at Site 58 and a license was gained from the Ministry of Justice (Ref. OPR/072/126. Dated 13 February 2015) to exhume the bodies after written, drawn and photographic recording.

4.1.4.7 PCA's archaeometallurgist was consulted during the excavation to discuss the most appropriate strategy for recovering industrial residues from the site. This work was also undertaken according to the relevant guidelines (Historic England 2015).After due consideration, the use of a portable XRF machine was considered to be inappropriate for the site.

4.1.4.8 The WSI required community involvement during the project; details are provided in Appendix 21.

*Site 122 Aiskew Roman villa*

4.1.4.9 Detailed excavation of Site 122 was undertaken as set out in the WSI (Jacobs 2013). A Method Statement compiled by Pre-Construct Archaeology Ltd (2015b) supplemented the WSI and detailed the excavation and recording methodology.

4.1.4.10 The trial trenching evaluation of Site 122 had indicated that survival of structural remains was poor and the original excavation strategy therefore included the excavation of the part of the villa complex to be destroyed by the road as well the Licensed Area, to further understand this poorly-preserved structure. However, upon removal of the topsoil it was immediately apparent that survival of the structure was excellent with intact floor surfaces exposed. Due to the exceptional preservation of the villa building, it was agreed that archaeological remains located within the Licensed Area were to remain *in situ,* subject to hand cleaning and archaeological recording of the upper strata. Only features considered to be under imminent threat upon the resumption of ploughing due to their fragile nature were removed from the Licensed Area, specifically discrete patches of tessellated floor within a corridor and the wall plaster which had collapsed onto the concrete floor within a room in the north-east part of the villa. The lifting of the wall plaster was undertaken under specialist supervision.

4.1.4.11 The archaeological investigation at site 122 was undertaken in phases with the initial phase of work within a section of the bypass road corridor and the Licensed Area forming the eastern part of the site outside of the bypass road corridor scheme. A portion of site 122 initially remained unexcavated due to the requirement for an access track (Haul road) along the route of the proposed bypass. It was agreed that the location of the access track would be sited along the western edge of site 122 to avoid areas of deeply stratified and sensitive archaeological remains. The portion of site 122 that remained *in situ* below the access track was subsequently investigated in the form of a strip and record exercise during the construction phase.

4.1.4.12 The removal of all homogenous overburden was undertaken under archaeological supervision to the top of the first significant archaeological horizon, or the clearly defined top of the natural sub-stratum, whichever was reached first. All features and deposits were cleaned using hand tools and a pre-excavation plan of the site produced. A site grid was established within the excavation areas and tied into the Ordnance Survey grid using a Leica Viva Smart Rover Global Navigation Satellite System (GNSS).

*Site 123 Trackway and other features*

4.1.4.13 Detailed excavation of Site 123 was undertaken as set out in the WSI (Jacobs 2013). The area under archaeological investigation comprised a roughly square area of *c*. 0.3 hectares within a pasture field west of Bedale Beck.

4.1.4.14 The site was originally interpreted as a trackway of unspecified date (Jacobs 2013). Previous archaeological work undertaken across this part of the bypass road scheme comprised geophysical survey and trial trench evaluation (ASDU 2009). The geophysical survey identified three NW-SE aligned parallel linear anomalies interpreted as possible

headlands or field boundaries. This was followed by archaeological evaluation with the trenches sited over the three parallel linear geophysical anomalies recording a single NNW-SSE aligned ditch, a furrow and a post-medieval feature.

4.1.4.15 Upon commencement of the machining it was decided that due to changes in the construction levels within this section of the road scheme, the ground would be made-up and any potential archaeological remains here would not be impacted. Therefore only the south-eastern portion of the original excavation area was opened up for a distance of *c*. 59m by 23m, comprising an area of *c*. 780m$^2$.

### 4.1.5 Photographic recording

4.1.5.1 A full photographic record of Sites 43 and 110 was undertaken using a 35mm analogue single lens reflex camera for the production of black & white photographs, and a high resolution digital camera for the production of colour images.

4.1.5.2 The photographic records illustrated:

- General views of the site in its setting;
- The external appearance of the site, including oblique and parallel shots;
- Any details that was relevant to the site's design, development, or use that did not show up in general photographs.

## 4.2 Post-excavation

4.2.1 The stratigraphic data generated by the project is represented by the written, drawn and photographic records. A total of 903 archaeological contexts were defined during the work. The contents of the paper and photographic elements of the Site Archive are quantified in Section 6. Post-excavation work involved checking and collating site records, grouping contexts and phasing the stratigraphic data. The archaeological remains were assigned to nine broad phases of activity across all sites. A written summary of the archaeological sequence was then compiled, as described below in Section 5.

4.2.2 Artefactual material from the investigations comprised assemblages of flint, pottery, glass, small finds, ceramic building material, painted wall plaster, mortar, stone, industrial residues. For each category of material, an assessment report has been produced including a basic quantification of the material and a statement of its potential for further analysis.

4.2.3 The palaeoenvironmental sampling strategy of the project was to recover bulk samples where appropriate, from well-dated (where possible), stratified deposits covering the main periods or phases of occupation and the range of feature types represented, with specific reference to the project objectives. To this end, 192 bulk samples were recovered from Site 58, of which were 61 were assessed, and 92 bulk samples were taken from Site 122 and Site 122 North, of which 41 were assessed.

4.2.4 A very large assemblage of faunal remains was recovered from Site 58 along with human bone, including two articulated burials, and a very small quantity of shell. Site 122 produced a smaller quantity of faunal remains as well as large shell assemblage of shell

4.2.5 The results and methodologies for each category of artefact and ecofact are provided in the specialists reports (Appendices 4-21).

4.2.6 The complete Site Archive, in this case comprising the written, drawn and photographic records (including all material generated electronically during post-excavation) and the majority of the artefactual assemblage, will be packaged for long term curation.

4.2.7 In preparing the Site Archive for deposition, all relevant standards and guidelines referenced in the Archaeological Archives Forum guidelines document (Brown 2007) will be adhered to, in particular a well-established United Kingdom Institute for Conservation (UKIC) document (Walker, UKIC 1990) and a more recent CIfA publication (CIfA, 2014d). In addition, the depositional requirements of the receiving body will be met in full.

4.2.8 At the time of writing the Site Archive is housed at the Durham Office of PCA, Unit N19a Tursdale Business Park, Durham DH6 5PG and at the London Office of PCA, Unit 54 Brockley Cross Business Centre, 96 Endwell Road, Brockley, London SE4 2PD. When complete, the Site Archive will be deposited with the Yorkshire Museum, under the site code RALB14 with a digital copy of the report sent to Archaeology Data Service to be issued onto OASIS (Online Access to the Index of archaeological investigation).

# 5. RESULTS: THE ARCHAEOLOGICAL SEQUENCE

## 5.1 General

5.1.1 During the investigations, separate stratigraphic entities were assigned unique and individual 'context' numbers, which are indicated in the following text by being placed in square brackets, for example, [100]. The archaeological sequence is described by placing stratigraphic sequences within broad phases, assigned on a scheme-wide basis. An attempt has been made to add interpretation to the data, and correlate these phases with recognised historical and geological periods. Deposits and features have been grouped and have the prefix G.

5.1.2 The archaeological fieldwork has been split into two sections; the archaeological investigations (excavations, strip and record and record during construction sites) and the photographic surveys.

5.1.3 The archaeological remains have been split into nine broad phases of activity and are presented below in a chronological sequence for each site.

## 5.2 Archaeological Investigations

### 5.2.1 Site 58

***Phase 1 Geological***

5.2.1.1 The natural superficial drift geology at Site 58 [2002] comprised firm mid brownish grey boulder clay which was exposed across the entire site. The Bedale enclosure was sited on a NE-SW aligned ridge overlooking the Bedale Beck to the south, with a marked rise to the north-east beyond the enclosure. The maximum recorded height of the natural sub-stratum at Site 58; 43.94m AOD at the centre of site, dropping to 42.09m AOD at the limit of excavation to the north-east and 41.33m AOD at the south-west limit of excavation towards Bedale Beck.

***Phase 2 Iron Age***

5.2.1.2 The earliest archaeological features encountered at the site were three linear ditches; one at the easternmost extent of the site (G1) and two at the northernmost extent (G4 and G5) (Figure 3).

5.2.1.3 **Group 1 (Figure 3 and Figure 4; Section 155):** The ditch was exposed for 7.14m NW–SE, continuing beyond the limit of excavation into the field to the east and truncated by enclosure ditch G11 to the west (Phase 3.2; Figure 5; Slot 2 section). It had a maximum width of 2.60m (Slots 2 and 46) and at its deepest measured 1.06m. The ditch survived at a highest level of 42.71m AOD with the base recorded at 41.67m AOD. The form and function of ditch G1 may suggest that it formed part of an earlier enclosure or boundary feature.

5.2.1.4 G1 ditch was filled by a series of deposits that represented the natural silting of the ditch (G2; maximum thickness 1.06m), [2381] in Section 155, and may have been recut before

a deliberate backfill/period of disuse (G3; maximum thickness 0.80m); [2382] and [2383] in Section 155.

5.2.1.5 A small assemblage of Late Iron Age pottery was recovered from the G2 deposits (Appendix 4). Within the deliberate backfill of the ditch (G3) were industrial residues including slagged clay and micro residues of flake hammerscale (Appendix 17), relatively large quantities of animal bone were recovered from the excavated segment with cattle, sheep/goat and pig represented (Appendix 19). A small assemblage of briquetage and one abraded sherd of imported Baetican amphora dating from between 43 AD to 200 AD was also recovered (Appendix 4). It is considered likely that the latter is intrusive, likely to have been introduced through ploughing.

5.2.1.6 **Group 4 (Figure 3 and Figure 4; Section 129):** A NE-SW aligned irregular ditch exposed within the northernmost extent of Site 58 was recorded for a distance of 14.80m, continuing beyond the limit of excavation to the north. To the south the ditch was truncated by Phase 3.4 trackside ditch G25 (Figure 7; Slot 40). The Group 4 ditch was 1.34m wide and between 0.46m to 0.66m deep (Slots 44 and 45). The maximum height recorded on the ditch was 42.18m AOD with the base of the feature being at 41.35m AOD. The ditch had naturally silted up with deposit G4; a light orange brown sandy clay.

5.2.1.7 No artefacts or ecofacts were recovered from the ditch, it may have formed part of a field system.

5.2.1.8 **Group 5 (Figure 3 and Figure 7; Slot section 28):** To the immediate south of the Group 4 ditch was a shallow curvilinear ditch, recorded for a distance of *c*. 9.8m east-west and truncated at both ends by Phase 3.4 trackside ditch G25. The width of the ditch varied from 0.76m in the west to 0.40m in the east. At its deepest the feature was 0.14m with a maximum height of 42.38m AOD at the top of the ditch and 42.22m AOD at the base. The ditch was filled by a series of deposits; G7 deliberate backfilling and G59, natural silting/accumulation within the ditch.

5.2.1.9 No datable material was recovered from the ditch so its precise age and function remain unknown.

***Phase 3.1 Middle Iron Age***

5.2.1.10 A single ditch has been assigned to Phase 3.1 activity.

5.2.1.11 **Group 8 (Figure 3 and Figure 4; Section 154):** A short length of north–south aligned ditch survived in the entranceway of the Phase 3.2 and 3.3 enclosure ditch (G11 & G15), truncated at each end by the entrance terminals of these later ditches. The ditch had a steep V-shaped profile which became steeper towards the base (Plate 1) and was 2.56m wide at its widest with a maximum depth of 1.54m (42.88m AOD at the top and 41.34m AOD at the base). The form and profile of the feature suggests that it may perhaps represent a palisaded ditch, and it is possible that this represents the first boundary of the Bedale enclosure, elsewhere along its circuit being completely truncated by the subsequent ditch which was of larger proportion. However, as only 2.44m survived truncation by the later enclosure ditch, this is far from certain.

5.2.1.12 The ditch had two depositional events; natural silting deposits (G9) up to 1.10m thick and backfill deposits (G10) up to 0.52m thick.

5.2.1.13 A fragment of corylus charcoal recovered from G9 silting deposit [2378] produced an AMS date of 408 to 212 cal BC (SUERC-69114). A fragment of indeterminate hardwood charcoal from the overlying fill [2377] produced an AMS date of 380 to 202 cal BC (SUERC-69116).

5.2.1.14 A small assemblage of animal bone was recovered from the G10 deposits; mainly cattle with a few fragments of equid and pig bone also present.

***Phase 3.2 and 3.3: Late Iron Age to 2nd-century AD ditched enclosure***

5.2.1.15 Phases 3.2 (G11) and 3.3 (G15) are discussed together as they were essentially part of the same feature, with Phase 3.3 representing the latest recut of the Bedale enclosure ditch. With the exception of a few postholes adjacent to the northern side, there were no surviving internal features and it is evident that centuries of ploughing had resulting in horizontal truncation of archaeological levels at the site, including the destruction of an internal bank, the only evidence for which could be seen in deposits infilling the ditch. The full profile of this substantial ditch therefore did not survive due to plough truncation.

5.2.1.16 Twenty-four slots were excavated through the sub-square enclosure ditch; the excavated slots were 2m long at the base and in some instances the sections had to be stepped due to the depth of the Phase 3.2 ditch (Figure 3; Plate 2). The dimensions of the ditch and recut are summarized below:

| **Slot No.** | **Phase 3.2 Group 11** | | | | **Phase 3.3 Group 15** | | | |
|---|---|---|---|---|---|---|---|---|
| | *Width* | *Depth* | *mAOD* | | *Width* | *Depth* | *mAOD* | |
| | | | *Top* | *Base* | | | *Top* | *Base* |
| **1** | 4.48m | 2.12m | 42.87 | 40.65 | 3.62m | 1.36m | 42.85 | 41.41 |
| **2** | 6.48m | 1.48m | 42.89 | 41.33 | 4.58m | 1.06m | 42.91 | 41.73 |
| **3** | 5.42m | 1.78m | 43.06 | 41.08 | 3.9m | 1.46m | 43.00 | 41.64 |
| **4** | 5.62m | 1.94m | 43.02 | 41.12 | 4.04m | 1.36m | 43.00 | 41.64 |
| **5** | 3.26m | 1.48m | 43.07 | 41.89 | 3.46m | 1.22m | 43.01 | 41.79 |
| **6** | 3.8m | 1.22m | 43.36 | 42.14 | 3.04m | 1.1m | 43.34 | 42.2 |
| **7** | 3.84m | 0.82m | 43.35 | 42.31 | 1.88m | 0.6m | 43.19 | 42.59 |
| **8** | 3.60m | 0.76m | 43.3 | 42.28 | 2.24m | 0.3m | 43.50 | 42.78 |
| **9** | 2.58m | 1.16m | 43.68 | 42.54 | 1.78m | 0.58m | 43.66 | 43.02 |
| **10** | 4.06m | 0.94m | 43.61 | 42.65 | 1.6m | 0.48m | 43.61 | 43.09 |
| **11** | 3.14m | 0.80m | 43.49 | 42.53 | 1.54m | 0.42m | 43.41 | 42.91 |
| **12** | 3.68m | 1.00m | 43.07 | 42.03 | 2.4m | 0.60m | 43.07 | 42.31 |
| **13** | 3.72m | 0.86m | 43.16 | 42.08 | 2.50m | 0.62m | 43.08 | 42.36 |
| **14** | 3.72m | 0.81m | 43.18 | 42.01 | 2.60m | 0.74m | 43.08 | 42.09 |
| **15** | 4.28m | 0.88m | 42.75 | 41.65 | 2.30m | 0.62m | 42.63 | 41.89 |
| **16** | 4.14m | 0.94m | 42.75 | 41.63 | 2.58m | 0.62m | 42.61 | 41.89 |
| **17** | 3.80m | 0.84m | 42.98 | 41.82 | 2.46m | 0.52m | 42.92 | 42.60 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **18** | 2.90m | 1.00m | 43.21 | 42.17 | 2.12m | 0.42m | 43.21 | 42.73 |
| **19** | 3.78m | 1.10m | 43.24 | 42.02 | 2.76m | 0.68m | 43.24 | 42.48 |
| **20** | 3.52m | 1.22m | 43.30 | 42.00 | 2.30m | 0.50m | 43.28 | 42.76 |
| **21** | 4.12m | 1.40m | 43.25 | 41.75 | 2.34m | 0.80m | 43.19 | 42.35 |
| **22** | 3.74m | 1.38m | 43.03 | 41.61 | 2.68m | 1.14m | 43.03 | 1.14 |
| **23** | 4.72m | 2.10m | 42.87 | 40.77 | 2.98m | 1.26m | 42.88 | 41.62 |
| **24** | 4.34m | 2.16m | 42.86 | 40.70 | 3.90m | 1.14m | 42.86 | 41.62 |

Table 4: Phase 3.2 and 3.3 Enclosure Ditch G11 and recut G15 dimensions

5.2.1.17 **Group 11 (Figure 3 and Figure 5 & 6; Slots 1-24):** The earliest full circuit of the enclosure boundary to survive (Phase 3.2, Group 11) comprised a wide and deep, steep-sided ditch with a flat to slightly concave base. The internal dimensions of the sub-square enclosure encompassed by this ditch were 53.89m north–south and 45.26m east–west (total internal area of 0.24 hectares), although the presence of an internal bank would have reduced the area inside the enclosure. Externally the enclosure measured 61.22m north-south and 58.54m east-west. On the eastern side of the enclosure was a 2.40m-wide entrance defined by rounded ditch terminals.

5.2.1.18 At its widest in the south-eastern corner of the enclosure, the ditch measured 6.48m across, Slot 2 (Plate 3). The narrowest excavated section (2.58m) was at the south-western corner, Slot 9 (Plate 4). The deepest section at 2.16m was at the northern terminal of the eastern entranceway, Slot 24 (Plate 5) whilst the shallowest at 0.76m was at the south-western corner, Slot 8 (Plate 6).

5.2.1.19 The Bedale enclosure was constructed on a NE-SW aligned ridge overlooking the Bedale Beck to the south. The highest part of the enclosure was in the south-west corner where the maximum surviving height of the ditch was between 43.49m OD and 43.68mOD (Slots 11 and 9). The northern part of the enclosure was relatively high with the ditch in this area recorded at maximum of heights of 43.21m OD to 43.30m OD (Slots 18 and 20) On the east side of the enclosure and south-east corner the ditch recorded at maximum heights of between 42.87mOD and 43.02m OD (Slots 23 and 4). The lowest part was in the north-west corner where the maximum surviving height of the ditch was 41.63m OD (Slot 16).

5.2.1.20 Four depositional events have been identified to date within the Phase 3.2 ditch, although it is evident in some of the excavated slots that the ditch was subject to a more complex sequence of recutting. G52: the internal bank of the enclosure collapsing into the ditch; G12: natural silting; G13 backfilling near the entrance; and G14: natural silting near the entranceway. At the northern entrance terminal, where the ditch was at its deepest, the G13 backfilling included large quantities of stone presumably to consolidate this area which was maintained as an entrance during the final recut of the enclosure ditch (Plate 5). The table below details the thickness of each event within the slots:

| Slot No. | Maximum Thickness of Deposit | | | |
|---|---|---|---|---|
| | G52 | G12 | G13 | G14 |
| 1 | | 0.50m | 0.60m | 0.42m |
| 2 | 0.58m | 0.38m | | |
| 3 | 0.64m | 0.70m | | |
| 4 | 0.72m | | | |
| 5 | 0.90m | | | |
| 6 | 0.32m | 0.18m | | |
| 7 | 0.58m | 0.28m | | |
| 8 | 0.60m | 0.50m | | |
| 9 | | 0.50m | | |
| 10 | 0.36m | 0.66m | | |
| 11 | 0.32m | 0.80m | | |
| 12 | 0.46m | 0.46m | | |
| 13 | 0.28m | 0.44m | | |
| 14 | | 0.54m | | |
| 15 | 0.42m | 0.24m | | |
| 16 | 0.22m | 0.56m | | |
| 17 | 0.38m | 0.24m | | |
| 18 | 0.60m | 0.60m | | |
| 19 | 0.14m | 0.50m | | |
| 20 | 0.42m | 0.72m | | |
| 21 | | 0.64m | | |
| 22 | 0.32m | 0.38m | | |
| 23 | 0.75m | 0.96m | | |
| 24 | | 0.70m | 0.42m | 0.30m |

Table 5: Maximum thickness of depositional events within enclosure ditch G11

5.2.1.21 Thirty-six pottery sherds were recovered from the Phase 3.2 G11 enclosure ditch (from Slots 4, 17, 18, 19 & 21), and with the exception of one sherd, these were all handmade local vessels (Appendix 4). Pottery of this type is not closely datable as it was manufactured over many centuries; in northern Britain such handmade Iron Age pottery continued to be manufactured into the second century AD (Gerrard 2012; Willis 2016). A single sherd of pottery dated AD 43 to 200 was also recovered from the Phase 3.2 ditch, but this is likely to be intrusive from a later recut give the AMS date obtained from the Phase 3.2 ditch. A fragment of Maloideae charcoal recovered from fill [2048] of Slot 3 in the south-eastern corner produced an AMS date of 377 to 197 cal BC (SUERC-69113) (Appendix 22). A fragment of Cf. Prunus charcoal from fill [2045] within Slot 3 produced an AMS date of 702 to 379 cal BC (SUERC-69115).

5.2.1.22 A large proportion of the faunal remains recovered from the Phase 3.2 ditch came from Slot 21 on the northern side of the enclosure, 209 fragments; the remaining slots providing no more than 50 bones. Cattle dominated the assemblage, with sheep/goat and pig also represented; there was a wide distribution of skeletal parts of all three major domesticates. A concentration of equid bones was recovered from Slot 21 (11 out of 29 bones in total), again including a mix of parts and no evidence for bone working. Other species in the assemblage included roe deer and dog along with single bones from mallard and raven. Smaller species including mouse and vole were recovered from environmental samples. A craft interpretation could perhaps account for the single roe deer fragment, (an antler piece from Slot 11), while the mallard humerus from Slot 21 could represent an indication of the consumption of wild game.

5.2.1.23 A small quantity of iron-smithing debris was recovered from bulk environmental samples taken from the infilling of the Phase 3.2 ditch in Slots 3 and 4 in the south-east corner of the enclosure. The upper fill of the latest recut of the ditch in this area produced significant quantities of metal-working debris suggesting that this part of the enclosure may have been a focus for such activity over a sustained period.

5.2.1.24 **Group 15 (Figure 3 and Figures 5 & 6; Slots 1-24):** The final recut of the enclosure ditch (Phase 3.3) comprised a steep-sided feature with a concave base in some areas with a wide U-shaped profile in other parts of the circuit. The internal dimensions of the enclosure bounded by this ditch were 55.65m north–south and 45.50m east–west, although again an internal bank would have reduced the internal space. Externally the enclosure measured 60.48m north–south and 52.78m east–west. The entrance was maintained in the same location with rounded ditch terminals defining a 3.83m-wide entrance, slightly wider than the earlier entrance at this location.

5.2.1.25 As with the Phase 3.2 ditch, the widest section of the recut was in the south-eastern corner of the enclosure at 4.58m wide within Slot 2 (Plate 2), and the narrowest was at the south-western corner at 1.54m wide within Slot 11 (Plate 7). The deepest section was within Slot 3 (Plate 8) at 1.46m whilst the shallowest section was in Slot 8 (Plate 6) at 0.30m deep at the south-western corner of the enclosure. These variations in the dimensions of the recut are again indicative of the scale of truncation by episodes of ploughing within the agricultural landscapes of the medieval and post medieval periods.

5.2.1.26 Seven depositional events were recorded within the 24 excavated slots through the enclosure ditch recut (listed in stratigraphic order from the earliest). G16 and 17, two crouched inhumations at the base of the recut (described below); Group 53 backfilling of the recut; G18 natural silting; G19 a further episode of backfilling; G20 more natural silting and G54 the final backfilling of the enclosure ditch recut which contained large quantities of occupation debris including bone-manufacturing and metal-working waste. The table below details the maximum thickness of each depositional events within the corresponding slot:

| Slot No. | Maximum Thickness of Deposit | | | | |
|---|---|---|---|---|---|
| | G53 | G18 | G19 | G20 | G54 |
| 1 | | 0.38m | 0.18m | 0.10m | 0.98m |
| 2 | 0.20m | 0.18m | 0.34m | 0.16m | 0.84m |
| 3 | | 0.12m | 0.38m | 0.24m | 1.00m |
| 4 | | 0.42m | 0.70m | 0.40m | |
| 5 | 0.18m | | | | |
| 6 | | 0.46m | 0.12m | 0.18m | 0.68m |
| 7 | | 0.12m | 0.34m | 0.26m | |
| 8 | | 0.30m | | | |
| 9 | 0.58m | | | | |
| 10 | 0.48m | | | | |
| 11 | 0.42m | | | | |
| 12 | | 0.22m | 0.50m | | |
| 13 | 0.42m | 0.24m | | | |
| 14 | | 0.24m | 0.54m | | |
| 15 | | 0.18m | 0.44m | | |
| 16 | 0.62m | | | | |
| 17 | 0.52m | | | | |
| 18 | 0.42m | | | | |
| 19 | 0.18m | 0.46m | 0.48m | 0.12m | |
| 20 | 0.48m | | | | |
| 21 | 0.80m | | | | |
| 22 | | 0.12m | 1.02m | | |
| 23 | 0.25m | 0.56m | 0.17m | 0.34m | 0.35m |
| 24 | 0.40m | 0.34m | 0.76m | | |

Table: 6 Maximum thickness of depositional events with enclosure ditch recut G15

5.2.1.27 The upper fills of the latest recut of the ditch in the baulks between each of the 24 fully excavated slots were excavated to recover the significant artefactual and ecofactual remains which were present within the main backfilling deposit within this ditch. The depositional events within these baulk sections comprised G55 backfilling (equivalent to the G54 backfilling within the 24 slots); G51 a discrete dump of animal bone in the north-west corner of the enclosure ditch recut (Plate 9); and G56, the natural silting of the upper part of the recut following the main episode of backfilling, only evident in a few areas, presumably as much of this depositional episode has been removed by later plough truncation.

5.2.1.28 Two crouched burials (G16 & G17) had been placed within the base of the latest recut of the enclosure ditch (Phase 3.3 G15). Skeleton [2099] (Plate 10) was located in the south-western corner of the enclosure (Slot 7). The feet of skeleton [2099] were resting on a

large stone. This individual, an adolescent-young adult of indeterminate sex, was 90% complete and in a good-moderate condition (Appendix 18). The only skeletal pathology evident was a Schmorl's node recorded on the twelfth thoracic vertebra, along with dental pathologies; the observed defects in dental enamel are indicators of stress caused by such factors as disease or nutritional deficiency experienced during childhood.

5.2.1.29 Skeleton [2091] was located along the northern side of the enclosure ditch recut, within Slot 20 (Plate 11). A large stone was positioned in close proximity to the skull and a copper-alloy pin (SF. 113) was found on the upper left side of the chest. The tip of the pin was bent and the other end bent and incomplete; the dimensions of the object (48mm long) suggest that this may have originally been part of a brooch. This skeleton, of a mid-adult probable male individual, was also 90% complete and in a good-moderate condition. A number of different skeletal pathologies were noted including joint disease, trauma and dental disease. Joint disease was the most widespread condition in this individual; degeneration of this kind is associated with such factors such as wear and tear, age, genetic predisposition and occasionally being the result of other pathological conditions such as rickets or trauma. The most serious condition to be observed was compression fractures of two vertebral bodies, potentially an indicator of osteoporosis. A single instance of trauma was noted; a well-healed fracture to the distal shaft of the right ulna; probably the result of putting an arm out to arrest a fall. The dentition was marked by severe wear on the maxillary right first pre-molar and the left first molar and on all extant mandibular dentition. Several carious lesions were found on the mandibular dentition, notably the right and left third molars and the left first molar.

5.2.1.30 Disarticulated human bone was recovered from the backfill of the latest recut of the enclosure (Slots 5, 13, 14, 16, 21, 22, 23) and from the baulk between Slots 5 and 6 and Slots 14 and 15. This is summarised in the table below:

| Slot No. | Group No. | Skeletal Element | Sex | Age |
|---|---|---|---|---|
| **5** | 53 | Femur (shaft fragment) | Indeterminate | Adult |
| | | Femur (distal condyle fragments x 2) | | Unknown |
| | | Tibia (left proximal shaft) | | Adult? |
| **13** | 53 | Femur (shaft fragments) | Indeterminate | Adult? |
| **14** | 19 | Clavicle (right midshaft-sternal end x1) | Indeterminate | Juvenlie? |
| **16** | 53 | Skull (zygomatic right x 2) | Indeterminate | Adult? |
| **21** | 53 | Skull (parietal fragments) | Indeterminate | Adult? |
| **22** | 19 | Skull (parietal fragment) | Indeterminate | Adult? |

| | | | | |
|---|---|---|---|---|
| **23** | 54 | Femur (shaft fragment) | Indeterminate | Unknown |
| **Human Remains recovered from the section baulks** | | | | |
| **Between Slots 5 & 6** | 55 | Humerus (distal shaft fragment) | Indeterminate | Unknown |
| **Between Slots 14 & 15** | 55 | Humerus (mid distal shaft) | Indeterminate | Juvenile |

Table 7: Disarticulated human bone found within Phase 3.3- Enclosure ditch recut.

5.2.1.31 No pathological traces were found on any of the disarticulated elements and the entire collection of disarticulated bone represented at a minimum two individuals.

5.2.1.32 The Phase 3.3 G15 enclosure ditch recut produced 220 pottery sherds from Slots 1, 2, 3, 4, 5, 6, 12, 13, 14, 15, 16, 18, 19, 20, 21, 23, 24 and the baulks between Slots 5 & 6, 9 & 10, 11& 12, 12 & 13, 13 & 14, 15 & 16, 16 & 17, 17 & 18, 19 & 20, 20 & 21. The majority of the assemblage was local handmade Iron Age tradition pottery and therefore not closely datable. However a small assemblage of Roman imported and Romano-British material was also present with the fabric present indicating a latest date range of AD 120–200 (Appendix 4). Ten sherds of oxidised pottery, including a flagon handle and a flagon rim of probable Hadrianic or earlier date were recovered. Four sherds of samian from 2nd-century vessels were also recovered from the G15 enclosure ditch recut Slots 1,3, 18 and within the baulk between Slots 13 & 14 (Appendix 5). No material of third-century date was recovered from the ditch indicating that activity had ceased by this period. Within this assemblage were also 13 sherds of briquetage recovered from Slots 2, 3, 4, 21, and from the baulks between Slots 5 & 6, 16 & 17 of the enclosure ditch recut G15 (Appendix 4). A total of three fragments of ceramic building material were recovered from fill G56 of the Phase 3.3 enclosure ditch (Appendix 9). The fragments comprised pieces of prehistoric fired clay and Roman tile.

5.2.1.33 For an indigenous site in the north of England, the small-finds assemblage recovered from the backfill of the latest recut of the enclosure ditch is large and extensive (Appendix 12). The items comprise a mixture of copper-alloy, antler, bone, stone and iron objects and date from the Late Iron Age to the 2nd century AD. Amongst the faunal remains there was evidence for bone and antler manufacturing, as described below and Appendix 19.

5.2.1.34 Objects associated with production comprised weaving combs (Phase 3.2; SF. 338. Phase 3.3; SF. 102 & 353), pointed bone tools (Phase 3.3; SF. 351, 357 & 358), spindle whorl (Phase 3.3; SF. 111), serrated ribs and handles (Phase 3.3; serrated ribs SF.133, 350 and handles SF. 154, 349). These objects all suggest that textile-working and other forms of craft-working were carried out at the settlement, although there were no needles present. A single piece of antler was recovered from Phase 3.3: Slot 20 (G53, SF. 352). The antler was polished and had sawn ends which suggest the craft-working of antler.

5.2.1.35 A small number of personal adornments were recovered. A copper-alloy finger ring recovered from Phase 3.3 G54 is a purely Roman type of object (SF. 329) and a

Colchester-derivative brooch (Phase 3.3, G45; SF.139) is a typical object of the late 1st and 2nd centuries (Appendix 12).

5.2.1.36 The only hint of military activity is a small copper-alloy mount (Phase 3.3, Slot 18, G53, SF. 120). Given the early Roman chronology of the site and its proximity to Catterick and the main route north, the influence of the Roman army might be expected. Certainly it suggests that there was interaction at the site between soldiers and the local inhabitants.

5.2.1.37 A bone stylus (Phase 3.3; G55, SF. 156) suggests that some people were maintaining literate records.

5.2.1.38 A bone toggle (Phase 3.3; G56, SF. 182) is an object which, when combined with the copper staining (possibly from other no longer extant bridle fittings), might be indicative of horse riding which would presumably be an elite activity.

5.2.1.39 There was little evidence for structural fittings from the site. A small collection of nails suggests their use in wood-working and carpentry but there are few large examples. This might suggest that any structures on the site were built in an indigenous fashion and did not require the use of large quantities of nails.

5.2.1.40 Two querns (a saddle and a beehive quern) and a fragment of a possible rotary quern were recovered from the Phase 3.3 ditch fills (Appendix 14). A saddle quern (Slot 23, G54, SF. 332) is a relatively rare example of a well-stratified saddle from a Late Iron Age/early Roman period site, exhibiting a light degree of wear that hints that the object may have been deposited shortly after acquisition. A beehive quern recovered from Slot 19: Group 19 (SF. 104) is substantially complete and shows signs of being very heavily and asymmetrically worn. A possible fragmented rotary quern from Phase 3.3 Slot 1 had no diagnostic features with all surfaces being worn/eroded.

5.2.1.41 The Phase 3.3 G15 enclosure ditch recut backfill also contained a significant quantity of metal-working debris (Appendix 17). Much of the metal-working debris contained a relatively high proportion of slag fragments that cannot be attributed to a specific metallurgical process, but there was significant evidence for both ferrous and non-ferrous metal production (largely concentrated in Slots 2-4, on the south-eastern corner of the enclosure ditch and Slots 19-20 on the northern side). The presence of fragments of crucible with copper rich residues, as well as possible copper-alloy casting and working waste in the small finds recovered would suggest that copper alloys were being produced in the immediate vicinity. The assemblage recovered from the enclosure ditch also included evidence of lead casting/melting waste. Dr MacKenzie (Appendix 17) notes that the presence and types of small finds that were found within the same deposits as the metallurgical slag and micro residues suggests that copper based alloy was being melted (or indeed smelted) and cast at the site, and the scraps/offcuts of worked metal suggest that a craft person(s) may have been manufacturing items on the site. There is a possibility that the scraps/offcuts of metal are pieces brought in from elsewhere for re-melting, although combined with the archaeological evidence it seems just as likely that the production of copper/copper alloy artefacts was being carried out on site. Evidence of

ferrous metal production largely consisted of residues that were indicative of iron/steel blacksmithing as many of the environmental samples contained flake hammerscales and spheroidal hammerslag with a significant concentration of residues recovered from Slot 3 in the south-eastern corner of the enclosure. The assemblage also contained numerous fragments of fired clay, many of which are heavily slagged which suggest that the clay may have formed the lining of a smithing hearth, or small furnace that was being used to produce non-ferrous metals at the site.

5.2.1.42 A large collection of faunal remains was recovered from the latest recut of the 3.3 enclosure ditch (Appendix 19). There is a notably larger array of species compared to previous phases; this may well relate more to the quantity of bones rather than a broader usage of domesticates and wild resources. Both large and small game species are represented, however, 13 out of the 14 red deer fragments were antler pieces, all of which have been cut and/or sawn, indicative of antler working waste. Poultry is certainly better represented and there are also a few fish bones taken from the samples, including gadidae (probably cod) and freshwater eel. Swan and woodcock were retrieved from the material excavated in the baulks. An abundance of equid remains may be suggestive of working waste, at least ultimately, with a broad array of disarticulated parts and several sawn items. In addition, there are four butchered bones, indicating probable dressing and skinning cuts. Dog is also relatively abundant in Phase 3.3, also comprising various disarticulated parts, although with a concentration of size bones, possibly from the same adult individual within Slot 14. Furthermore, there is also a reasonable quantity of incidental species following on from the previous phases, as small rodents and amphibians. Of particular interest is the presence of the house mouse, a species which was certainly present in this country from the Iron Age period but notably better represented by the Roman era.

5.2.1.43 The proportion of cattle markedly decreases from Phase 3.2 to 3.3 accompanied by a notable increase in sheep or goat (Appendix 19: Table 8). However, of particular interest is the notably large proportion of 1st year cattle and to a lesser extent of similarly aged sheep. This certainly includes animals which can be equated with infant mortalities, signifying local stock breeding. It can be suggested that the large collection of bones denotes a sizeable population, largely involved in cattle herding. Moreover, there is certainly evidence for local production with Phases 3.2 and 3.3 as demonstrated by the presence of young calves, although also of interest was the high proportion of older calves. This could also be indicative of a production centre, the culled youngsters representing those animals not required for breeding or working purposes

5.2.1.44 37 environmental samples were analysed from the enclosure ditch; 19 from the Phase 3.2 G11 and 18 from Phase 3.3 recut G15. Considering the size of the assemblage, and the amount of material processed however, the concentration of ecofacts is judged to be relatively poor (Appendix 20). This may be related to the way in which the ditches were used by the occupants of the enclosure, though considering the wealth of animal bone

and other occupational debris that has been found within the enclosure that seems unlikely, and may be due to preservational factors.

5.2.1.45 The highest concentration of seed and grains was observed within Phases 3.2 and 3.3. This and the low concentrations of charred grain that occur throughout the sample set, are a further indication of near constant occupation, though the lack of glume and base fragments indicates that whilst cereals may be have been consumed at the site, they were being processed elsewhere and perhaps even traded locally. Of particular interest is sample <269> (Phase 3.3: Slot 24, northern entrance terminal); this contained a substantial concentration of grain and both charred and uncharred seeds and full quantification of the species present may shed light on the types of agriculture undertaken locally.

5.2.1.46 The samples did however produce high concentrations of charcoal, though the majority of pieces were too small for identification. This indicated that the site was under constant occupation; with low levels of charcoal indicating burning as a function of everyday life, as well as perhaps for industrial purposes. In several areas peaks in charcoal concentration coincided with the presence of hammerscale, slag, and other industrial residues further evidence of the probable smelting and indeed smithing that was being undertaken at the site.

5.2.1.47 Three samples from Phase 3.3 enclosure ditch recut (<126>, <159> & <269>) contained sufficient sized charcoal fragments to conduct an assessment of the remains (Appendix 21). Wood charcoal macro-remains provide direct information about the contemporary local vegetation and modes of wood exploitation, most often the use of wood as fuel, and are thus a valuable contribution to better understanding local environmental history and plant exploitation. The taxa identified within the samples are all hardwoods native to England and included alder (*alnus glutinosa*), hazel (*corylus avellana*), ash (*fraxinus excelsior*), blackthorn; cherries (*prunus sp.*), oak (*quercus*), and rowan (*maloideae*). The apparent lack of dominance of any particular taxon suggests that fuel-wood use may not have been especially selective, although this remains unclear. Alder is present in small quantities indicating the presence of wetland or riverine habitats along with deciduous woodland and scrub, the latter of which, it seems, more conspicuously exploited. In summary, initial observations taken from the environmental data suggest the presence of open areas of grassland and the consumption of cereals at the site along with the aforementioned metalworking.

***Phase 3.4 Ditched trackway***

5.2.1.48 Features assigned to Phase 3.4 comprised trackside ditches G25 (and recut G32), G28 and G30, metalled trackway G36. Pit G23, located to the south of the Bedale enclosure, was also assigned to this phase of activity in the absence of any artefactual material or stratigraphic relationship to any other phase of activity, though could well date from earlier phases.

5.2.1.49 **Group 25 & recut G32 (Figure 3, Figure 7; Slots 25-44), Group 28 & 30 (Figure 3, Figure 8; Slots 35-147):** A section of the double ditched trackway which had been identified on aerial photographs and by geophysical survey, leading north-eastwards from Bedale Beck towards the Bedale enclosure, was exposed within the excavation area. The south-eastern ditch (G30) (Plate 12) cut into the Group 15 backfill of the latest Phase 3.3 enclosure recut, demonstrating that it dates from after the main backfilling of the ditch. However, as the western and northern sides of the enclosure evidently formed one side of the trackway leading around the enclosure, the bank and/or upper part of the ditch must still have survived as an earthwork when the trackway was in use. The northern trackside ditch (G25), had been recut (G32), indicating longevity of use. No recut was visible in the sections excavated across the western ditch (G28) and the south-eastern ditch, though of course it is possible that a later and larger recut in these areas could had removed all traces of the original ditches. The trackway was *c*. 15m wide in the south-east and 16.65m wide in the north. The northern trackside had a terminal in the east and there is no sign on aerial photographs of the track continuing beyond this point suggesting that the feature was used to herd animals to and from the beck and around the enclosure.

5.2.1.50 Twenty slots were excavated through the trackside ditches; eleven in the northern section, three in the western, and seven in the south-eastern. The table below summarises the dimensions of the trackside ditch:

| **Slot No.** | **Dimensions** | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | *Width* | *Depth* | *mAOD* | | *Width* | *Depth* | *mAOD* | |
| | | | *Top* | *Base* | | | *Top* | *Base* |
| | **Northern Trackside Ditch** | | | | | | | |
| | **G25** | | | | **Recut G32** | | | |
| **25** | 2.26m | 1.03m | 41.62 | 40.06 | 1.10m | 0.48m | 41.58 | 41.08 |
| **26** | 1.89m | 0.86m | 41.54 | 40.71 | 1.18m | 0.34m | 41.54 | 41.21 |
| **27** | 2.06m | 0.82m | 41.90 | 41.14 | 0.98m | 0.34m | 41.98 | 41.90 |
| **28** | 1.96m | 1.02m | 42.10 | 41.12 | 1.30m | 0.66m | 42.18 | 41.48 |
| **29** | - | - | 42.74 | - | - | 0.30m | 42.34 | 42.04 |
| **30** | 3.16m | 1.08m | 42.33 | 41.23 | 1.82m | 0.74m | 42.33 | 42.37 |
| **31** | 2.18m | 1.06m | 42.51 | 41.39 | 1.64m | 0.68m | 42.49 | 41.79 |
| **32** | 2.50m | 0.92m | 42.59 | 41.65 | 1.90m | 0.64m | 42.59 | 41.87 |
| **33** | 2.48m | 0.92m | 42.46 | 41.54 | 1.68m | 0.48m | 42.46 | 42.00 |
| **34** | 2.60m | 0.86m | 42.54 | 41.62 | 1.34m | 0.48m | 42.54 | 41.98 |
| | **Western Trackside Ditch G28** | | | | | | | |
| **35** | 1.36m | 0.44m | 42.23 | 41.72 | | | | |
| **36** | 1.40m | 0.44m | 41.78 | 41.30 | | | | |
| **37** | 1.90m | 0.74m | 42.03 | 41.29 | | | | |

| | South-eastern Trackside Ditch G30 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **38** | Truncated | 0.86m | 42.11 | 41.21 | | | | |
| **39** | 1.82m | 0.52m | 42.09 | 41.54 | | | | |
| **40** | 1.98m | 0.60m | 42.41 | 41.71 | | | | |
| **41** | 2.56m | 0.74m | 42.64 | 41.88 | | | | |
| **42** | 2.50m | 0.80m | 42.71 | 41.83 | | | | |
| **43** | 1.22m | 0.31m | 42.99 | 42.69 | | | | |
| **8** | 1.44m | 0.44m | 43.34 | 42.70 | | | | |

*Table 8: Dimensions of Trackside ditches*
*(Note Slot 29 is a relationship slot so true dimensions not given).*

5.2.1.51 The northern trackside ditch G25 was exposed for a distance of *c.* 49m east–west continuing beyond the limit of excavation to the west and with a rounded terminal in the east. At its widest the ditch measured 3.16m across, Slot 30, and at its narrowest was 1.89m wide, Slot 26. The depth of the ditch varied from 1.06m in Slot 31 to 0.82m within Slot 27 with the base of the ditch at the eastern terminal sloping down to the west from 41.32m AOD in Slot 34 down to 40.06m AOD within Slot 25.

5.2.1.52 A shallower recut (G32) was observed within the northern trackside ditch which had a maximum depth of 0.74m in Slot 30 and a maximum width of 1.90m within Slot 32. The shallowest section of the recut was 0.30m in Slot 29 and narrowest 0.98m within Slot 27. Like the original ditch, the recut G32, sloped down from east to west from 41.98m AOD in Slot 34 to 41.08m AOD within Slot 25.

5.2.1.53 The western trackside ditch G28 was exposed in the south-western corner of excavation for a distance of 20.20m NE–SW, continuing beyond the limits of excavation. The 2005 geophysical survey (WYAS) shows the trackside ditch curving to the north to join up with the northern trackside ditch; this conjectured line is shown on Figure 3. The haul road, where the trackside ditch would have continued, was not excavated down to the archaeological horizon as the construction level for the bypass was reached. The width of the ditch varied from 1.90m within Slot 37 to 1.36m within Slot 35 with the depth varying from 0.74m in Slot 36 to 0.44m in Slots 35 & 36. The base of the ditch sloped from south to north from 41.72m AOD in Slot 35 down to 41.29m AOD in Slot 37.

5.2.1.54 The south-eastern trackside ditch G30 was aligned north-east/south-west and was exposed for a distance of 41.40m, continuing beyond the limit of excavation in the south-east and with a terminal in the north-east which cut into the backfill (Groups 12 and 18) of the latest recut (Phase 3.3) of the Bedale enclosure ditch. The width of this element of the trackway varied from 2.56m in Slot 41 narrowing to 1.22m within Slot 43, with the depth varying from 0.86m in Slot 38 to 0.31m within Slot 43. Unlike the base of the western trackside ditch which sloped down to the north, the base of the south-eastern ditch sloped down from 42.70m AOD in Slot 8 to 41.21m AOD to the south-west in Slot 38.

5.2.1.55 Five depositional events were recorded in the trackside ditches; natural silting G26 in the northern trackside ditch; natural silting G33 and backfilling G34 of the northern trackside

ditch recut; natural silting G29 of the western trackside ditch and natural silting G31 of the south-eastern trackside ditch. The table below summarises the maximum thickness of the depositional events:

| Slot No. | Dimensions | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | *Width* | *Depth* | *mAOD* | | *Width* | *Depth* | *mAOD* | |
| | | | *Top* | *Base* | | | *Top* | *Base* |
| | **Northern Trackside Ditch** | | | | | | | |
| | **G25** | | | | **Recut G32** | | | |
| **25** | 2.26m | 1.03m | 41.62 | 40.06 | 1.10m | 0.48m | 41.58 | 41.08 |
| **26** | 1.89m | 0.86m | 41.54 | 40.71 | 1.18m | 0.34m | 41.54 | 41.21 |
| **27** | 2.06m | 0.82m | 41.90 | 41.14 | 0.98m | 0.34m | 41.98 | 41.90 |
| **28** | 1.96m | 1.02m | 42.10 | 41.12 | 1.30m | 0.66m | 42.18 | 41.48 |
| **29** | - | - | 42.74 | - | - | 0.30m | 42.34 | 42.04 |
| **30** | 3.16m | 1.08m | 42.33 | 41.23 | 1.82m | 0.74m | 42.33 | 42.37 |
| **31** | 2.18m | 1.06m | 42.51 | 41.39 | 1.64m | 0.68m | 42.49 | 41.79 |
| **32** | 2.50m | 0.92m | 42.59 | 41.65 | 1.90m | 0.64m | 42.59 | 41.87 |
| **33** | 2.48m | 0.92m | 42.46 | 41.54 | 1.68m | 0.48m | 42.46 | 42.00 |
| **34** | 2.60m | 0.86m | 42.54 | 41.62 | 1.34m | 0.48m | 42.54 | 41.98 |
| | **Western Trackside Ditch G28** | | | | | | | |
| **35** | 1.36m | 0.44m | 42.23 | 41.72 | | | | |
| **36** | 1.40m | 0.44m | 41.78 | 41.30 | | | | |
| **37** | 1.90m | 0.74m | 42.03 | 41.29 | | | | |
| | **South-eastern Trackside Ditch G30** | | | | | | | |
| **38** | Truncated | 0.86m | 42.11 | 41.21 | | | | |
| **39** | 1.82m | 0.52m | 42.09 | 41.54 | | | | |
| **40** | 1.98m | 0.60m | 42.41 | 41.71 | | | | |
| **41** | 2.56m | 0.74m | 42.64 | 41.88 | | | | |
| **42** | 2.50m | 0.80m | 42.71 | 41.83 | | | | |
| **43** | 1.22m | 0.31m | 42.99 | 42.69 | | | | |
| **8** | 1.44m | 0.44m | 43.34 | 42.70 | | | | |

Table 9: Maximum thickness of depositional events with the trackside ditches

5.2.1.56 38 sherds of pottery or ceramics were recovered from the trackside ditches; 20 sherds (including two sherds of briquetage from Slot 30) from the northern trackside ditch (Slots 26, 30, and 32); 17 sherds from the northern trackside ditch recut (Slots 26, 33, and 44), and one sherd of central Gaulish samian from Slot 40 of the south-eastern enclosure ditch; (Appendix 4 & 5). The majority of the sherds were local handmade Iron Age tradition and therefore not closely datable, however the samian recovered from the south-eastern trackside ditch dates from AD 120 to 200, and Romano-British pottery recovered from Slots 33 and 44 in the northern trackside ditch recut ranges AD 43 to 200. A single

small find was recovered from Slot 20 of the northern trackside ditch G15 from backfill group G34. The item (SF. 339) comprised a fragment of rib bone that had been sawn at one end with triangular notches forming a series of seven teeth/serrations on one side. The item is likely to be associated with some form of craft working (Appendix 12).

5.2.1.57 Two fragments of disarticulated human bone were recovered from the northern trackside ditch G25 from within backfill deposit G34; the assemblage comprised two elements of a foot (MT2 left x1 and a proximal phalanx) (Appendix 18).

5.2.1.58 The trackside ditches produced a reasonably sized collection of faunal remains. Most of these provided up to about 50 bones with just one larger assemblage from Slot 34; the terminus of the northern enclosure ditch recut, which produced 212 fragments (Appendix 19). A good representation of cattle was noted within the assemblage with a major domesticate abundance pattern approximately returning to that observed in the Phase 3.2 enclosure, i.e. dominated by cattle but with sheep/goat and pig also represented. There was a notable proportion of loose teeth within these ditches, perhaps suggestive of a greater level of fragmentation. There was also a continuation of the general scatter of equid fragments, although here without any worked items but one butchered bone, a radius with a dressing cut from Slot 34. Moreover, there was a notable collection of dog bones found within the trackside ditches; these were mainly retrieved from natural silting G31 of the Slot 40 of the south-eastern enclosure ditch (28 out of the 29 bones) forming the remains of at least three adult individuals.

5.2.1.59 No residues or flots of any importance were recovered from the environmental assessment of the trackside ditches (Appendix 20).

5.2.1.60 In the north-western corner of the excavation area, a metalled surface G36 survived within the area between the trackside ditch and the enclosure ditch for a distance of 7.5m NW-SW, continuing beyond the limit of excavation to the north-west, by 2.82m NE-SW (Figure 3, Figure 8; Section 102) at a height of 41.66m AOD (Plate 13). The surface was approximately 0.14m thick and comprised sub-rounded and rounded sandstone cobbles ranging in size from 30x20x20mm to 200x120x100mm. It is possible that this metalled surface was originally more extensive and that it only survived plough-truncation in this area, however as such a small section was encountered this is far from certain.

5.2.1.61 A shallow pit G23 (Figure 3. Figure 8; Section 147) was located *c*. 8m to the south of the enclosure at the southern boundary of the site. This measured 3.58m north–south, continuing beyond the limit of excavation to the south, and 2.70m east-west, and was just 0.18m deep. The pit was backfilled by G24 from which a small number of finds were retrieved. These included a single sherd of briquetage (Appendix 6), two fragments of lead waste (SF.137), a single piece of solidified copper waste (SF. 138) (Appendix 12 & 17), disarticulated human remains in the form of skull fragments (Appendix 18), and the largest assemblage of pig bones on site (Appendix 19). As discussed above, it is not possible to be certain if this pit was associated with a particular phase of enclosure, or if it post-dated the enclosure.

***Phase 3.5***

5.2.1.62 Phase 3.5 is represented by a group of four postholes G38, a pit G40 with intercutting posthole G42 and a small linear ditch G44.

5.2.1.63 **Group 38 (Figure 3 and Figure 9: Sections 117, 118, 119, 121):** Group 38 comprised four postholes; three at the northern edge of the enclosure and one at the south-west corner of the enclosure. The table below summarises the dimensions of each of the postholes (in clockwise order starting from the northernmost posthole):

| Posthole | Figure No. | Diameter | Depth | mAOD | |
|---|---|---|---|---|---|
| | | | | Top | Base |
| 2171 | 3 & 9: Sec. 118 | 0.35m | 0.11m | 43.38 | 43.26 |
| 2004 | 3 & 9. Sec. 119 | 0.60m | 0.43m | 43.27 | 42.84 |
| 2178 | 3 & 9 Sec. 121 | 0.68m x 0.45m | 0.15m | 43.10 | 42.95 |
| 2160 | 3 & 9 Sec. 117 | 0.40m | 0.16m | 43.58 | 43.40 |

Table 10: Dimension of Group 38 Postholes

5.2.1.64 The postholes were backfilled by G39; an iron object, possibly part of a fitting, was recovered from one of the postholes (SF. 101. Appendix 12), as well as fuel ash slag and potential metallurgical slag with flow/run morphology (Appendix 17).

5.2.1.65 The function, exact date, and their relationship with the enclosure remains unknown; all of the postholes were located within the enclosed area close to the edge of the ditch in the area where the bank would have been. This suggests that perhaps the postholes were cut through a bank which was by this time denuded.

5.2.1.66 **Group 40 (Figure 3 and Figure 6: Slot 23):** A small pit G40 was located within the internal area of the enclosure and truncated the western edge of the enclosure ditch G11. The pit had a flat base with steep sides and a measured 1.60m by 1.29m by 0.42m deep. The pit was infilled with G41 which contained potentially metallurgical slag. The centre of the pit was truncated by posthole G42.

5.2.1.67 **Group 42 (Figure 3 and Figure 9: Section 133):** Posthole G42 had a diameter of 0.38m, measured 0.31mn deep and was filled by G43. Sub-rounded stones were observed within the deposit that perhaps represented post-packing.

5.2.1.68 **Group 44 (Figure 3, Figure 7: Slots 27 & 28, Figure 9: Section 150):** A small linear ditch G44 was observed at the northern end of the excavation area which truncated the northern trackside ditch G25 and recut G32. Three slots were excavated through the ditch which measured just 5.60m east–west, 0.87m to 0.94m wide and 0.28m to 0.50m deep. The table below summarises the dimensions:

| Context No. | Width | Depth | mAOD | |
|---|---|---|---|---|
| | | | Top | Base |
| 2274 | 0.94m | 0.28m | 42.04 | 41.72 |
| 2286 | 0.87m | 0.30m | 42.28 | 41.92 |
| 2330 | 0.90m | 0.39m | 42.34 | 41.89 |

Table 11: Dimensions of ditch G44

5.2.1.69 The ditch was filled natural silting deposit G45. No artefactual or ecofactual material was recovered from the ditch.

***Phase 8 Post Medieval***

5.2.1.70 Phase 8 is represented by two postholes G57 and numerous field drains that ran across the site.

5.2.1.71 **Group 57 (Figure 3, Figure 9: Section: 122):** Both postholes were located outside of the backfilled enclosure within the trackway. The western posthole [2188] had a diameter of 0.37m and a depth of 0.23m with the highest and lowest levels of the feature at 43.48m AOD and 43.24m AOD respectively. The eastern posthole [2189] had a diameter of 0.36m, measured 0.16m deep and with the highest and lowest levels of the feature recorded at 43.54m AOD and 43.37m AOD respectively.

5.2.1.72 The postholes were filled by infill deposit G58 that contained fragments of post-medieval pottery and ceramic building material. The postholes are likely to be associated with the agricultural land use of the area.

5.2.1.73 A subsoil deposit G50 was also observed at Site 58 that overlay all the archaeological features. The subsoil had a maximum thickness of 0.29m.

***Phase 9 Modern***

5.2.1.74 Phase 9 is represented by topsoil deposit G35. The topsoil had a maximum thickness of 0.30m

### 5.2.2 Site 122, The Aiskew Roman villa, Site 122 North & Site 68

***Phase 1: Sites 122, 122 North & 68 (Geological)***

5.2.2.1 The earliest deposits encountered across these three areas represent the natural drift geology.

5.2.2.2 The basal deposit recorded across Site 122 comprised friable silty clay and clayey sand [199] and within site 122 North and 68 comprised firm to friable silty clay and coarse clayey sand [103].

5.2.2.3 The natural sub-stratum at site 122 was observed extending across the area of the bypass road corridor. It was recorded at a maximum height of 38.26m OD, this at the location of the primary villa building along the central-eastern portion of the site, and at a minimum height of 36.99m AOD at the southern extent of the site.

5.2.2.4 The natural sub-stratum exposed across site 122 North and 68 was recorded at a maximum height of 38.13m AOD at the north-eastern extent of site 68, this gradually sloped down to the south-west where it was recorded at maximum and minimum heights of c. 37.64m AOD and 37.30m AOD, respectively.

5.2.2.5 It is probable that the upper interface of the geological sub-stratum at Site 122 had been subject to truncation by agricultural activity during the medieval, post-medieval and modern periods. This is supported by the absence of any developed soil across the majority of the site with the exception of a developed soil that survived directly below stratified deposits associated with the villa building.

5.2.2.6 A colluvial deposit [102] was recorded extending across sites 122 North and 68 therefore no truncation of the geological sub-stratum had occurred.

***Phase 3.5: Site 122 Pre-Villa Activity (Field System)***

5.2.2.7 Features assigned to Phase 3.5 activity comprised truncated elements of a field system represented by a group of four variously aligned undated ditches Group 120 & 122 (Figure 12 and Figure 18; Sections 39, 41, 45, 46, 54, 53, 55, 60). This field system evidently pre-dated the villa, all features were directly overlain by a developed soil which predated the villa, they have therefore been assigned to the latest pre-villa phase identified at Site 58, Phase 3.5, but an association between these two sites was not established

5.2.2.8 The earliest of these features cut through the natural sub-stratum [199] and comprised three parallel WNW-ESE aligned ditches (G120). The northernmost of these ditches survived for a length of *c*. 11m and was the most extensive in this group. These ditches generally had a shallow U-shaped profile measuring up to 0.65m wide by up to 0.25m deep and were recorded at maximum and minimum heights of 38.39m AOD and 37.49m AOD, respectively.

5.2.2.9 All group G120 ditches contained a single fill G121 that generally comprised relatively sterile brownish grey sandy clay representing natural silting.

5.2.2.10 A NNE-SSW aligned ditch G122 cut the G120 ditches; this was recorded for a distance of *c*. 37m and presumably represents one side of an enclosure field boundary. This was set at right angles to the most southerly G120 ditch and the two may have formed the corner of an enclosure; the G122 only truncated the terminal of the G120 ditch and could represent the latest reinstatement of this boundary. The ditch generally had a shallow U-shaped profile with the exception of its NNE extent where it comprised a broad V-shaped profile (Plate 14). It measured up to 1.20m wide by up to 0.40m deep and was encountered at maximum and minimum heights of 38.28m OD and 37.71m OD, respectively.

5.2.2.11 Each section excavated through ditch G122 contained a single fill which comprised relatively sterile brownish grey sandy clay G123 that represents natural silting of the ditch. A single sherd of East Gaulish samian ware (AD130-160) and an iron nail (SF84) were recovered from the natural silting deposits.

5.2.2.12 A small assemblage of animal bone was recovered from the Phase 3.5 ditch fills (G121 and G123); the species represented comprised cattle, sheep or goat and equid (Appendix 19). Two environmental samples (Samples 54 & 57) from the Phase 3.5 ditch fills were processed from which only small quantities of charcoal and uncharred seeds were recovered however much more significant was the small quantities of fish bone recovered from the samples. In both samples possible residues from metal-working activity were recovered (Appendix 17).

5.2.2.13 The artefactual material recovered from Phase 3.5 fills was sparse and although a 2nd-century date is probable this is only based on a single sherd of samian. All features were directly overlain by Phase 3.6 developed soil [288] and they therefore must at least pre-date the establishment of the Phase 4.2 villa building.

***Phase 3.6: Site 122 Developed Soil (Figure 22; Sections 32 & 51)***

5.2.2.14 A mid grey sandy silt deposit [288] (G155) was partially exposed along the eastern edge of the road corridor for a maximum extent of *c*. 41m NNE-SSW by *c*. 17m ENE-WSW, continuing ESE beyond the limit of excavation and overlain by stratified deposits within the Licensed Area (Plate 15 & 16). It was up to 0.20m thick and encountered at maximum and minimum heights of 38.57m AOD and 37.81m AOD, respectively.

5.2.2.15 A small assemblage of finds recovered from this deposit includes ceramic building material, *opus signinum,* and an iron nail (SF 245). Small quantities of animal bone including cattle and small rodents were also recovered.

5.2.2.16 This deposit directly overlay Phase 3.5 features and is interpreted as a developed soil possibly representing an agricultural soil; the finds of ceramic building material and *opus signinum* recovered from this developed soil are probably associated with the villa building and likely to be intrusive.

5.2.2.17 A sample excavation undertaken at the south-eastern corner of the Licensed Area recorded a small area of developed soil. Within this location the developed soil comprised *c*. 0.12m thick silty clay [367] which directly overlay the natural sub-stratum [199] (Figure

22; Section 37). It was encountered *c.* 0.69m below the current ground level at a height of *c*. 38.78m AOD. The developed soil was sterile and contained no artefactual material.

5.2.2.18 A single environmental sample (Sample 28) was processed from the developed soil [288] from which no environmental material of significance was recovered.

5.2.2.19 Although this deposit was only present across the eastern edge of the bypass road corridor, it is likely that it would have extended across the site, however successive farming activity during the post-medieval to modern periods have probably truncated this with the developed soil only surviving below the deep stratified remains associated with the villa building.

***Phase 4: Sites 122 North & 68 Roman period field system***

5.2.2.20 Interconnected fields and enclosures were identified by geophysical survey across an extensive area to the east and north of the villa, with elements of variously aligned ditches exposed and excavated within Area 122 North. Artefactual material recovered from these ditches dates from 2nd to 4th centuries AD and this wide date range, along with the evidence for recutting of features and realignment of enclosures indicates that the field system was long-lived, possibly being established before construction of the villa, but certainly in use throughout the occupation of the villa (Figure 11; see Fig. 23).

5.2.2.21 The earliest elements of the field system exposed within this area comprised at least four enclosures formed by east–west aligned ditches G106, G108, G168 and ENE-WSW ditch G100 (Plate 17) and NNE-SSW aligned ditches G114, G104, G110 G112 and G162 (Plate 18). Ditches G104, G110 and G112 were on the same alignment and may represent parts of the same ditch, forming the west sides and east side of a group of interconnected enclosures (Enclosures 1-4).

5.2.2.22 As recorded, the northernmost enclosure (Enclosure 1) measured *c*. 30m north–south by at least 16m east–west and the central enclosure (Enclosure 2) measured *c*. 19m north–south by at least 12m east–west. Only the north-western corner of the southernmost enclosure (Enclosure 3) was exposed for a distance of 14m north–south by 7m east–west. All ditches forming Enclosures 1, 2 and 3 had shallow U-shaped profiles and were up to 0.66m wide by up to 0.45m deep (Figures 16 and 17; Sections 1, 2, 4, 5, 7-14, 64, 68-71 & 73). The exception was a relatively substantial ditch G100 forming the north-eastern part of Enclosure 1 that had a broad U-shaped profile measuring up to 2.06m wide by up to 0.60m deep (Figure 16; Sections 1 & 68; Plate 17).

5.2.2.23 Elements of a further possible enclosure (Enclosure 4) were recorded at the southern extent of site 122 North. This comprised a north–south aligned ditch G174 forming the eastern limit of the enclosure, a short length of east–west aligned ditch G168 forming the northern limit and the north-south aligned ditches G104, G110 and G112 forming the eastern limit, with these ditches also forming the eastern limit of Enclosures 2 and 3. The dimensions of Enclosure 4 as exposed were *c.* 17.20m east–west by at least 28m north–south.

| Group No. | Section No. | Phase 4.2 122 North maximum thickness of ditch fills | | | |
|---|---|---|---|---|---|
| | | *Natural Silting/Backfill* | *Thickness* | *mAOD* | |
| | | | | *Highest* | *Lowest* |
| **102** | 1, 68 | Natural Silting | 0.32m | 38.46 | 37.51 |
| **103** | 1, 68, 69 | Backfill | 0.50m | 38.66 | 37.10 |
| **105** | 8, 4, 13 | Natural Silting | 0.29m | 37.35 | 37.21 |
| **107** | 2, 4 | Natural Silting | 0.26m | 37.39 | 36.97 |
| **109** | 7, 11 | Natural Silting | 0.28m | 37.76 | 37.53 |
| **111** | 9, 12 | Natural Silting | 0.22m | 37.62 | 37.45 |
| **113** | 10, 14 | Natural Silting | 0.40m | 37.55 | 37.08 |
| **115** | 5, 64, 69, 70, 71, 73 | Backfill | 0.44m | 37.40 | 37.13 |
| **117** | 65, 73 | Natural Silting | 0.15m | 37.70 | 37.24 |
| **119** | 64, 65, 66, 67, 72 | Natural Silting | 0.23m | 37.29 | 37.22 |
| **163** | 62 | Backfill | 0.13m | 36.88 | 36.72 |
| **169** | 8 | Natural silting | 0.25m | 37.24 | 37.22 |
| **172** | 2, 4 | Backfill | 0.24m | 37.45 | 37.20 |

Table 12: Dimensions of Phase 4 field enclosure ditches

5.2.2.24 The majority of the ditches forming Enclosures 1, 2, 3 and 4 contained basal deposits of natural silting (ditch G100, fill G102; ditch G104, fill G105; ditch G106, fill G107; ditch G108, fill G109; ditch G110, fill G111; ditch G112, fill G113; ditch G168, fill G169). Ditches where episodes of backfilling were recorded included ditch G100 backfill G103, ditch G107 backfill G172, ditch G114 backfill G115 and ditch G174 backfill G163. Table 12 above summarises the maximum combined thicknesses recorded for natural silting and backfill deposits by group.

5.2.2.25 The natural silting deposits (G102, G105, G107, G109, G111, G113 & G169) consisted of various compositions of clay, silt and sand from which a small assemblage of finds were recovered, including pottery, ceramic building material and animal bone. A total of nine pottery sherds were recovered from the natural silting deposit providing a broad date range of AD43–400. Included in the pottery assemblage were two sherds of South Gaulish samian (AD50–110) and a single sherd of mortaria (AD100–350). Four fragments of ceramic building material including box flue tile and brick were also recovered; these probably derived from the villa buildings located to the south. Also recovered from natural silting deposit G102 was a complete copper-alloy trumpet brooch of probable second-century date (SF 2). A small assemblage of 27 fragments of animal bone recovered from the silting deposits comprised primarily cattle and to a lesser extent horse, pig and sheep/goat.

5.2.2.26 Two environmental samples taken from the natural silting deposits G102 and G111 (Samples 5 & 6) produced residues or flots of little interest. Sample 5 did contain charcoal fragments that would be large enough for further species analysis.

5.2.2.27 Backfill deposits (G103, G172, G115 & G163) comprised various compositions of clay, silt and sand and generally produced larger quantities of artefactual material. A total of 242 sherds of pottery were recovered from the enclosure ditches (Appendix 16). The majority of the pottery assemblage provides a broad date range of 2nd to 4th century, with some narrower date ranges provided from individual contexts including [414] and [416] G103 (AD350–400 & AD120–130, respectively), [117] G172 (AD360–400) and [435] G115 (AD160–300). Also identified in the pottery assemblage were three sherds of samian dated to AD165–230 and *mortaria* fragments of probably third-century date from G103 including two joining sherds of a possibly handmade *mortarium* (Appendices 5 & 8). The handmade mortarium is of some significance, with only a single further example identified to date in Britain at Faverdale, Darlington (Appendix 8). The latest pottery in this group, AD350–400, indicates that the enclosure ditches were backfilled towards the end of the use of the villa Ceramic building material including Roman tile (*tegula* and *imbrex*), fragments of box flue and Roman brick were also recovered with the majority of the assemblage recovered from G115.

5.2.2.28 Animal bone recovered from the backfill deposits contained the three domesticates of cattle, sheep/goat and pig with a prevalence of cattle throughout the assemblages.

5.2.2.29 Two environmental samples (Sample 3 & 4) from the backfill deposits only contained small quantities of material. Sample 3 from G115 produced small quantities of fish bone and wood charcoal and Sample 4 from G172 produced small quantities of charred and uncharred seeds. Also recovered from these samples were small quantities of iron, slag, coal and clinker. Although present in small quantities, this material may indicate that metal working activity took place in the near vicinity of the site. A single piece of metallurgical slag was also recovered from the upper backfill G127 [127] (ditch G106). The fragments of wood charcoal recovered from Sample 3 are large enough for further species analysis.

5.2.2.30 Two refuse pits, G166 and G165, were recorded within Enclosures 3 and 2, respectively. Oval-shaped pit G166 was recorded within the north-western corner of Field Enclosure 3 and measured 1.75m NW-SE by 1.28m NE-SW and was up to 0.69m deep (Figure 17; Section 6). Its two backfill deposits G167 comprised silty clay from which a single sherd of Roman pottery dated AD160–250 was recovered. Animal bone recovered from its upper backfill comprised almost exclusively cattle with the exception of a single fragment of sheep/goat.

5.2.2.31 Presumed to be circular refuse pit G165 was partially exposed at the eastern edge of the site within the southern part of Enclosure 2 (Plate 19). It measured 1.34m north-south by at least 0.76m east-west, continuing beyond the eastern limit of excavation, and was up to 0.62m deep (Figure 17; Section 3). Its three backfill deposits comprised silty clay G173

from which seven sherds of Roman pottery were recovered providing a date of AD120–300. A sherd of Central Gaulish samian (AD120–200) and a sherd of mortaria (AD100–200) were also identified. A small assemblage of animal bone was also recovered that contained remains from cattle and sheep or goat.

5.2.2.32 A collared beehive quern base (SF 1) was recovered from the basal backfill deposit of the pit suggesting that processing of cereal was undertaken at or close to the site.

5.2.2.33 Environmental samples taken from the backfill deposits of refuse pits G166 (Sample 2) and G173 (Sample 1) yielded no environmental remains of significance**.**

5.2.2.34 Elements of later agricultural features, G116 and G118, were recorded truncating ditch G114 that formed the western limit of Enclosure 1. The earliest of these, a NW-SE aligned ditch G116 was exposed for a distance of *c*.18m (Figure 16; Sections 65 & 73). It comprised a shallow U-shaped profile and was up to 3.10m wide by up to 0.17m deep, encountered at maximum and minimum heights of 37.70m AOD and 37.28m AOD, respectively. No artefactual material was recovered from the natural silting deposits G117 infilling the ditch. Ditch G166 was in turn truncated by a NE-SW aligned ditch G118 which was exposed for a distance of c. 22m. It had a U-shaped profile and was up to 0.71m wide by up to 0.26m deep, encountered at maximum and minimum heights of 37.29m AOD and 37.24m AOD, respectively (Figure 16; Sections 64, 65, 66, 67 & 72). Its natural silting fills generally comprised sandy silt and silty sand G119 from which a small assemblage of Roman pottery, ceramic building material and cattle bone was recovered.

5.2.2.35 At the north-eastern extent of the of the excavation area (Site 68), the south-western corner of a further enclosure was recorded [3003]. This comprised a north–south aligned ditch exposed for *c*. 7.50m this turning at a right angle to the east with the east–west aligned element exposed for a maximum distance of 4.00m (Figure 11). It had a broad V-shaped profile up to 0.90m wide by 0.26m deep and was encountered at maximum and minimum heights of 38.08m AOD and 37.64m AOD, respectively (Figure 16; Section 80).

5.2.2.36 Its basal natural silting fill comprised 50mm thick sterile silty sand [3004] that in turn was overlain by *c*. 0.20m thick clayey sandy silt [3005] backfill deposit. No artefactual material was recovered from any of its fills.

5.2.2.37 Due to the limited exposure of this ditch enclosure it is unclear if it forms part of a field enclosure or settlement enclosure. Enclosures 1-4 recorded within site 122 North to the south-west are all orientated roughly NNE-SSW with field enclosure [3003] on a notably different north–south alignment. This difference in orientation may suggest that these enclosures may not be contemporary however further exposure would be necessary to definitively establish this and therefore enclosure [3003] is provisionally attribute to Phase 4 Roman activity.

***Phase 4.2: Site 122 Villa Construction and Primary Villa Building (3rd Century)***

5.2.2.38 Phase 4.2 represents activity associated with the construction of the villa building, the establishment of the villa boundary and the primary villa building.

**Postholes G158, pits [236] G147 and [252] G151 and [242] G149, slot/ditch [372] G161, ditch G133 (Figure 13)**

5.2.2.39 These features potentially represent remains associated with the early development of the villa building.

5.2.2.40 A WNW-ESE aligned linear feature G133 located *c*. 15m north of the main villa building measured *c.* 9.80m long. It had a shallow U-shaped profile at least 0.50m wide and was up to 0.28m deep, encountered at a height of *c*. 37.74m AOD (Figure 18; sections 15 & 17). Its single silty backfill G134 contained no datable material and two fragments of sheep or goat bone. Due to the absence of any dating evidence this feature has been attributed to Phase 4.2 however could potentially form part of the Phase 3.5 field system that predates the villa buildings.

5.2.2.41 Three pits were recorded immediately to the north of the villa building including pit G149 and intercutting pits G147 and G151 with pits G149 and G147 truncating the natural [199]. Oval-shaped pit G149 measured 1.15m by 0.90m and was up to 0.28m deep (Figure 18; Section 19). Only a single fragment of 1st to 2nd century bottle glass was recovered from its three backfill deposits G150.

5.2.2.42 Oval-shaped pit G147 measured *c*. 3.20m by *c*. 1.00m and was 0.36m deep (Figure 18; Section 20). Three fragments of ceramic building material and a small assemblage of animal bone were recovered from its single silty backfill G148. The animal bone contained a prevalence of cattle and sheep with small quantities of pig and small rodents. The backfill of pit G147 was truncated by a smaller circular pit G151 measuring *c*. 0.60m diameter and was up to 0.31m deep. No artefactual material was recovered from its single silty backfill.

5.2.2.43 Four environmental samples were analysed from these pits with samples from the two upper fills of pit G149 (Samples 7 & 8) and one sample of each backfill deposit from pits G147 and G151 (Samples 11 & 12). All samples produced varying quantities of charcoal with larger fragments recovered from Samples 8, 11 and 12. The recovery of environmental material from these samples was poor with only low concentrations of grain from Sample 7 and low concentrations of uncharred seeds from Samples 7, 11 and 12. Small quantities of iron fragments and slag may represent debris from metal-working activity carried out in the vicinity. Fragmented pottery that appears to have been burnt and burnt bone was also recovered from Sample 11 along with a glass bead.

5.2.2.44 A short distance to the north-west of the main villa building was a NE-SW aligned curving linear feature G161 which measured c. 9.50m long by up to 0.60m wide and was up to 0.25m deep. It was encountered at a maximum height at 38.11m AOD and sloped down gradually from the south-west to the north-east were it was recorded at a minimum height of 37.66m AOD. A small assemblage of finds was recovered from its single sandy silt backfill G162 including a single sherd of Roman pottery (AD250–400), ceramic building material, animal bone and oyster shell. This feature had near vertical edges and a flat

base and may represent a timber slot or alternatively a drainage feature that may have been timber-lined (Figure 18; Sections 49 & 50; Plate 20).

5.2.2.45 An environmental sample (Sample 55) from backfill G162 produced small quantities of environmental material including charcoal, uncharred seed and animal bone. A piece of worked flint was also recovered.

5.2.2.46 Two postholes G158 which truncated the Phase 3.6 developed soil G155 were up to 0.25m in diameter by up to 0.12m deep (Figure 13; Plate 15). Although no finds were recovered from their single sandy silt backfill deposits G159 they were both directly overlain by Phase 4.2 consolidation deposit G157 that was laid down prior to the construction of the villa buildings. Therefore the postholes may represent either the remains of pre-villa occupation or alternatively represent activity associated with the construction of the villa building itself.

**Quarry Pits G124 & G126 (Figure 13 and 19; Sections 35, 42, 48 & 52)**

5.2.2.47 Two substantial irregular-shaped features G124 and G126 partially exposed within the limits of excavation were located *c*. 20m to the west of the main villa building; these are interpreted as clay extraction pits (Plates 22 & 23).

5.2.2.48 The southernmost quarry pit G126 was exposed for a maximum distance of *c*. 14m north–south by 12m east–west and was up to 0.74m deep, encountered at a height of *c*. 37.10m AOD. Two slots excavated across quarry pit G126 [314] and [380] recorded four backfill deposits G127 with varying compositions of clay, sand and silt (Figure 19; Sections 35 & 52). A small assemblage of finds was recovered from backfill deposits G127 including pottery, ceramic building material and animal bone. An assemblage of 35 pottery sherds provided a spot date of AD120–AD250 (Appendix 16). A small assemblage of animal bone was also recovered, with cattle and horse represented (Appendix 19).

5.2.2.49 Quarry pit G124 was exposed for a maximum distance of *c*. 16m north-south by *c.* 13m east–west, continuing to the west beyond the limit of excavation. This feature could be seen as a large geophysical anomaly located to the south-west of the villa building. The extraction pit was up to 0.55m deep with the top recorded at a height of 37.72m AOD and the base at 36.72m AOD. Two slots [348] and [349] were excavated across quarry pit G124 and a further slot [388] which was excavated across quarry pit G126 also extended across the southern extent of quarry pit G124, [380]. A total of ten deposits were recorded within these slots and it was evident that after a short period of natural silting, the pit was used for the disposal of refuse from the villa; backfill deposits G125, which comprised various compositions of clay, sand and silt (Figure 19; Sections 42, 48 & 52). Assemblages of pottery, ceramic building material, animal bone and shell were recovered from the G125 backfill deposits. A small assemblage of 15 sherds of Roman pottery provided a broad date range of AD70–400 along with a single sherd of Central Gaulish samian dating to AD120–160 (Appendix 16 & 5). The bone assemblage contained a prevalence of cattle, sheep or goat and horse remains and a single fragment of pig

(Appendix 19). A handle fragment from a 1st -2nd century bottle was also recovered (SF237) along with an unidentified fragment of glass (SF 361).

5.2.2.50 Three environmental samples were processed from the quarry pit G125 backfills (Samples 52, 53 & 56) from which limited environmental material was recovered. Samples 53 and 56 produced small quantities of wood charcoal and uncharred seeds. The wood charcoal from Sample 52 was large enough for further analysis and taxa identified include hardwoods of hazel (*corylus avellana*) and rowan (*maloideae*) (Appendix 21). Hammerscale was also recovered from Sample 53.

5.2.2.51 A substantial deposit G156 that directly overlay the uppermost backfill deposits of quarry pits G124 and G126 was recorded within two excavated slots. It comprised sandy silt and sandy clay up to 0.40m thick and was encountered at maximum and minimum heights of 37.26m AOD and 36.97m AOD, respectively. Although this deposit is a later depositional event, it does represent the deliberate backfilling of both quarry pits. Assemblages of pottery, ceramic building material, bone and shell were recovered from this backfill deposit. A total of 39 sherds of pottery provided a spot date of AD70–AD400 (Appendix 6). A single sherd of samian dated to AD150–200 was also recovered (Appendix 5). The faunal remains assemblage mainly comprised cattle, sheep/goat and horse with small quantities of pig, red deer, chicken and oyster also represented in the assemblage (Appendix 19). Also recovered from these backfill deposits were two fragments of 1st-2nd century bottle glass (SF 236 & 269) along with a large iron ring (145mm in diameter) with articulated double spiked loop (SF 99). The function of this is uncertain and it may represent a large structural fitting or alternatively used to articulate cauldron chains based on comparable examples (Appendix 12).

5.2.2.52 A distinctive reddish deposit [350] G130 which contained large quantities of ash and occupation debris extended across the upper part of the large northernmost quarry pit, as well as the villa boundary ditch to the east (described below). This deposit was exposed for a maximum distance of *c*. 14m east-west by *c*. 11m north-south, continuing beyond the limits of excavation to the west, and was up to 0.48m thick, recorded at maximum and minimum heights of 37.27m AOD and 36.91m AOD. Following the excavation and recording of the two slots through the quarry pit and the slots through the boundary ditch in this area, the remainder of this upper artefact-rich deposit was removed by machine and taken off site to be sieved for the recovery of additional artefactual and ecofactual material, described below.

5.2.2.53 The quarry pits were located within an area where the underlying natural sub-strata comprised firm boulder clay which was presumably being extracted and used as a raw building material for the construction of the villa buildings. Firm clay material was observed to be the principle material for the Phase 4.2 villa wall foundations with this clay probably derived from the quarry pits. The deposits recorded in the pits indicated that following an initial period of silting, the quarry pits were used for the disposal of occupation debris from the villa.

**Villa Boundary G128 & G135 (Figure 13 and Figures 18 & 20; Sections 18, 21, 24, 28, 30, 31, 33, 34, 38, 40, 47, 61, 63, 74 - 79)**

5.2.2.54 Two ditches G128 and G135 recorded to the west and north of the villa building represent a boundary encompassing the villa building.

5.2.2.55 The western element of the boundary ditch G128 comprised a NW-SE ditch that was exposed for distance of *c*. 45m, continuing beyond the limit of excavation to the south-east and turning in the north-west to a NNE-SSW alignment for a maximum distance of *c*. 65m. At its NNE extent boundary ditch G128 turned sharply to an ESE-WNW alignment where it was exposed for a maximum distance of *c*. 39m, continuing beyond the eastern limit of excavation. The northern boundary was situated *c*. 35m from the northernmost room in the villa complex and the western boundary was *c.* 25m away from the buildings.

5.2.2.56 A total of 16 slots were excavated through the boundary ditch G128 with twelve slots excavated across the western side of boundary ditch and four slots across the northern side.

5.2.2.57 The table below summarises the dimensions for the villa boundary ditch G128:

| **Cut No.** | **Section No.** | **Phase 4.2 Group 128** | | | |
|---|---|---|---|---|---|
| | | *Width* | *Depth* | *mAOD* | |
| | | | | *Highest* | *Lowest* |
| **239** | 21 | 1.66m | 0.45m | 37.59 | 37.01 |
| **259** | 28 | 1.30m | 0.49m | 37.50 | 36.94 |
| **281** | 30 | 1.30m | 0.48m | 37.43 | 36.88 |
| **295** | 31 | 1.76m | 0.51m | 37.35 | 36.64 |
| **297** | 33 | 0.76m | 0.26m | 37.35 | 37.09 |
| **308** | 34 | 0.73m | 0.40m | 37.20 | 36.77 |
| **313** | 48 | 1.43m | 0.82m | 37.31 | 36.47 |
| **353** | 42 | 2.00m | 0.74m | 37.27 | 36.65 |
| **397** | 61 | 0.63m | 0.38m | 37.10 | 36.72 |
| **401** | 63 | 0.57m | 0.15m | 36.89 | 36.74 |
| **447** | 74 | 1.32m | 0.27m | 36.87 | 36.48 |
| **450** | 75 | 0.99m | 0.43m | 37.17 | 36.75 |
| **452** | 76 | 0.58m | 0.29m | 37.20 | 36.91 |
| **455** | 77 | 0.56m | 0.32m | 37.11 | 36.79 |
| **458** | 78 | 1.06m | 0.52m | 37.12 | 36.60 |
| **461** | 79 | 1.15m | 0.60m | 37.07 | 36.53 |

Table 13: Dimensions of Villa Boundary Ditch G128

5.2.2.58 The southernmost NW-SE aligned element of the boundary ditch G128 truncated the upper backfill deposits (G125 and G156) of quarry pit G124. The profile of the boundary ditch was generally U-shaped and varied in width from 2.00m to 0.56m (Plates 23–25). It was up to 0.82m deep and was encountered a maximum height of 37.59m AOD at the

ESE extent of the northern ditch element and sloped down gradually to the ENE corner to a minimum height of 36.87m AOD. The western element of the boundary ditch lies between heights of 37.35m AOD and 36.89m AOD.

5.2.2.59 The boundary ditch G128 was filled with up to two depositional events of backfilling G129 and G130. The initial backfilling depositional event G129 comprised a single backfill in ditch slots [295], [308], [397], [401], [447], [450], [452] & [455] and two backfills in ditch slots [239], [259], [281], [297], [258] & [261].

5.2.2.60 The backfill deposits G129 generally comprised various compositions of brownish grey silt, sand and clay from which 20 sherds of pottery were recovered providing a date range of 120–350AD (Appendix 6). An assemblage of 79 fragments of ceramic building material include roof tile (tegula and imbrices) and a single fragment each of box-flue tile and brick (Appendix 9). The animal bone assemblage was dominated by cattle with sheep/goat and only small quantities of pig, horse and dog present. A small quantity of oyster shell was also recovered. Small finds recovered included two iron nails (SF 77a & 77b), an iron ring (SF 93), a single fragment of 1st-2nd century bottle glass (SF 211; Appendix 16) and a complete bone hairpin (SF 69). Two fragments of quernstone also came from the ditch including a fragment presumably from a rotary quern (SF396) from backfill [283] and part of a beehive quern base (SF1) from backfill [446] (Appendix 14).

5.2.2.61 A total of six environmental samples (Samples 13, 14, 20, 21, 32 & 33; Appendix 20) were processed from the G129 backfill. Varying quantities of charcoal was recovered from all samples with only Sample 13 containing fragments large enough to be identified to a species level. Low concentrations of charred grain were recovered from these samples and may represent un-threshed material, rather than waste by-products. Uncharred seeds were also recovered from sample flots (Samples 13, 20, 32 and 33). All samples contained animal bone in various quantities of both large and small mammal species. By products of metal working were recovered from Samples 13, 14 & 21 which contained small quantities of slag and iron fragments. Varying quantities of building material including ceramic building material, stone and daub was present within Samples 13, 14, 20 & 33.

5.2.2.62 The later backfilling depositional event G130 for boundary ditch G128 comprised a distinctive dark reddish brown deposit that contained various compositions of ash, silt, clay and sand. This material was only present within the central part of the western boundary ditch element as a single fill up to 0.24m thick that was recorded in four slots [308], [353], [450] and [455] (fills [309], [350/395], [448] & [453], respectively). As described above, this deposit extended far beyond the villa boundary ditch, overlying the backfill [351] of the northern quarry pit, indicating that the upper part of the quarry pit had not been completely backfilled (Figure 19; Section 42). This deposit was exposed for a maximum distance of *c*. 14m east-west by *c*. 11m north-south, continuing beyond the limits of excavation to the west, and was up to 0.48m thick. Following the excavation and recording of the two slots through the quarry pit and the slots through the boundary ditch

in this area, the remainder of this G130 upper artefact-rich deposit was removed by machine and taken off site to be sieved for the recovery of additional artefactual and ecofactual material. Due to the different methods of finds retrieval there has been a distinction made between finds recovered on-site by hand [350] and those recovered from off-site by sieving [395].

5.2.2.63 Large assemblages of pottery were recovered from the G130 deposits [350] and [395] (Appendix 6). A total of 549 sherds of pottery were recovered and the assemblage dates from AD200–300. Five abraded sherds of *mortaria* along with 51 sherds of samian were also recovered; the samian assemblage dates to AD120–240 (Appendix 5) and included a prevalence of vessels from Lezoux, Central Gaul with the remainder of the vessels being from Rheinzabern in East Gaul.

5.2.2.64 Numerous small finds were recovered from the G130 deposits [350] and [395] (Appendix 12). Fixtures and fittings were the most prolific in the assemblage and include 55 iron nails and nail fragments (SF 73, 86a-d, 90, 98, 200, 202, 203, 242, 246, 247, 248. 249a-p, 251a-i, 252a-f, 253a-e, 254a-c), an iron ring (SF 255) and an iron spiked double loop (SF 240). An iron object identified as the head of a linchpin (SF 238) attests to the presence of wheeled vehicles at the site. Twelve fragments from several different glass vessels were identified, including several jugs or jars, convex and cylindrical cups and beakers (SF 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229 & 262) (Appendix 16). Objects of personal adornment recovered included six bone hairpins (SF 70, 92, 217 & 218) of probably late Roman date. Two complete bone needles were identified (SF 213 & 214) along with four bone fragments (SF 91, 95, 215 & 216) that may represent either needles or hairpins. Five pottery spindlewhorls (SF 201 & 232-235) represent evidence of textile working at the site and were made of local greywares with the exception of SF 233 which was made of Oxfordshire Red Colour Coated Ware. An almost complete iron knife (SF 87) was also recovered. Industrial activities such as metal working and antler and horn working were represented in the assemblage including a fragment of lead waste (SF 97), a bone waste or inlay (SF 212) and two fragments of antler tine (SF 230 & 231). Also recovered was a heavily corroded iron stylus (SF 71), which was revealed by X-ray to have two bands of silver inlay.

5.2.2.65 The 893 fragments of ceramic building material were recovered from backfill deposits [350] and [395], with smaller assemblages from deposits [309] and [448] (Appendix 9). Within these assemblages there was a prevalence of roof tile (tegulae and imbrices) and smaller quantities of brick and tile including box-flue. A small portion of the ceramic material had markings and graffiti including five with animal prints and five with the makers' signature marks.

5.2.2.66 Oyster shell and animal bone was recovered from all G130 deposits with the largest proportion of this assemblage recovered from deposits [350] and [395]. From these deposits the largest proportion of the assemblages were recovered from backfill deposit [395]. This backfill deposit was processed off-site with the high proportion of material

recovered likely to be the result of this material being sieved. The assemblage includes all three domesticates, cattle, sheep/goat and to a lesser extent pig as well as poultry. Smaller quantities of red deer, horse, mallard and teal, common crane, goose, swan, wood pigeon, brown hare and heron were also recovered. The presence of such a diverse range of species may represent an affluent lifestyle or alternatively represent hunting activity with the population utilising resources within the vicinity. A small quantity of bone from small rodents, shrew and amphibians were recovered from the backfill deposits, though these are unlikely to have been utilised as a food source.

5.2.2.67 Bulk sample 45 taken from G130 deposit [350] (Appendix 20) produced charcoal, shell and animal bone and low concentrations of seed. The flot recovered low concentrations of charred and uncharred seeds with the charred seeds identified indicating a strong presence of *Rumex spp.* (dock/sorrels), as well as specimens of several weed species such as *Stellaria spp.* (chickweed) and *Rubus spp.* (brambles).

5.2.2.68 An ENE-WSW aligned boundary ditch G135, which ran parallel to the northern boundary of the G128 ditch, was located immediately to the north of the villa building. This was exposed for a maximum distance of *c*. 42m, continuing to the east beyond the limit of excavation (Figure 13 and 18; Sections 18, 24, 38, 40 &47). Boundary ditch G135 and the northern elements of boundary ditch G129 formed a part of a rectangular field north of the villa building which measured *c.* 23m NNE-SSW by at least 42m ENE-WSW within the limits of excavation. Ditch G135 could be seen on the geophysical survey to extend for a considerable distance, extending in total for at least 120m. A linear anomaly running at right angles to this anomaly may represent the eastern limit of both the G135 and G128 boundaries.

5.2.2.69 Four slots were excavated through the G135 boundary ditch. The ditch was between 1.72m wide at its ESE extent narrowing towards its WNW extent where it was 0.62m wide at its narrowest and was up to 0.55m deep. The ditch gradually sloped down from ESE to WNW and was encountered at a maximum height of 38.00m AOD at its ESE extent to a minimum height of 37.03m AOD at its WNW extent.

5.2.2.70 A relatively large assemblage of artefacts and ecofacts was recovered from these backfill deposits with the largest proportion of these recovered from the central part of the exposed boundary ditch. At this location the ditch was within the very near vicinity of the villa building which accounts for the relatively high quantities of occupation debris. Backfill deposits G136 comprised various compositions of clay, sand and silt from which an assemblage of 67 sherds of pottery was recovered (Appendix 6). The latest pottery in the assemblage dated to AD360–400 indicating that this boundary was backfilled towards the end of the occupation of the villa. Also recovered were two sherds of abraded mortaria and a sherd of 3rd- to 4th-century amphora with a stamp of a cordiform leaf; thin section analysis indicated that this may have been from Tunisa (Appendix 7).

5.2.2.71 Numerous small finds (Appendix 12) were recovered from these backfill deposits with the largest proportion of these represented by 41 iron nails (SF 28a-c, 30a-b, 38, 39, 40a-b,

42a-d, 43, 45-49, 52a-j & 56a-j). Objects of personal adornment recovered comprised a copper-alloy bracelet (SF 27), fragment of shale bracelet (SF 74), a glass bead (SF 75) and a jet bead (SF76). Two knives (SF 34 & 53) of indeterminate function were also recovered along with six fragments of glass including a fragment of 4th-century glass beaker (SF 206) and three fragments of window glass (SF 266, 267 & 268).

5.2.2.72 The faunal remains assemblage comprised cattle, sheep/goat and to a lesser extent pig with chicken and smaller quantities of other food species including hare, game bird, red deer, oyster and fish (Appendix 20). Amphibious remains were also recovered.

5.2.2.73 Two environmental samples were analysed from boundary ditch G135 (Samples 9 & 10). Charcoal was recovered from both samples with an abundance of charcoal recovered from the uppermost backfill deposit [249] (Sample 10). This contained sufficient sized fragments to undertake taxa identification. The taxa identified within the sample included native English hardwoods of hazel (*corylus avellana*), ash, (*fraxinus excelsoir*), rowan (*maloideae*), blackthorn; cherries (*prunus* sp) oak (*quercus* sp) and willow/poplar (*Salix/populous*) (Appendix 21). The presence of alder and willow/poplar in small quantities indicate the presence of wetland or riverine habitats along with deciduous wood land and scrub, with this result to be expected with the Scurf Beck located a short distance to the west of the villa buildings. There is a higher proportion of ash and hazel within the sample and this may suggest some level of selective wood-use as a fuel. Various concentrations of charred and uncharred grain were present and where identified the species present were *Hordeum spp*. (barley) and *Triticum spp*. (undetermined wheat). A substantial number of charred seeds were present in Sample 10 including *Fabaceae spp*. (legumes), *Rumex spp.* (dock/sorrels) and *Chenopodium album* (fat-hen), these being non-domestic plants. High concentrations of glume fragments were present in Sample 10 along with the remains of whole grains may be indicative of crop processing in the near vicinity. Both samples contained animal bone, including fish bone, with small quantities of burnt bone in Sample 10. Iron fragments were present in both samples and may indicate metal working within the near vicinity.

***Consolidation deposit [328] G157 prior to construction of villa (Figure 22; Section 32 & 51***

5.2.2.74 A compact clayey sand deposit G157 [328] was exposed within the central portion of the bypass road corridor within the area of a natural elevated platform. It was exposed for a distance of 14.22m north-south by 10.56m east-west and was up to 0.26m thick, encountered at maximum and minimum heights of 38.55m AOD and 38.28m AOD, respectively. This deposit overlay the Phase 3.6 developed soil G155 and subsequent Phase 4.2 postholes G158 and probably represents a levelling and consolidation deposit that was laid down prior to the construction of the villa buildings. No datable material was recovered from this deposit.

**Primary villa building (Figure 13)**

5.2.2.75 The initial construction of the villa building as exposed within the bypass road corridor and the Licensed Area comprised a north–south aligned stone-founded building of winged corridor plan. The building was exposed for a maximum distance of *c*. 48m north-south by *c*. 20m east-west and continued to the east and south beyond the limits of excavation of the Licensed Area

5.2.2.76 Most of walls courses of the villa had been removed; however the locations of the walls were evident by well-defined robber trenches and the remnants of floor surfaces and bedding/consolidation deposits which enabled the identification of the internal room layout of the villa within the bypass road corridor and the Licensed Area (Rooms 1–9; Figure 13). The layout as exposed comprised two rooms forming the northern wing (Rooms 1 & 2), two north-south orientated corridor rooms to the west (Rooms 3 & 4) and two larger rooms to the east (Rooms 5 & 6). Room 7 projected north from the northern wing and Room 8 projected west from the corridor rooms (Rooms 3 & 4). As only a portion of Room 1 was excavated, at this stage all rooms have been phased with the primary villa construction, but analysis of the plans of other excavated villas may help to determine a longer sequence of construction. A room furnished with a hypocaust heating system (Room 9) was evidently a later addition to the original villa; this was completely excavated and is described in Phase 4.3.

***Primary villa building (bypass road corridor)***

5.2.2.77 The walls of the villa building within the bypass road corridor and Licensed Area had been largely robbed (Phase 6), with only a small portion of the westernmost wall [274] G153 of the northern wing remaining (Plate 26). This north–south aligned wall [274] G153 survived for up to two courses (0.30m high) in roughly hewn sandstone blocks (largest 300mm x 260mm x 150mm) with a stone rubble core bonded with clayey sand. The wall was uniformly 1.10m wide and encountered at a maximum height of 38.51m AOD (Figure 13 and Figure 20; Section 58).

5.2.2.78 Although the northern and southern walls of the northern wing of the villa had been entirely removed, substantial cobble and clay foundations G140 survived with the westernmost wall G153 built directly onto this. The construction cut G139 for the northern, southern and western wall foundations measured up to 1.40m wide by up to 0.90m deep and the foundations within the cut comprised large rounded river cobbles and clay G140 (Figure 20; Sections 57-59, Figure 22; Section 51; Plates 26–28). Only a small assemblage of finds was recovered from the foundations including two sherds of pottery (AD160-300), ceramic building material and single fragment of cattle bone.

**Room 1**

5.2.2.79 The western side of the westernmost room (Room 1) of the northern wing lay partially within the bypass road corridor and this portion was therefore excavated; for a maximum internal area of 3.80m in the north and *c*. 1m in the south. Room 1 measured *c.* 6.40m north–south by *c*. 8.70m east–west internally. Within Room 1 successive floor surfaces

and associated levelling and consolidation deposits G143 were recorded which had a combined thickness of *c*. 0.70m (Figure 22; Section 51; Plates 29 and 30).

5.2.2.80 The thickness and heights (m AOD) for floor surfaces and consolidation/levelling deposits within the bypass road corridor are summarised below in Table 14.

| **Context No.** | **Type** | **Phase 4.2 Group 143** | | |
|---|---|---|---|---|
| | | *Thickness* | *mAOD* | |
| | | | *Highest* | *Lowest* |
| **179** | *opus signinum* floor surface | 20mm | 39.18 | 38.94 |
| **280** | Consolidation/levelling | 0.13m | 38.98 | 38.93 |
| **284** | Ashy silt floor surface | 0.28m | 38.98 | 38.75 |
| **285** | Ashy silt floor surface | 0.16m | 38.87 | 38.71 |
| **286** | Consolidation/levelling | 0.28m | 38.89 | 38.57 |
| **292** | Ashy silt floor surface | 0.23m | 38.98 | 38.65 |
| **303** | Consolidation/levelling | 0.26m | 38.76 | 38.52 |
| **304** | Sandy silt floor surface | 0.20m | 38.82 | 38.75 |
| **305** | Consolidation/levelling | 0.25m | 38.46 | n/a |
| **306** | Consolidation/levelling | 0.12m | 38.82 | 38.62 |
| **327** | Lime mortar floor surface | 0.16m | 38.72 | 38.60 |
| **356** | Consolidation/levelling | 0.20m | 38.84 | 38.75 |
| **357** | Consolidation/levelling | 0.16m | 38.64 | 38.54 |

Table 14: Dimensions of Room 1 floor surfaces and associated consolidation/levelling deposits G143

5.2.2.81 The earliest consolidation and levelling deposits within Room 1 comprised various compositions of sand and silt [357], [305] & [303] which had a combined thickness of 0.26m. This was overlain by a lime mortar floor surface [327] that measured 2.35m north-south by 1.14m east-west. The central portion of the mortar surface was raised with a square shaped depression (0.34m x 0.30m) that may represent a structural element such as a timber socket (Plate 31). The lime mortar surface and consolidation deposit [303] were overlain by ashy silt floor surface [292] and sandy silt floor surface [304] which in turn was overlain by consolidation and levelling deposits [286], [356] & [306]. The consolidation deposits were overlain by floor surfaces comprising ashy silt [284] and [285]. The latest floor surface in the sequence comprised a concrete (*opus signinum*) floor surface [179] and associated consolidation/levelling deposit [280] that extended into the Licensed Area to the east and measured 6.64m north-south by 6.72m east west (Plate 32).

5.2.2.82 A small assemblage of finds including pottery, ceramic building material and animal bone was recovered from deposits G143. A total of four sherds of pottery came from consolidation/levelling deposits [286] and [305] (dated to AD120–400) and surfaces [292] and [304] (AD120–300) (Appendix 16). Six iron nails (SF 58, 88a-c & 89a-b) were recovered from floor surfaces [284] and [292] and a fragment of a jet bracelet (SF 204) from floor surface [292].

5.2.2.83 Faunal analysis of the animal bone recovered from these deposits identified a prevalence of domesticates such as cattle, sheep or goat and to a lesser extent chicken and pig (Appendix 19). Also recovered were the remains of small rodents such as rat and vole.

5.2.2.84 Four environmental samples were processed from G143 including samples from floor surfaces [179], [284], [285] and [292] (Samples 19, 24, 25 and 34, respectively) and a single sample from consolidation and levelling deposit [303] (Sample 39) (Appendix 20). Various quantities of charcoal were recovered from floor surfaces [284], [285] and [292] with fragments from these large enough for further analysis. To this end, Sample 34 from floor surface [292] was sent for further analysis and taxa identified within the sample includes native English hardwoods of alder (*alnus glutinosa*), hazel (corylus avellana), ash (*fraxinus excelsoir*), rowan (*maloideae*), oak (*quercus* sp) and willow/poplar (*Salix/populous*) (Appendix 21). Low concentrations of charred and uncharred grain were present in floor surfaces [284] and [285] with the main species present *Hordeum spp*. (barley) and *Triticum spp*. (undetermined wheat). Metal-working by-products were also recovered from the floor surfaces [284] and [285]; small quantities of hammerscale and possibly metallurgical or fuel ash slag.

***Primary villa building (Licensed Area)***

5.2.2.85 The remaining exposed rooms of the villa (Rooms 2–8) lay within the Licensed Area and therefore only the uppermost floor surfaces and associated consolidation/levelling deposits were cleaned and recorded with no excavation undertaken.

| **Context No.** | **Type** | **Phase 4.2 Group 143** | | |
|---|---|---|---|---|
| | | *Room* | *mAOD* | |
| | | | *Highest* | *Lowest* |
| **177** | *Op. sig*. floor surface | Room 2 | 39.18 | n/a |
| **184** | *Op. sig.* floor surface | Room 7 | 38.90 | 38.84 |
| **191** | Consolidation/levelling | Room 5 | 38.85 | 38.80 |
| **192** | Consolidation/levelling | Room 5 | 39.16 | 38.80 |
| **193** | Consolidation/levelling | Room 5 | 39.25 | 39.07 |
| **194** | Consolidation/levelling | Room 5 | 39.23 | 38.85 |
| **197** | Consolidation/levelling | Room 6, 0.30m thick | 39.24 | n/a |
| **205** | Cobble floor surface | Room 8 | 39.07 | 38.99 |
| **212** | Tessellated floor surface | Room 3 (corridor) | 39.11 | n/a |

| | | | | |
|---|---|---|---|---|
| **213** | Tessellated floor surface | Room 3 (corridor) | 39.12 | n/a |
| **214** | Tessellated floor surface | Room 3 (corridor) | 39.38 | n/a |
| **215** | ?Floor surface | Room 3 (corridor) | 31.10 | 31.04 |
| **216** | Consolidation/levelling | Room 3 (corridor) | 39.10 | n/a |
| **321** | Consolidation/levelling | Room 3 (corridor) | 39.17 | n/a |
| **322** | Consolidation/levelling | Room 3 (corridor) | 39.14 | 39.04 |
| **462** | Consolidation/levelling | | 39.15 | n/a |

Table 15: Unexcavated floor surfaces and associated consolidation/levelling deposits G143 in Rooms 2–8. Licensed Area

**Room 2**

5.2.2.86 Room 2 of the northern wing measured *c*. 7m square internally and the latest floor surface in this room comprised a concrete *opus signinum* floor (Plates 32 and 33). The preservation of the floor surface was exceptional with the remains of quarter-round moulding along its northern edge surviving. Small areas of truncation had occurred that exposed the surfaces underlying sandy silt consolidation deposit [462]. Areas of painted wall plaster from the walls of Room 2 had collapsed onto the floor, as described below.

**Room 3 (northern corridor)**

5.2.2.87 Room 3 measured *c.* 20m north–south by 4m wide internally and comprised a corridor linking Rooms 1, 5, 4 and 8.

5.2.2.88 The earliest deposit encountered within the corridor room comprised sandy silt [215] which was exposed for a maximum distance of 8.40m north-south by 4.00m east-west and was directly overlain by consolidation deposits [322], [321] and [216] for tessellated surfaces. This deposit has been interpreted as a possible floor surface or alternatively could represent a further consolidation/levelling deposit.

5.2.2.89 Within the corridor room three small areas of tessellated flooring [212], [213] and [214] survived with the largest of these measuring up to 1.05m by 1.05m (Plate 34). The surface was built of individual sub-rectangular border stone tesserae (largest 25mm x 25mm 20mm) laid directly onto sandy silt and silt consolidation deposits [322] and [216], respectively. The surviving areas of tessellated surface were found to lie immediately below the topsoil and were considered to be under immediate threat from ploughing (which had recently taken place in this long-standing field of pasture). It was therefore decided that the tesserae should be removed and retained so further analysis could be undertaken. The tesserae recovered from the *in-situ* floor surfaces and unstratified material in the Licensed Area were examined (Appendix 11). This established that tessellated floor surface [212] was made from white fine “blonde” sandstone and tessellated surfaces [213] and [214] were primarily made from the green Elland flags with occasional cream-yellow Magnesian limestone. Due to the poor survival of these surfaces

no pattern was discernible but is likely to have formed individual or intermixed tessellated zones of white sandstone and dark-grey/green Elland Flags with a few yellow dolomites and red tile.

**Room 4 (southern corridor)**

5.2.2.90 Although no Phase 4.2 features or deposits were recorded within Room 4 the later Phase 5 demolition material and Phase 6 robber trenches delimited its extent. This corridor room was exposed for a distance of 12m north-south, continuing beyond the southern limit of excavation, and was 4m wide. It is likely to have accessed Room 6 and the southern wing of the villa building that was situated beyond the Licensed Area.

**Room 5**

5.2.2.91 Room 5 measured *c*. 20m north–south and at least 7.60m east–west, continuing to the east beyond the limits of the Licensed Area. No surfaces were recorded within the room; the group of three deposits [191], [192] and [194] comprising various compositions of sand and silt were recorded across the central portion of the room and are interpreted as consolidation/levelling deposits. At the southern end of the room rows of roughly hewn and un-worked sandstone blocks on edge (largest 600mm x 400mm x 200mm) within a sandy silt matrix [193] were exposed for a distance of 4.70m north-south by 7.60m east-west. This may represent a more substantial consolidation deposit possibly for a flag surface or some other substantial structural element.

5.2.2.92 Interpretation of this area is difficult as no excavation took place and no floor surfaces were exposed. It is possible that the different compositions of consolidation material represent the use of different floor materials which do not survive or it could potentially delimit a further division of this room into at least two rooms.

**Room 6**

5.2.2.93 A partially exposed room at the southern extent of the Licensed Area measured at least 12m north–south by 7.40m east–west, continuing to the east and south. Clayey silt deposit [197] was recorded within Room 6 and is interpreted as a possible consolidation/levelling deposit.

5.2.2.94 In the central portion of Room 6 a masonry structure [195] was partially exposed for a distance of 0.95m east-west and 0.23m wide. It survived to a single course (0.16m high) of roughly hewn sandstone blocks (largest 320mm x 160mm x 100mm) and was encountered at a maximum height of 38.91m AOD. Due to its limited exposure, the function of this structure is uncertain; it may represent part of a wall forming an internal partition.

**Room 7**

5.2.2.95 A square room measuring 4.90m north–south by 4.40m east–west was recorded projecting north from the northern villa wing. All walls associated with this had been robbed therefore it is uncertain if this room is contemporary with the primary villa building

or part of a later addition. However it is likely that the access to this room was via Room 2.

5.2.2.96 Floor surfaces of *opus signinum* and compact sandy silt [184] survived within the room (Plate 35). The *opus signinum* looked to be of a similar composition to that of the adjacent floor surfaces in Room 2 and could potentially be contemporary.

**Room 8**

5.2.2.97 Another room measuring *c*. 7.40m north–south by *c*. 8.10m east–west projected west from the villa Corridor Rooms 3 & 4 (Plates 36 & 37). Nearly all the walls for this room had been robbed with only a short length of the northernmost wall [202] surviving for a distance of *c*. 3m (Plate 38). It was built from un-worked and roughly hewn sandstone blocks with a stone rubble core bonded by light grey lime mortar. The wall itself was uniformly 0.64m wide and was only exposed to two courses, encountered at a maximum height of 39.11m AOD.

5.2.2.98 A cobble surface [205] inside Room 8 abutting wall [202], was exposed for a maximum distance of 8.10m north-south by 3.40m east-west, with this continuing below Phase 5 demolition deposits.

5.2.2.99 Due to the robbing of the walls the access locations are uncertain with access to this room from either the corridor room (Room 3) or from any of the external areas.

***Phase 4.3: Room 9, heated room***

5.2.2.100 Features associated with a small square room G144 (Room 9) furnished with a hypocaust heating system have been assigned to Phase 4.3. This was evidently a later construction to that of the villa building complex as its northern wall abutted the western wall of the primary villa buildings northern wing. The internal dimensions of the heated room were *c*. 4.80m north-south by *c*. 4.40m east-west (Figure 14; Plate 39 & 40).

5.2.2.101 Almost all of the walls and wall foundations associated with Room 9 had been removed (Phase 6). Only a short section of its northern wall [272] survived for a length of 0.41m east–west; just a single course of roughly hewn sandstone blocks (largest 480mm x 180mm x 150mm) survived with its clayey sand bonded rubble core (Plates 41 and 42). The wall was 0.90m wide and encountered at a maximum height of 38.80m AOD. The wall [272] was built directly onto a substantial clay and cobble foundation [271], within construction cut [279], which survived for a distance of 2.92m long and was 0.90m wide by 0.57m deep, this abutting the Phase 4.2 primary villa wall [274].

5.2.2.102 A small assemblage of finds was recovered from the wall foundation [271] including two sherds of pottery dated to AD200–300, ceramic building material and a single fragment of cattle bone.

5.2.2.103 The earliest deposit encountered within the heated room directly overlay Phase 4.2 consolidation deposit [328]. This was a *c*. 20mm thick spread of light grey lime mortar [326] which extended over an area measuring 3.46m north-south by 1.44m east-west and was encountered at a height of *c*. 38.56m AOD. Analysis of the lime mortar demonstrated

that it was made with four layers comprising a *statumen* of dolomite rubble, followed by a coarse gravel (*rudus*) topped with a finer mortar layer and finally a thin lime layer (Appendix 10). This presumably formed a foundation and levelling layer within the room, and it is possible that the material originated from an earlier floor surface from elsewhere in the villa, perhaps from a room where the floor had been replaced.

5.2.2.104 A clayey sand deposit [270] up to 40mm thick extended across the entire internal area of the room, encountered at a maximum height of 38.58m AOD. This deposit contained frequent quantities of small fragments of sandstone and formed a consolidation layer upon which the *pilae* stacks [168] were constructed. A total of thirty-seven *pilae* stacks [168] of six north–south rows by seven east–west rows survived to a maximum height of 0.32m. The pilae stacks were built using roughly hewn and squared sandstone slabs and blocks bonded with a light grey lime mortar. The majority of the *pilae* stacks survived to two to three stone slabs/blocks high with three stacks surviving to five slabs/blocks high within the southernmost two rows. The majority of the sandstone slabs and blocks had a pinkish hew and had evidently been affected by the hot gases of the heating system.

5.2.2.105 At the northern-central portion of Room 9 were the basal structural remains of the stoking chamber [277] (Plate 42). This comprised three upright sandstone blocks (largest 340mm x 240mm x 200mm), of which two blocks formed the western side and one block formed the eastern side, set *c*. 0.40m apart, bonded with *opus signinum.* The western elevation of wall [272] had a pinkish hew indicating that this part of the wall also formed part of the stoking chamber.

5.2.2.106 Between the walls of the stoking chamber was a *c*. 20mm thick ashy silt deposit [269] which extended for a distance of 1.03m north–south. Environmental Sample 30 contained a high concentration of grain, however identification proved difficult as the outer layers had been totally charred (Appendix 20). Charcoal from this sample contained fragments large enough that further analysis was undertaken; taxa identified included native English hardwoods of blackthorn; cherry (*prunus* sp), ash (*fraxinus excelsoir*), rowan (*maloideae*), oak (*quercus* sp) and willow/poplar (*Salix/populous*) (Appendix 21).

5.2.2.107 Animal bones recovered from this deposit comprised small quantities of bone from rodent and amphibian. Freshwater snails were also recovered from the environmental sample. It is unlikely these animal remains represent a food source but rather the abandonment of the hypocaust system with the void of the hypocaust system possibly forming an ideal habitat for the animals.

5.2.2.108 A clay silt deposit [307] up to 0.50m thick extended over an area that measured 8.96m north–south by 6.70m east–west external to the east and west of the heated room, encountered at maximum and minimum heights of 38.62m AOD and 37.97m AOD, respectively. A small assemblage of finds was recovered from this deposit including a single sherd of pottery dated AD200–275, 97 fragments of ceramic building material, two fragments of mid to late 3rd century glass (SF 256 & 258), and two iron nails (SF 79a-b). Small quantities of animal bone were identified as cattle and sheep/goat along with small

quantities of oyster shell. Recent disturbance from animal burrowing was observed across this deposit with voids and plant vegetation from the former burrow and the find of a copper-alloy percussion cap.

5.2.2.109 Recorded immediately to the north of the stoking chamber of the hypocaust system was a c. 0.10m thick sandy, silty, ash deposit [291] which measured up to 4.84m east–west by 2.80m north–south and was encountered at a height of *c*. 38.50m AOD. The composition of this deposit indicated it probably represents a raking-out deposit from the stokehole. Small assemblages of refuse material including ceramic building material, oyster shell and animal bone were recovered. The animal bone recovered was predominantly domesticates, sheep and cattle with a single fragment of chicken bone, along with small rodents. An environmental sample from [291] (Sample 31) contained relatively high concentrations of charred grain although the species were difficult to identify due to the completely charred outer layer (Appendix 20). No chaff was present suggesting the processing of grain was undertaken elsewhere. Small quantities of burnt animal bone and fish bone were also recovered. Wood charcoal recovered from this sample was large enough for further analysis and the taxa identified were all hardwoods native to England and included ash (*fraxinus excelsior*), rowan (*maloideae*), blackthorn; cherries (*prunus sp.*), oak (*quercus sp.*) and willow/poplar (*salix/populous sp.*) (Appendix 21). Small quantities of possibly metallurgical or fuel ash slag were also recovered that may represent metalworking debris.

***Phase 5: Site 122 villa abandonment***

5.2.2.110 Phase 5 represents a period of abandonment and early robbing of the villa building; 25 deposits associated with the demolition of the villa complex were recorded to the west and north of the exposed villa building and within the villa building itself where such deposits directly overlay Phase 4.2 floor surfaces or associated consolidation deposits.

5.2.2.111 Demolition deposits within the area of the bypass road corridor (G145) were excavated and those within the Licensed Area were recorded and remained unexcavated (Table 15). The exception was two demolition deposits [198] and [329] that were partially exposed within a sample excavation sited at the south-eastern corner of the Licensed Area (Figure 22; Section 37).

| **Context No.** | **Type** | **Phase 4.2 Group 143** | | |
|---|---|---|---|---|
| | | *Room* | *mAOD* | |
| | | | *Highest* | *Lowest* |
| **177** | *Op. sig*. floor surface | Room 2 | 39.18 | n/a |
| **184** | *Op. sig.* floor surface | Room 7 | 38.90 | 38.84 |
| **191** | Consolidation/levelling | Room 5 | 38.85 | 38.80 |
| **192** | Consolidation/levelling | Room 5 | 39.16 | 38.80 |
| **193** | Consolidation/levelling | Room 5 | 39.25 | 39.07 |
| **194** | Consolidation/levelling | Room 5 | 39.23 | 38.85 |

| | | | | |
|---|---|---|---|---|
| **197** | Consolidation/levelling | Room 6, 0.30m thick | 39.24 | n/a |
| **205** | Cobble floor surface | Room 8 | 39.07 | 38.99 |
| **212** | Tessellated floor surface | Room 3 (corridor) | 39.11 | n/a |
| **213** | Tessellated floor surface | Room 3 (corridor) | 39.12 | n/a |
| **214** | Tessellated floor surface | Room 3 (corridor) | 39.38 | n/a |
| **215** | ?Floor surface | Room 3 (corridor) | 31.10 | 31.04 |
| **216** | Consolidation/levelling | Room 3 (corridor) | 39.10 | n/a |
| **321** | Consolidation/levelling | Room 3 (corridor) | 39.17 | n/a |
| **322** | Consolidation/levelling | Room 3 (corridor) | 39.14 | 39.04 |
| **462** | Consolidation/levelling | | 39.15 | n/a |

Table 15: Dimensions of Phase 5 demolition deposits

5.2.2.112 Demolition deposits G145 within the bypass road corridor were excavated to the west ([185] and [206]) and north ([181], [300] and [301]) of the villa building with the uppermost of these deposits extending into the Licensed Area to the east (Figure 22; Sections 32 & 51; Plate 16). The demolition deposits had combined dimensions of up to 49.20m north–south by 37.00m east–west and were up to 0.63m thick. The upper stratum of these deposits was recorded at maximum and minimum heights of 39.15m AOD and 37.99m AOD, respectively.

5.2.2.113 The deposits contained various compositions of clay, silt and sand from which a relatively large assemblage of finds, particularly building material, was recovered, which has provided a wealth of information about the materials used to build the villa and construction techniques. A total of 87 sherds of pottery was recovered from these deposits with the latest material dating to AD360–400+ attesting to the final phases of occupation of the villa (Appendix 6). Also identified within the assemblage were six sherds of samian (AD100–230) and two sherds of *mortarium* including a rim with stamp (Appendix 5 & 8). The *mortarium* rim probably pre-dates AD200 and has a double stamped on the left side of the spout and where legible it read ‘IAIO’ on the first stamp and ‘AIOR’ on the second stamp. A single sherd of early to mid 13th-century pottery was also recovered from demolition deposit [206]. A total of 786 fragments of ceramic building material were recovered from the demolition deposits with a prevalence of roofing tile (*tegulae* and *imbrices*) and box-flue tile with relatively small quantities of brick.

5.2.2.114 Small finds included 38 iron nails (SF 57a-f, 59, 60, 62, 63, 66a-d, 67a-f, 68a-l, 72a-e & 244) and two fragments of window glass (SF 260 & 261) presumably from the villa structure. Occupation debris included glass vessel fragments (SF 207 & 265; Appendix 16), the head of a bone pin (SF 61) and an iron object of unknown function (SF 243) (Appendix 12). Also recovered were two copper alloy coins (SF 63 & 65) from demolition deposits [185] and [206] (Appendix 15). Although both coins were heavily corroded and

illegible they are probably either 3rd-century *antoninianus* or 4th-century *nummus*. Domestic refuse in the form of food waste included animal bone with cattle, sheep/goat with relatively small quantities of pig and chicken represented. Small quantities of other animal bone recovered were identified as red deer, teal, dog, hare and thrush along with small rodents, voles and amphibians (Appendix 19). Also recovered was a small assemblage of oyster shell (Appendix 20).

5.2.2.115 Four environmental samples (Samples 23, 27, 35 & 38) from demolition deposits [181], [206], [300] and [308] were processed (Appendix 20). Wood charcoal was present in Samples 23 and 27 in small quantities with only charcoal from Sample 23 big enough for further analysis. All samples produced small quantities of shell, molluscan remains, animal bone, and stone and ceramic building material. Small quantities of charred grain, charred seed and uncharred seed were also recovered from the flots. Small quantities of coal and slag were recovered from Sample 23 with this material probably by-products of metal working.

5.2.2.116 A demolition deposit within the internal area of the hypocausted room which comprised a *c*. 0.30m thick sandy clay [167] G145 provided much information about the construction of this room. A relatively large assemblage of 102 fragments of ceramic building material comprised predominantly roof tile of *tegulae* and *imbrices* (Appendix 9). Three of the *tegulae* had deliberate markings of a semi-circular type that probably represent the signature of the tile maker. Also recovered were a large quantity of combed keyed box-flue tiles and a single fragment of *voussoir* tile suggesting that the walls of the room would have been jacketed with stacked columns of box-tile and possibly a heated vault. A large quantity of painted wall plaster was recovered from this room indicating that the box tiles would have been faced with plaster and the room decorated (Appendix 10 and discussed below). Fixtures and fittings, presumably from the room, included three iron nails (SF 36, 55a-b) and a complete iron pintle (SF 37) which may have formed part of a hinge for a hanging door.

5.2.2.117 A small assemblage of five sherds of pottery dated AD360–400+ was also recovered from this deposit (Appendix 6) along with was a spindle whorl (SF 51) made from local greyware. Further occupation debris included animal bone and the assemblage contained similar proportions of domesticates to those recovered from earlier villa deposits with cattle, sheep/goat and to a lesser extent pig (Appendix 19). Smaller quantities of poultry, red deer and fish were also recovered providing further supporting evidence for the affluence of the inhabitants of the villa. The remains of a moderately sized slender sub-adult dog, possibly a ‘running’ hound and the remains of a small raptor that may have been used for hunting were also recovered from this deposit.

5.2.2.118 Numerous bones associated with the abandonment of the villa included numerous remains of frogs/toads (at least 60 individuals) and small rodents (mice, vole and rat). It is likely after the abandonment of the villa the semi-subterranean area of the room under the floor supported by the *pilae* stacks would have been an ideal habitat for such animals.

Two environmental samples (Samples 17 & 18) were processed from demolition deposit [167], these yielded very limited amount of environmental material with Sample 18 producing no flot material. Pieces of painted wall plaster were recovered from both samples and fish bone from Sample 17.

5.2.2.119 Numerous deposits associated with the demolition of the villa building were recorded in the Licensed Area including the aforementioned demolition deposits G145 ([181], [185], [206] & [301]) excavated within the bypass road corridor with these continuing into the Licensed Area. Demolition deposits within the Licensed Area were recorded to the west and north externally to the villa building ([207], [208], [210], [211], [320]) and across the internal area of the villa building ([178] Room 1; [176] Room 2; [217], [250] & [251] Room 3; [201] Room 4; [190] Room 5; [196], [198] & [323] Room 6; [183] Room 7; [204] & [319] Room 8). The dimensions and locations of each demolition deposit are listed in Table 15.

5.2.2.120 These deposits remain unexcavated therefore artefactual remains recovered were limited with only two fragments of cattle bone from deposits [250] and [251] and two individual finds of an iron nail (SF 81) and a small fragment of worked bone (SF 83) that were collected during the initial cleaning of the site.

5.2.2.121 Within the easternmost exposed room of the northern wing (Room 2) large patches of wall plaster [176] directly overlay Phase 4.2 *opus signinum* floor surface [177]; the plaster had evidently collapsed onto the floor from the walls of the room, painted side face-down (Figure 11; Plate 33). The plaster lay directly below the newly formed ploughsoil, *c*. 0.30m below present ground level, and was at threat from subsequent ploughing therefore it was decided that the painted wall plaster should be lifted. The wall plaster was removed in sections and placed on a rigid sheet to be processed off-site. Two individual finds including an iron nail (SF 81) and a small fragment of worked bone (SF 83) were also recovered from this deposit.

5.2.2.122 A large assemblage of wall plaster and *opus signinum* was recovered from Phase 5 demolition deposit G145 and Phase 6 robber trenches G142 (Appendix 10). The majority of the wall plaster derives from two schemes (Schemes 1 and 2), one of which has been renovated, with a further scheme identified from a number of smaller fragments (Scheme 3). Schemes 1 and 2 are of two consecutive painted plaster schemes the earliest of which has two base coats (*arriccio*) and a thin lime top coat (*intonaco*). The majority of the painted plaster from these schemes were recovered from Phase 5 demolition deposit [167], from the internal area of the hypocausted room, with smaller quantities recovered from Phase 6 robber trench backfill deposits [255] and [258] G142.

5.2.2.123 Due to the fragmentary nature of the wall plaster assemblage the definitive design for Scheme 1 is difficult to reconstruct, however based on the wall plaster recovered it appears to be a two-dimensional polychrome panel based scheme on a natural white plaster background. The scheme appears to have red panel boarders with blueish-grey framing lines, with yellow ochre over-painting identified on one small fragment. Also identified was various coloured panels and borders over-painted with various coloured

decorative lines or blocks of colours. Other design elements comprise fragments with adjacent red and black with the black over-painted with white stylised flower motifs with a central dot, solid blocks of red applied in fan shapes and red and black specks on white ground with the latter probably in imitation marble that probably forms the base of the wall (*dado*).

5.2.2.124 Based on a smaller quantity of wall plaster fragments Scheme 2 was formed by a single base coat and thin top coat and comprised polychrome panels on natural white ground. Panel and panel borders of yellow, red and black, yellow and black, and yellow and red were identified. Also identified were red and black specks on white ground of imitation marble probably forming a *dado* element.

5.2.2.125 A further scheme (Scheme 3) was identified from a small assemblage of wall plaster recovered from demolition deposits [167], [181], [185] and [206] (G145) and the backfill of various Phase 6 robber trenches G142. The plaster comprises a grey base layer and a thick top coat that compared to the relatively crudely finished Schemes 1 and 2 has a smooth and even finish. Based on the wall plaster recovered it is assumed to be a polychrome panel based scheme, with possible marbled dado with the main zone including decorative elements of foliate motifs and a possible figure. This scheme shares elements in common to that of the wall-decoration from the 4th-century principia in York and is likely to be of a similar date.

5.2.2.126 Other potential schemes may be represented within the assemblage, however due to the fragmentary nature this is difficult to establish. Fragments recovered from unstratified deposits during the initial hand cleaning of the villa building and from demolition deposit [167] are presumed to be unrelated to the aforementioned identified schemes and may represent painted wall plaster from rooms within the villa building located in the Licensed Area (Rooms 1-8).

*5.2.2.127* Also recovered from demolition deposit [167] G145 were fragments of floor surface that comprised a coarse gravelly mortar (*rudus*) topped with well smoothed *opus signinum.* A significant number of tapered fragments were identified in the assemblage suggesting that the floor sloped upwards at the room edges. Fragments of *opus signinum* quarter beading were identified that probably formed the edges of the floor surface, with similar quarter beading observed within Room 2 of the villa building.

***Phase 6: Site 122 post-Roman robbing of the villa***

5.2.2.128 Phase 6 represents activity associated with the removal of the coursed walls of the villa and, in the case of the heated room, some of the cobble foundations as well.

5.2.2.129 The robber trenches comprised a series of north–south and east–west aligned linear features (Figures 15 and 21; Sections 16, 22, 23, 26, 27 & 29; Plates 43–45). Robber trenches within the bypass road corridor were excavated and attributed a group number (G141) and remained unexcavated within the Licensed Area. The dimensions of each robber trench are given in the table below (Table 16).

| Cut No. | Backfill No. | Phase 6: (Group 141) Bypass road corridor | | | | |
|---|---|---|---|---|---|---|
| | | *Length* | *Width* | *Depth* | *mAOD* | |
| | | | | | *Highest* | *Lowest* |
| **164** | [218], [219], [220] | 7.20m | 0.95m | 0.74m | 38.70 | 37.95 |
| **165** | [228], [229], [230], [238] | 3.80m | 1.15m | 0.86m | 38.78 | 38.00 |
| **166** | [221], [222], [223], [224], [225] | 5.80m | 1.01m | 1.02m | 38.94 | 38.00 |
| **170** | [264], [265], [266] | 18.44m | 1.42m | 0.70m | 39.00 | 38.39 |
| **171** | [257], [257], [258], [268] | 13.44m | 1.55m | 0.90m | 38.18 | 37.37 |
| **254** | [255], [262], [263] | 5.78m | 1.14m | 0.55m | 38.80 | 38.26 |
| **Cut No.** | **Backfill No.** | **Phase 6: Licensed Area (unexcavated)** | | | *mAOD* | |
| | | *Length* | *Width* | *Depth* | *Highest* | *Lowest* |
| **173** | [337] | 6.90m | 1.10m | n/a | 39.12 | n/a |
| **174** | [339] | 7.30m | 1.20m | n/a | 39.18 | n/a |
| **175** | [338] | 11.60m | 0.95m | n/a | 38.97 | n/a |
| **186** | [331] | 33.00m | 1.20m | n/a | 39.26 | n/a |
| **187** | [332] | 33.00m | 1.00m | n/a | 39.22 | n/a |
| **188** | [333] | 7.50m | 0.95m | n/a | 39.16 | n/a |
| **189** | [334] | 3.90m | 0.90m | n/a | 39.16 | n/a |
| **203** | [336] | 12.92m | 1.30m | n/a | 38.89 | n/a |
| **209** | [335] | 9.30m | 1.06m | n/a | 38.81 | n/a |

Table 16: Dimensions of Phase 6 robber trenches

5.2.2.130 The robber trenches generally comprised near vertical edges, with the exception of the steeped northern edge of Robber Trench [170], with flat bases and measured up to 1.55m wide and where excavated up to 1.02m deep (Plate 43). The walls of the primary villa building were generally robbed down to the uppermost fills of the wall foundations (Phase 4.2, G140) with only a small section of wall left *in situ* ([274] G153) (Plate 45). The walls and clay and cobble wall foundations associated with the later hypocausted room (Phase 4.3, G144) were for the most part completely removed with only a small section of its northernmost wall and foundations still remaining (Plate 41).

5.2.2.131 Backfill deposits in the robber trenches generally comprised various compositions of sand, silt and clay G142 from which a small assemblage of finds was recovered. Four sherds of pottery were recovered from these deposits of medieval and potentially 17th or early 18th century date. All pottery from the robber trenches was recovered from the uppermost backfill deposits and could therefore potentially be residual. Ceramic building material of Roman tile and brick and fragments of painted wall plaster recovered from the robber trenches are certainly derived from the primary villa building and Room 9, the heated room. The painted plaster recovered from the robber trench backfill forms

elements of the aforementioned Scheme 3 and potentially other schemes associated with Room 9.

5.2.2.132 Also recovered from the robber trench backfill deposits were two iron nails (SF 26 & 29), an almost complete iron knife (SF 264) and two fragments of glass (SF221 & 256), including a fragment of 1st-2nd century bottle glass (SF 221) and a fragment of cast window glass (SF 256).

5.2.2.133 A relatively small assemblage of animal bone was collected from the backfill deposit with a few major domesticates of cattle and sheep/goad represented along with small quantities of red deer, roe deer and oyster (Appendix 20). These remains are likely to have derived from the underlying villa deposits and were introduced into this context. Relatively large quantities of amphibian and small rodent remains were recovered suggesting that the robber trenches may have been left open for a period of time and were either a beneficial habitat or pit-fall traps for such animals.

5.2.2.134 A single environmental sample was analysed from the backfill of Robber Trench [171] (Sample 15) from which very little environmental material was recovered. Some fish bone was recovered along with small fragments of building material including painted wall plaster, daub and stone. Snail eggs along with *Cecilioides acicula* (agate snail) may indicate modern contamination.

***Phase 7: Sites 122, 122 North & 68 Colluvium***

5.2.2.135 A colluvial deposit comprising greyish brown sandy silt [200] G146 was exposed across site 122 within the western part of the bypass road corridor for a maximum distance of *c*. 80m north–south by at least 20m east–west. Where exposed its thickness varied from 0.25m at its northern extent to a maximum thickness of 0.70m at its southern extent and was encountered at maximum and minimum heights of 37.85m OD and 37.37m, respectively (Figures 18 & 19; Sections 38 & 35).

5.2.2.136 A small assemblage of finds was recovered from the colluvium including two small fragments of Roman pottery, animal bone, ceramic building material, and an iron nail (SF 80). This deposit represents a period of villa abandonment with this material becoming thicker within areas situated at the lower elevations of the sites and directly overlay Phase 4.2 features including quarry pit G126 and east–west aligned boundary ditch G135 and Phase 5 demolition deposit [196].

5.2.2.137 The artefactual material recovered from the colluvium is likely to have derived from the villa and its associated occupation deposits, possibly the result of subsequent agricultural activity during the medieval to modern periods.

5.2.2.138 A further colluvial deposit was recorded extending across sites 122 North and 68 comprising a *c*. 0.22m thick brownish grey silty clay, [102] and [3001], directly overlying Phase 4 Roman features. No artefactual material was recovered from the colluvium [102] and [3001].

***Phase 8: Sites 122 & 122 North Post-medieval***

5.2.2.139 Phase 8 represents post-medieval agriculture activity recorded at the central-western part of Site 122 and a single feature at Site 122 North (Figure 10)

5.2.2.140 A stone-filled linear feature G170 was recorded for a distance of 15.20m east–west. This had a shallow U-shaped profile and measured up to 0.60m wide and up to 0.30m deep, encountered at a height of *c*. 37.46m AOD. It was deliberately backfilled with medium to large sub-rounded stones within a firm silty clay matrix. This feature truncated Phase 7 colluvium [200] G146. Although no artefactual material was recovered from this feature, it is likely to date to the post-medieval period and is tentatively interpreted as a field boundary. It is worth noting that boundary feature G170 was on a similar alignment to that of Phase 4.2 Roman boundary feature G135 and may represent a continuity of this field system over a substantial period of time (Figure 10).

5.2.2.141 A humic sandy silt deposit [278] G154 was exposed for a distance of *c*. 13.00m east–west by 8.80m north–south and was up to 0.14m thick, encountered at a height of *c*. 37.97m AOD. The southern extent of this deposit was contained by boundary ditch G170 and is likely to be associated with agricultural activity. An environmental sample (Sample 22) recovered relatively high quantities of grass, insects and seeds that were deemed to be of post-medieval origin. Small assemblages of finds recovered from this deposit include two sherds of pottery of Roman and post-medieval date along with small quantities of animal bone and ceramic building material.

5.2.2.142 A single feature attributed to post-medieval activity (Phase 8) was recorded at site 122 North. This comprised a shallow irregular shaped feature [116] which measured 4.00m east-west by 3.70m north-south and was up to 0.25m deep. Its fill contained frequent quantities of large sub-round stones within a clayey silt matrix [115] from which no artefactual material was recovered. The function of this feature is uncertain.

***Phase 9: Modern***

5.2.2.143 Modern features and deposits were recorded within Site 122 North were primarily represented by drainage features including a brick and stone culvert [421], a brick manhole with a stone slab capping [426] that adjoin field drains [424] and [427]. Two further ceramic field drains were also recorded [104] and [106] (Figure 10).

5.2.2.144 An animal burial [125] recorded at the central-eastern edge of the site was of a modern date and remained unexcavated (Figure 10).

5.2.2.145 Ploughsoil formed the existing ground surface across Sites 122, 122 North and 68. At Site 122 the ploughsoil consisted greyish brown silty clay [330] up to 0.36m thick. The maximum and minimum heights recorded were 39.57m AOD, at the central-eastern edge of the Licensed Area, and 37.88m AOD, at the south-western extent of the site, respectively. Ploughsoil encountered across Sites 122 North and Site 68 consisted of similar greyish brown silty clay, [101] and [3000], and was recorded at maximum and minimum heights of 38.63m AOD and 38.14m AOD.

### 5.2.3 Site 123 Figure 24

***Phase 1: Geological***

5.2.3.1 The earliest deposits encountered across Site 123 represented the natural geological material.

5.2.3.2 The natural sub-stratum [3102] at Site 123 was observed extending across the excavation area. Within the central and northern parts of the site this comprised light yellowish brown sandy clay with the southern area containing substantial quantities of medium to large sub-round cobbles.

***Phase 6: Medieval***

5.2.3.3 A NNW-SSE aligned linear feature [3103], was exposed across the northern portion of the excavation area for a distance of 13.65m, truncating the natural sub-strata. This had a U-shaped profile and was up to 1.10m wide by up to 0.47m deep (Plate 48).

5.2.3.4 Its basal fill comprised *c*. 50mm thick light yellowish grey sandy clay silt [3104] from which no artefactual material was recovered. This fill contained very few inclusions is likely to represent natural silting of the ditch. Its upper fill comprised 0.40m thick brownish grey sandy clayey silt [3105] which contained small sub-rounded and sub-angular stones; this represents a deliberate backfill. A single sherd of medieval pottery recovered from its backfill.

5.2.3.5 The archaeological potential of site 123 was initially identified by a geophysical survey followed by archaeological trial trench evaluation (ASDU 2009). The geophysical survey identified three parallel NW-SE aligned linear anomalies and the subsequent evaluation trenches were sited to test these at two locations. NNW-SSE aligned ditches were recorded within each trench that may represent elements of the same ditch, however are unlikely to account for the linear geophysical anomalies.

5.2.3.6 The geophysical anomalies at the site were interpreted as a trackway (Jacobs 2013). The single NNE-SSW ditch recorded however is likely to represent a boundary feature or drainage feature of probable medieval date.

***Phase 7: Subsoil***

5.2.3.7 Subsoil comprising firm reddish brown sandy silt [3101] directly overlay Phase 6 ditch. This deposit was recorded extending across site 123 and was up to 0.40m thick (Plate 47).

***Phase 9: Modern***

5.2.3.8 Ploughsoil formed the existing ground surface across Site 123 and directly overlay Phase 7 subsoil and consisted friable brownish grey silty clay [3100] up to 0.10m thick.

### 5.2.4 Site 12 Figure 24

5.2.4.1 The Record during Construction exercise was undertaken east of the A684 at the location of a proposed roundabout with this area extending to the north-east within the bypass road corridor towards Site 123.

5.2.4.2 The natural geological material (Phase 1) exposed across this area comprised reddish brown clayey silt [3200] that in turn was directly overlain by *c*. 0.15m thick friable

brownish grey silty clay [3201] ploughsoil (Phase 9). No subsoil was encounter within this part of the site.

5.2.4.3 Geophysical survey identified a series NE-SW and NW-SE aligned linear anomalies interpreted as field boundaries with subsequent archaeological evaluation of three trial trenches undertaken within this area (ASDU 2009). No archaeological remains of significance were recorded and the linear features identified as modern drain.

5.2.4.4 No archaeological structures, features or deposits of archaeological significance were encountered. The modern drain as identified by trial trench evaluation was deemed to be of no archaeological importance and was therefore not recorded.

### 5.2.5 Site 94 Figures (Figure 25)

5.2.5.1 Site 94 comprised an area of land immediately to the east of Leazes Lane with the exclusion of the area previously investigated during the archaeological works associated with the A1M widening project. It was considered that there was potential for the survival of archaeological remains associated with Dere Street Roman road and the later turnpike. The geophysical survey and subsequent archaeological trial trench evaluation undertaken within this part of the bypass road corridor did not identify any significant archaeological remains (ASDU 2009).

5.2.5.2 This site was originally to be undertaken as a Detailed Excavation however prior to commencement of the archaeological work it was agreed this would be undertaken as a Record during Construction exercise.

5.2.5.3 Natural geological material (Phase 1) was exposed across the whole of Site 94 and comprised friable reddish brown silty sand [4001], this being the same material recorded during archaeological trial trench evaluation (Plate 49).

5.2.5.4 Ploughsoil (Phase 9) formed the existing ground surface across Site 94 and comprised c. 0.30m thick friable greyish brown sandy silt [4000].

5.2.5.5 No archaeological remains of significance were identified.

### 5.2.6 Site 111 Figure 26

5.2.6.1 Partial Recording during Construction was undertaken at Site 111 including an area measuring *c*. 62m NE-SW by 20m NW-SE immediately to the east of the Wensleydale Railway Line and an area within the central portion of the bypass road corridor measuring *c*. 113m east-west by up to 0.38m north-south.

5.2.6.2 Geophysical survey identified a group of amorphous and linear anomalies at the eastern extent of the site and interpreted as possible features associated with the adjacent railway, however no evaluation trenches were undertaken to establish this (ASDU 2009). Two evaluation trenches undertaken at the central portion of Site 111 identified no archaeological remains of significance.

5.2.6.3 The natural geological material (Phase 1) was only encountered within the western extent of the site and comprised firm bluish grey clay [5002] (Plate 50). Phase 7 subsoil comprising *c*. 0.40m thick friable mid reddish brown clayey silty sand [5001] directly overlay the natural geological material at the western extent of the site (Plate 51). This

upper stratum of this subsoil [5002] was also encountered across the area monitored within the central portion of the site and at this location the construction levels of the road construction were higher than the present ground level therefore the subsoil remained *in situ* (Plate 52). It was decided that further monitoring at this location was unnecessary and that any archaeological remains if present would not be impacted upon by the road scheme.

5.2.6.4 Ploughsoil (Phase 9) formed the existing ground surface across Site 111 and comprised *c*. 0.30m thick friable greyish brown sandy clayey silt [5000].

# 6. STRATIGRAPHIC DATA

## 6.1 Paper Records

6.1.1 The paper element of the Site Archive for each individual site is shown in Table 17:

| *Item* | *Site 58* | | *Site 122, 122 North & 68* | | *Site 123* | | *Site 12* | | *Site 94* | | *Site 111* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *No.* | *Sheets* | *No.* | *Sheets* | *No.* | *Sheets* | *No.* | *Sheets* | *No.* | *Sheets* | *No.* | *Sheets* |
| Context register | 1 | 8 | 1 | 8 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Context/ Group sheets | - | 416 | - | 474 | - | 6 | - | 2 | - | 2 | - | 3 |
| Environmental sample register | 1 | 5 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Environmental sample sheets | - | 191 | - | 90 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Section register | 1 | 3 | 1 | 4 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Section drawings | 156 | 158 | 80 | 78 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Plans | 4 | 143 | 85 | 408 | 1 | 10 | 0 | 0 | 0 | 0 | 0 | 0 |

Table 17: The total paper element of the Site Archive:

6.2.2 The total paper element of the Site Archive is given in Table 18:

| *Item* | *No.* | *Sheets* |
|---|---|---|
| Context register | 6 | 20 |
| Context/ Group sheets | 903 | 903 |
| Environmental sample register | 2 | 7 |
| Environmental sample sheets | 281 | 281 |
| Section register | 3 | 8 |
| Section drawings | 237 | 166 |
| Plans | 90 | 561 |

Table 18: Total quantity of the BALB archive

## 6.2 Photographic Records

6.2.1 The photographic element of the Site Archive for each individual site is as follows:

| *Item* | *Site 58* | *Site 122, 122 North & 68* | *Site 123* | *Site 12* | *Site 94* | *Site 111* |
|---|---|---|---|---|---|---|

| | No. | Sheets | No. | Sheets | No. | Sheets | No. | Sheets | No. | Sheets | No. | Sheets |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Monochrome print registers | 4 | 7 | 8 | 12 | 1 | 1 | - | - | - | - | - | - |
| Monochrome prints | 116 | 16 | 96 | 27 | 3 | 1 | - | - | - | - | - | - |
| Monochrome negative | 124 | 7 | 234 | 13 | 3 | 1 | - | - | - | - | - | - |
| Digital photograph registers | 1 | 11 | 1 | 15 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Digital photographs | 200 | | 355 | | 7 | | 9 | | 13 | | 12 | |

*Table 19 Contents of the paper archive per individual site*

6.2.2 The archival element of the photographic surveys of Sites 43 and 110 comprises:

| Item | Site 43 | | Site 110 | |
|---|---|---|---|---|
| | No. | Sheets | No. | Sheets |
| Monochrome print registers | 1 | 1 | 1 | 1 |
| Monochrome prints | 14 | 2 | 6 | 1 |
| Monochrome negative | 15 | 1 | 7 | 1 |
| Digital photograph registers | 1 | 2 | 1 | 1 |
| Digital photographs | 30 | | 10 | |

*Table 20: Photographs generated from the survey of Sites 43 and 110*

6.2.3 The total photographic element of the Site Archive is as follows:

| Item | No. | Sheets |
|---|---|---|
| Monochrome print registers | 15 | 22 |
| Monochrome prints | 235 | 47 |
| Monochrome negatives | 383 | 23 |
| Digital photograph registers | 8 | 33 |
| Digital photographs | 636 | |

*Table 21: Contents of the photographic archive*

### 6.3 Artefactual Assemblages

6.3.1 The table below shows the complete artefactual assemblage recovered from the BALB bypass fieldwork.

| Item | No. of Boxes | Weight |
|---|---|---|
| Animal bone | 98 | 235kg |
| CBM | 38 | 416kg |
| Flint | n/a | n/a |
| Glass | 2 | 176g |
| Human remains | n/a | n/a |
| Industrial residues (crucibles, hearth/kiln lining, and slag) | 2 | 20.75kg |
| Mortar | 1 | 76.25kg |
| *Opus signinum* | 5 | 18.25kg |
| Pottery | 14 | 26.25kg |
| Shell | 6 | 10kg |
| Small finds | 9 | n/a |
| Stone | 7 | 77.50kg |
| *Tesserae* | 4 | 20kg |
| Wall plaster (excl. Room 2) | 15 | 20.50kg |

*Table 22: Total quantity of the finds assemblage for archive*

### 6.4 Site Archive

6.4.1 The Site Archive, including the paper and photographic records, is currently housed at the PCA Durham Regional offices. The artefactual and ecofactual assemblages are currently housed at the Durham and London Offices. Specialist assessments of the artefactual and ecofactual remains has determined that most of the assemblages should be retained for deposition in a suitable repository once the further analysis and publication work has been completed. Elements of the ceramic building material and stone assemblages can be discarded once this further work has taken place.

6.4.2 The Site Archive will be deposited at Yorkshire Museum under the site code BALB 14 for permanent storage; the detailed requirements of the repository will be met prior to deposition. It is possible that deposition of the complete archive in the Yorkshire Museum will not be possible due to the large size of some of the assemblages, for example the faunal remains. At the time of writing a decision has not been finalised about the place of deposition for all of the archive.

# 7. DISCUSSION OF THE ARCHAEOLOGICAL FINDINGS

## 7.1 Phase 1: Geological Sub-stratum

7.1.1 Phase 1 comprises deposits representing the superficial geology of this part of North Yorkshire and forms a mixture of glaciofluvial Devensian deposits at the western most extent of the road corridor, Devensian-Diamicton till along the central section of the western end of the road corridor, glaciciofluvial deposits along the course of the A1(M), and River Terrace deposits and Alne Glaciolacustine Formation clay and silts located at the easternmost extent of the road corridor.

7.1.2 Agricultural use of the land throughout the medieval and post-medieval periods likely resulted in horizontal truncation of the upper surface of the geological sub-stratum through plough truncation within parts of the bypass road scheme.

7.1.3 Across Site 58 the upper interface of the superficial geology had been truncated to such an extent that internal features within the enclosure were almost non-existent.

7.1.4 At Site 122, as with Site 58, the upper interface of the geological sub-stratum had been subject to truncation by medieval and post-medieval agricultural activity. The exception was at the location of the central eastern edge of the bypass road corridor where stratified deposits associated with the villa complex were present.

7.1.5 Colluvial or subsoil deposits were recorded extending across sites 122 North, 68, 111 and 123 therefore truncation of the geological sub-stratum had not occurred.

7.1.6 Within Record during Construction sites 12 and 94 no subsoil or colluvium was present and it is likely that the truncation of the upper geological sub-stratum at these locations by agricultural activity had occurred.

## 7.2 Phase 2: Iron Age (Site 58)

7.2.1 At Site 58 short lengths of ditches, including one (G1) truncated by the south-east corner of the Bedale enclosure ditch, attest to the presence of pre-enclosure activity in this area. The G1 ditch was the most substantial of these earlier features, and was exposed for over 7m, continuing beyond the limits of excavation. Geophysical survey indicated that this ditch continues for at least 40m (ASWYAS 2005, fig. 15). An anomaly interpreted as a possible Iron Age square barrow was identified during the 2005 geophysical survey to the north of this ditch.

7.2.2 A small assemblage of local handmade Iron Age tradition pottery was recovered from the natural silting deposits within the ditch G2. The pottery cannot be used to closely date this phase of activity as pottery of this type in this region was manufactured over a very long period. At the indigenous enclosure at Faverdale, Darlington, *c.* 30 km to the north of Bedale, large quantities of handmade pottery continued to be manufactured during the second century AD, despite the fact that the inhabitants had access to Roman material culture (Gerrard 2012). However it is known from the stratigraphic relationship of this ditch that it predated the establishment of the Bedale enclosure which AMS dates indicate may have been constructed by the beginning of the second century BC.

7.2.3 Following the partial natural silting of the G1 ditch, the upper part appears to have been deliberately infilled, and this may have been associated with the construction of the Site 58 Bedale ditched enclosure. The artefactual material from the backfill deposit, including occupation debris and manufacturing waste, may therefore be contemporary with the use of the enclosure. Industrial residues including slagged clay and flake hammerscale indicate that metal working was taking place within the near vicinity and the relatively large animal bone assemblage was dominated by cattle with sheep/goat and pig also present, this ratio of the three main domesticates was mirrored in the faunal remains assemblage recovered from the earliest phases of the Bedale enclosure ditch. Fragments of briquetage were also recovered from this backfill deposit, and the significance of such ceramic vessels which are associated with the production and transportation of salt, is discussed below.

### 7.3 Phase 3.1 Middle Iron Age (Site 58)

7.3.1 The short length of ditch excavated within the entranceway of the Phase 3.2 and 3.3 ditched enclosure may represent the earliest incarnation of the Site 58 Bedale enclosure, but as a length of just under 2.50m survived, this has not been proved for certain. The ditch was of smaller proportions to that of the Phase 3.2-3 ditches, and it is therefore feasible that all traces of it away from the entrance causeway could have been truncated by the later ditches. The profile of this ditch, steep V-shaped profile with narrow steep-sided slot in the base, suggests that it may have contained a palisade, although again with so little surviving this is far from certain.

7.3.2 The two AMS dates of 408 to 212 cal BC and 380 to 202 cal BC obtained from charcoal recovered from this feature indicate that it may date from the fourth to third century BC, placing it in the Middle Iron Age period. A small assemblage of animal bone was recovered from the backfill of this ditch; this was dominated by cattle but equid and pig were also identified.

### 7.4 Phase 3.2 & 3.3 Late Iron Age to Early Roman Enclosure (Site 58)

7.4.1 The first definitive evidence for the full circuit of the enclosure (Phase 3.2) was represented by a substantial ditch which defined a sub-square enclosure with internal measurements of *c*. 54m north-south and *c*.45.m east-west with a 2.40m-wide entrance along the eastern side. Externally the enclosure measured c. 61m by c. 58m. A total number of 24 2m-slots were excavated through the ditch in both the main road corridor and the licensed area. The widest section of the ditch was 6.48m at the south-east corner with the narrowest at 2.58m within the south-west corner. The depth of the ditch ranged from 2.16m at the northern terminus of the eastern entranceway whilst the shallowest section was 0.76m at the south-western corner of the enclosure ditch. At least four depositional events within the ditch have been recognised to date, comprising the internal bank eroding into the ditch, natural silting, backfilling and a further stage of natural silting near the entranceway. It is evident in most of the excavated sections that the ditch was

subject to a more complex history of recutting and may have been recut at least one more time before the final recut assigned to Phase 3.3. Further analysis of the depositional and recutting events will form part of the further work on the stratigraphic remains to be undertaken prior to publication. The AMS date of 377 to 197 cal BC (SUERC-6911) was obtained from a fragment of Maloideae charcoal recovered from one of the lowest fills in the south-eastern corner of the enclosure and a date at the latest end of this range towards the beginning of the second century BC is suggested when the AMS dates from the Phase 3.1 activity are taken into account. The fragment Cf. Prunus charcoal from the overlying fill which produced an AMS date of 702 to 379 cal BC (SUERC-69115) presumably represents residual material.

7.4.2 The presence of an internal bank within the enclosure was evident in a band of redeposited boulder clay along the internal slope of the feature. No traces of this bank survived in situ due to the severe plough truncation which had taken place in the site resulting in the horizontal destruction of archaeological deposits and cut features. Prior to this truncation the ditch would have been wider and deeper and along with its internal bank and position on a hill top, the enclosure would have been an impressive earthwork feature in the landscape.

7.4.3 The latest recut of the enclosure ditch saw the entranceway maintained in the same position as the previous entrance, and increasing in width to 3.83m north-south. The Phase 3.2 ditch in the vicinity of the northern terminal was consolidated with large stones, presumably to prevent slumping and collapsing of the ditch near to the entrance. At its widest the latest recut was *c*. 4.58m in the south-eastern corner of the enclosure with the narrowest section measuring 1.54m wide at the south-west corner of the enclosure ditch recut. The deepest section was 1.46m whilst the shallowest was at 0.30m at the south-west corner of the enclosure ditch. Seven depositional events have been identified within the recut, including two crouched inhumations at the base of the recut, three stages of backfilling and two events of natural silting. Pottery and small finds dating from the second century AD were recovered from the final extensive backfill deposit, providing a secure date for the end of use of the enclosure; there was no third-century artefactual material.

7.4.4 Rectilinear or square ditched enclosures with east-facing entrances are a well-recognised Late Iron Age and early Roman settlement type and numerous examples have been identified as cropmarks on aerial photographs across the Northumberland and Durham Coastal Plains (Petts and Gerrard 2006) and into the northern part of lowland North Yorkshire (Ottoway 2013, 61). Without excavation it is not possible to establish the date of these cropmark sites. Internal roundhouses are visible as cropmarks within some enclosures, either individual examples centrally placed or with several visible; excavated examples confirm this variety, some with a single central roundhouse, others with ancillary structures and some with numerous intercutting structures such as at Thorpe Thewles in the Tees Valley (Heslop 1987). Within some enclosures plough truncation has

removed all traces of internal structures such as at the substantial 2nd century AD enclosure at Faverdale, Darlington, located *c.* 30km to the north of Bedale the only surviving structure being a stone bath house which had deep foundations (Proctor 2012). Rectilinear enclosures vary in size from small sites under 0.2ha such as the settlement observed at Belmont (Haselgrove 1982) and Bowburn (Graham 2009) in County Durham, to larger examples like Holme House (Harding 2008), Moor Row Farm 2 or Carkin Moor (Zant & Howard-Davis 2013). The most common enclosure sizes noted by Haselgrove (1982) lie between 0.3 and 0.5 hectares; placing the Site 58 Bedale enclosure at *c*. 0.24 hectares at the smaller end of this scale.

7.4.5 Within the wider landscape of Durham and North Yorkshire, 27 well-dated Later Iron Age settlements are known (Sherlock 2012, 24) however, many more potential sites exist in the area but secure dating evidence is lacking. The form of the sites ranges from nine open settlements, which Sherlock notes is a higher proportion than generally found in the wider region (*ibid*), fourteen enclosed sites, three settlements that have elements or phases of both morphologies and one where the morphology is unknown because of the limit of the excavation. An evaluation of Iron Age and Roman sites in the Tees Lowlands and southern County Durham, with an emphasis around the Stanwick region, has identified 148 probable sites represented by sites identified from cropmarks, geophysical surveys and excavated settlements (Haselgrove & Moore 2016, 358). These 148 sites are sub-divided into 97 enclosed sites, seven curvilinear enclosures, twelve D-shaped enclosures and scarp-edge sites, five large enclosures/other and 27 open/unenclosed settlements. Of these types the rectilinear/sub-rectangular enclosures, of which the Bedale Site 58 enclosure is an example, are by far the predominant morphological group. Rectilinear enclosures have long been thought of as the standard Late Iron Age and indigenous Roman settlement type across the region. However the balance of evidence is weighted towards the identification of such settlements as their boundary ditches are more readily identifiable as cropmarks on aerial photographs than unenclosed settlements (Petts and Gerrard, 2006, 36-37). Large-scale excavations in the Northumberland and Durham Coastal Plains in recent years have revealed the presence of unenclosed settlements (Proctor 2009; 2012; Hodgson *et al*. 2012).

7.4.6 The vast majority of rectilinear enclosures are likely to have been for habitation, although smaller sites are noted at Carkin Moor, Barfoth, Winston Gate, Rock Castle and Tanton Hall located in the area around Stanwick in the Tees Valley, may have been ancillary enclosures or have had different functions from the larger compounds (Haselgrove & Moore 2016, 366). It is assumed that, given the date of occupation and the plentiful evidence for habitation such as the occupation debris, manufacturing and craft-working debris and the ecofactual evidence recovered from the ditches, that the Bedale enclosure would have contained clay and timber roundhouses for habitation. Such structures were constructed with relatively insubstantial foundations and plough truncation would have removed all traces of these habitation structures. The roundhouse continued as the

dominant domestic dwelling form on many lowland rural sites and during the first and second centuries BC and in some regions, including the north, remained in use into the fourth century (Hingley 1989, 43). The constant presence of charcoal in the bulk samples taken from the ditch fills indicates that the enclosure was under constant occupation, with low levels of charcoal indicating burning as a function of everyday life, as well as for small-scale industrial purposes

7.4.7 Evidence recovered from excavated examples and from cropmarks show that some enclosures were set within extensive field systems and the economy of these settlements was evidently based on mixed agricultural farming. Van der Veens' (1992) examination of archaeobotanical data from northern England demonstrated that by *c*. 300 BC small-scale intensive arable agriculture had been replaced in some areas by a strategy of arable expansion, characterised by the replacement of emmer with spelt wheat. Extensive cropmarks of Late Iron Age and early Roman field systems can be seen on much of the Magnesian Limestone (Ottoway 2013, 61), and this suitability for arable agriculture is still reflected in farming patterns today with a swathe of land along the A1 corridoor providing valuable arable land. There was evidently a substantial farming population in the region by the time of the arrival of the Roman army.

7.4.8 The largest proportion of the faunal remains recovered from the Phase 3.2 enclosure ditch came from Slot 21 located towards the north-eastern corner of the enclosure, with a wide distribution of skeletal parts of the three major domesticates (cattle, sheep/goat and pig) perhaps indicating that processing took place within this part of the enclosure. Cattle dominated the Phase 3.2 assemblage, and the settlement may well have been rearing cattle, as indicated by the presence of young calves; the nearby Bedale and Scurf Becks is likely to have provided good pasture. A concentration of equid bones recovered from the south-eastern corner of the enclosure included a mix of parts with no evidence for bone working, again suggesting that some processing may have taken place in this part of the enclosure. The single roe deer fragment and antler piece from the western side of the enclosure may represent craft-working debris, whilst dog and mallard may provide evidence for hunting of wild species. The bulk samples produced generally low concentrations of environmental material, but indeterminate wheat, barley and rye were identified along with species associated with arable crops indicating the presence of arable fields in the vicinity of the enclosure.

7.4.9 A small quantity of iron-smithing debris was recovered from the infilling of the Phase 3.2 enclosure, although as discussed below the backfill of the latest recut produced the most significant evidence for metal working. Evidence for iron smithing in the form of debris such as hammerscale and iron slag is common on many Late Iron Age settlements in the region and would have been carried out to repair iron tools (Morris 1997, 55). The introduction of iron working in the last centuries BC in this region had major implications for arable farming, with stronger and more efficient equipment improving production considerably (Higham 1986, 140). Ploughing with iron ards would have made the heavy

glacial till clay soils more workable. Smithing does not require purpose built hearths and could be carried out anywhere. Two metal-working areas at Faverdale, external to the main habitation enclosure, included a relatively insubstantial feature; a hearth built upon a cobbled-surface surrounded by a semi-circular fence which was presumably a wind break (Proctor 2012, 55). All traces of smithing areas which may have been situated within or external to the Bedale enclosure had been removed by the plough, but the location of the debris from this phase of activity and the subsequent phase indicates that this took place in the vicinity of the south-eastern part of the enclosure.

7.4.10 As discussed above, briquetage fragments were recovered from the backfill of the Phase 2 ditch and as this ditch was deliberately infilled, presumably ahead of the construction of the Bedale enclosure, these are considered with the occupation of the enclosure. Thirteen sherds of briquetage were also recovered from the final backfilling of the latest recut of the Bedale enclosure. Briquetage vessels were handmade ceramic vessels used in the production and transportation of salt from the coast. Within this region they are unique to the Late Iron Age and, at indigenous settlements at least, continued in in use into the early Roman period (Willis, 2009, 51; 2016, 256). The three fragments from the ditch would have formed part of a ceramic salt container either of small cylindrical form or trough-like with two troughs bound together to form a cylinder for transport (Willis 2009, 51). The presence of this material is of some significance as it not only demonstrates that salt, an important commodity for agricultural communities, was in use at the site, but also attests to the wide trade and exchange links of the community.

7.4.11 Prehistoric and early salt production is well documented in the Lincolnshire fenlands southwards across the county, but there is emerging evidence from newly excavated sites, and from the re-examination of previously excavated site assemblages, that salt was also being traded in the north-east (Willis 2009) and north-west (Hodgson & Brennand 2004). Evidence of briquetage at other regional sites confirms that generally it is rarely frequent in any quantity at consumer sites and compared to pottery sherds is a conspicuously sparse find, due to its vesicular nature that makes the fabric prone to frost action and easy breakage. Briquetage has been identified at settlements along the Tees valley; around Stanwick the fabric has been found at Melsonby, Rock Castle, Faverdale, Scotch Corner and Grange Quarry and was evidently in use at a variety of different sites of varying size and function (Willis 2016, 259). To the east briquetage has been identified at Catcote, Foxrush Farm, Dixon's Bank, Long Newton, Kilton Thorpe, Kirklevington, Street House and Thorpe Thewles. South of the Tees, it has been found in the Vale of York at Easingwold and Rawcliffe Moor. Evidence for the manufacture of salt has only been discovered to date at two sites in the entire northern region; at the Needles Eye Enclosure in Berwick-upon-Tweed (Proctor 2012) and at Street House, near Loftus on the coast between Saltburn and Staithes, where salt manufacturing hearths were excavated (Sherlock 2007). Willis (2016) suggests that Teesmouth is a very likely location for salt-manufacturing during this period. The presence of these salt container vessels at Iron

Age sites in the North East is one of our best indicators of the trade and exchange networks which must have existed in the region, but which are not otherwise detectable from the archaeological remains normally encountered at sites belonging to this period (Willis 2009, 52). The greatest distance that containers are known to have been distributed in southern Britain is 50-60km (Bradley 1975; Poole 1984; Morris 1994). Site 58 at Bedale is 47km from the mouth of the Tees and 56km from the nearest known salt production site at Street House. Whether the inhabitants were acquiring salt direct from a manufacturing site on the coast or more locally from a market cannot however, on present knowledge of salt production in this region, be ascertained. It has been postulated that from the production sites along the coast, the settlement at Stanwick may have acted as a redistribution centre for the salt (Willis 2016, 259), but at present there is no way of proving this.

7.4.12 The extent to which briquetage continued in use into the Roman period in this region is unknown. Willis (2016, 206) concluded that the available evidence indicates that salt production and trade seems to have disappeared after the first century AD and that the salt industry may have been directly affected by the arrival of Roman administration as salt production was nominally an Imperial monopoly which could have resulted in the cessation of the local industry. Willis (*ibid*) presented alternative explanations that sea salt may have been continued to be extracted locally, but was now transported in a manner that has left no archaeological trace or possibly it had simply became economically unviable to produce salt in the region in the face of competition from other sources, especially given the likelihood of new distribution systems in the early Roman period. However, the discovery of this assemblage of briquetage from second-century AD contexts at Bedale indicates that production and trade may have continued beyond the first century.

7.4.13 Salt was a particularly valuable commodity to prehistoric communities as it was used for many purposes, such as the preservation of meat and fish, in the production of cheese and butter, the processing of animal hides (including tanning and dying), and for medicinal purposes such as the reduction of infection (Proctor 2012, 110). Preservation of food was of vital importance as food could be stored for use during seasonal shortages and it also meant that food was transportable and even tradeable. Furthermore, salt is a necessary dietary requirement, although in temperate climates, meats and cheese would have provided enough salt to keep humans healthy (Morris 2007, 440). Personal taste, i.e. the use of salt as seasoning, should not be underestimated when considering the uses for salt and the reasons for its production. Salt is also an important pastoral resource and salt licks may have been used to keep animals healthy. The possibility that salt was used as currency and bridewealth, particularly before coinage was adopted, has also been raised. In the Lincolnshire fenlands there is clear evidence for a dramatic intensification of production in the Late Iron Age and early Roman period (Morris 2007). Maltby (2006) suggests this may be associated with an increased demand for salt to cure

meat. Intensification in salt production may thus be closely associated with intensification of agricultural production and the population expansion witnessed in the Late Iron Age.

7.4.14 Following the excavation of the final recut of the Bedale enclosure ditch, two crouched burials of an adult male and adolescent of indeterminate sex were placed at the base of the recut on the northern and south-western sides of the ditch. The carefully placed crouched position of the bodies, the brooch pin on the chest of skeleton [2091] and the presence of large stones in very close proximity to the bodies is indicative of a considered burial tradition rather than extempore dumping of the corpse. It can therefore be postulated that the two individuals buried in the enclosure ditch held a significant place in the community. At present the date at which these individuals were interred is unknown, although it must be between the 2nd-century BC establishment of the enclosure and the 2nd-century AD final backfilling. The long sequence of infilling and recutting of the early enclosure make it likely to be towards the middle or end of this date range and AMS dating of the skeletons will be carried out as part of the further analysis prior to publication.

7.4.15 Inhumations at Iron Age settlements are relatively common further south on the Magnesian Limestone in West Yorkshire, but in this region are very infrequent (Haselgrove 2016, 440). The most distinctive Iron Age burials in northern England are the chariot and square barrow burials associated with the Arras culture in the East Riding of Yorkshire (Cunliffe 2005, 84; Stead 1979; Dent 1982). Crouched burial was the dominant rite in the East Yorkshire cemeteries in the 3rd and 2nd centuries BC and for bodies interred at Iron Age settlements in the Vale of York such as Micklefield (Brown *et al* 2007, 99-103) and Wattle Syke (Martin *et al* 2013, 39-41), remaining so into the Roman period (Haselgrove 2016, 440)

7.4.16 While elsewhere in Yorkshire adults were often buried in pits, a direct parallel for this mortuary practice at Bedale can be seen at the Late Iron Age site at Stanwick where three, and possibly four, crouched inhumations were found, including two placed within ditches (Marlow *et al* 2016, 322 to 323). As with the Bedale examples, both of the Stanwick ditch internments were associated with significant remodelling of the enclosure boundaries (Haselgrove 2016, 441). Thirteen fragments of disarticulated human bone were recovered from the Bedale enclosure ditch, including four fragments of skull. This scatter of disarticulated bone may be linked to the abandonment of the enclosure, representing a form of closure deposit, much like the human bone fragments observed at Site 9 of the Stanwick excavations (Haselgrove 2016, 442).

7.4.17 The material used to backfill the final Phase 3.3 recut of the Bedale enclosure ditch contained large quantities of artefactual and ecofactual material; in the absence of internal features these assemblages are the only evidence for the activities taking place within and in the vicinity of the enclosure. Assessment of these assemblages has provided much significant information to date and the potential for further analysis has been highlighted in the specialist reports. Of most significance was the evidence for large

scale metal- and bone and antler-working, the scale of which is unique to an indigenous enclosure site in the region.

7.4.18 Evidence for arable agriculture was provided by three different types of quern (saddle, beehive and rotary) recovered from the Phase 3.3 enclosure ditch recut. The group is fairly typical of material from Hambleton and Richmondshire, and demonstrates the importance of agriculture in the subsistence economy. Although chaff was absent from the environmental samples, the presence of these quernstones indicates that grains were processed at the settlement. The vast bulk of the samples contained relatively little in the way of environmental remains, although seeds were present in the majority of samples albeit in relatively low concentrations. The main species represented in the samples taken from the Phase 3.3 enclosure ditch recut were *Carex Spp.* (sedges), *Rumex spp.* (dock/sorrel) and *Atriplex hortensis* (garden orache); all of which are wild plants, although garden orache has been domestically grown for consumption (Dickinson 1991). Sample <269> contained numerous charred and uncharred specimens of *Chenopodium album* (fat-hen) which when taken in conjunction with charred grain and rachis/grume fragments, could be interpreted as weeds of arable crop cultivation. Preliminary identification of the material in this sample has suggested *Triticum spp.* (indeterminate wheat), *Hordeum spp.* (barley) and *Secale cereal* (rye) are present.

7.4.19 High concentrations of charcoal were found in the bulk samples, though the majority of pieces were too small for a proper identification to be carried out. Where the charcoal was of sufficient size to aid identification (Appendix 21) the taxa identified were all hardwoods native to England. The species identified in the assessment included *Alnus glutinosa* (alder), *Corylus avellana* (hazel), *Fraxinus excelsior* (ash), *Prunus sp.* (blackthorn; cherries), *Quercus* (oak), and *Maloideae* (rowan). The apparent lack of dominance of any particular taxon suggests that fuel-wood use may not have been especially selective. The constant presence of charcoal in the samples indicates that the site was under constant occupation, with low levels of charcoal indicating burning as a function of everyday life, as well as for small-scale industrial purposes. In several areas peaks in charcoal concentration coincide with the presence of hammerscale, slag and other industrial residues. The initial observations gained from the samples support the identification of a landscape of open areas of grassland and the consumption of cereals on the site, alongside metalworking and blacksmithing that was occurring within the Phase 3.3 enclosure.

7.4.20 The faunal remains recovered from the Phase 3.3 enclosure ditch recut are of considerable significance as assemblages of this size and condition are rarely found at indigenous sites in the region. There was evidence for large scale bone working as well as butchery, demonstrating that this material comprises craft-working waste as well as food waste. The assemblage contained a notably larger array of species compared to previous phases, although this may well be a product of the quantity of bones rather than a broader usage of domesticates and wild resources. Notable in the assessment of the

animal remains is that the proportion of cattle in Phase 3.3 markedly decreases from the earlier phase and was accompanied by a comparable increase in sheep/goat and pig. Of particular interest concerning the age data is the notably large proportion of 1st year cattle and to a lesser extent, of similarly aged sheep. This certainly includes animals which can be equated with infant mortalities, signifying local stock breeding. In summary, the faunal assemblage has the potential for in depth studies of cattle and sheep or goat usage concerning exploitation practices and their size as well as butchery methods (largely limited to cattle). The large collection of bones denotes a sizeable population, largely involved in cattle herding, with evidence for local production demonstrated by the presence of young calves. Conversely, however, there is also a high proportion of older calves that may also be indicative of a production centre; the culled youngsters representing those animals not required for breeding or working purposes. Such age distributions have been noted at other rural Romano-British sites (Maltby 1981; 1994, 90). Both large and small game species were also represented in the assemblage and 13 out of the 14 red deer fragments were antler pieces; all of which had been cut and/or sawn, indicative of antler working waste. The abundance of equid remains may be suggestive of craft working and butchery, with a broad array of disarticulated parts and several sawn items. Poultry was certainly better represented and there are also a few fish bones taken from the samples, including gadidae (probably cod) and freshwater eel. Swan and woodcock were also identified.

7.4.21 The presence of fragments of crucibles with copper rich residues, as well as possible copper-alloy casting and working waste, slag and micro residues, suggests that copper alloys were being produced at the site. The metallurgical analysis has suggested that copper-based alloy was being melted (or indeed smelted) and cast at the site, and the scraps/offcuts of the worked metal suggest that a craft person(s) was manufacturing items at the site. It is possible that the scraps/offcuts of metal were being brought into site from elsewhere for re-melting, although combined with the archaeological evidence it seems just as likely that the production of copper/copper alloy artefacts was being carried out on site. The small finds assemblage included distinctive pieces, such as a prill of copper/copper alloy and part of a possible sprue or feeder which are all indicative of metal casting. The assemblage also contains some fragments of lead melting waste which may be related to a specific type of copper alloy known as leaded bronze, a type of alloy that was used in the Roman period. Copious evidence of ferrous metal-working was also recovered with residues that were indicative of iron/steel blacksmithing; many of the environmental samples contained flake hammerscale and spheroidal hammerslag. It is also possible that lead was being worked at the site. As well as the primary production residues recovered from the site, fragments of fired clay, many of which were relatively heavily slagged, were recovered. The latter suggests that the clay may have formed the lining of a smithing hearth, or possibly a small furnace that was being used to produce non-ferrous metals at the site. Unfortunately, due to plough truncation no internal

furnaces or hearths survived. The largest concentrations of metal-working debris came from the south-eastern corner of the enclosure, which is also where the iron smithing debris from the earlier phase of ditch was recovered, indicating that this activity took place somewhere in the near vicinity. It is possible this activity was taking place beyond the limits of excavation, outside the enclosure, although given the high value and desirability of both the raw materials and finished products it would seem likely that they would have been protected within the defended enclosure.

7.4.22 The range of residues and artefacts relating to copper-alloy production make the assemblage of regional and national significance. Given that the assemblage may only be part of the total amount of metallurgical waste produced, it is difficult to accurately judge the scale of production being carried out at the site with the current size of the assemblage being representative of a craft type level of production.

7.4.23 Within the metallurgical assemblage, the pieces of copper alloy metal are of the greatest research potential, followed by the fragments of slag that appear to relate to non-ferrous metal production. Previous work on Iron Age and Roman copper alloys from northern Britain (Dungworth 1995), examined the changes in copper-alloy composition and how this related to cultural and economic changes. A detailed study of the composition of the copper-alloy fragments would allow the type and amounts of alloying elements to be investigated, and extend and update the research; it would also enable the assemblage to be put into its regional; context. Analysis of a selection of the slag could help to determine whether copper alloys were being produced from ore, or whether they were being produced by remelting existing copper alloy. A number of copper sources exist in the Richmond area, although there is no definite evidence that these sources were mined in antiquity (Lowther 2016, 206). Documentary sources record that the exploitation of copper in Richmondshire occurred from at least the 15th century. A seam of copper ore was uncovered at Middleton Tyas in the mid-18th-century with such a high purity that would have certainly been well worth exploiting at an early date (Hornshaw 1975). Early assays of the Middleton Tyas ores recorded a purity of over 65% which when compared to 18th-century Cornish average of 9% is particularly high (Hornshaw 1975, 33). It is unsurprising that there is little evidence for copper ore extraction prior to the 16th century as copper mining from the Iron Age up to the end of the medieval period has received little attention in terms of research (Cranstone 1993) and the copper mines at Middleton Tyas, in North Yorkshire, have not been subjected to any archaeological investigation (Jackson 2016). However, during Hornshaw's detailed history of the site, key surface features were identified (Hornshaw 1975, Map 3).

7.4.24 A single piece of antler (SF. 352) with polished and sawn ends was recovered from the enclosure site that further associates the site, alongside the archaeometallurgy evidence, with craft working. Two serrated rib bone tools were also recovered from the Phase 3.3 ditch (SF, 133 & 350). These objects feature a series of teeth cut into one side and were presumably used as rasps, weaving tools and for cleaning animal skins (Snape *et al*

2010, Fig 29). The Phase 3.3 ditch also yielded two bone handles (SF. 154 & 349), one with iron tang surviving and three pointed bone tools (SF. 351, 356 & 358) which are well-paralleled at a variety of sites including Dragonby (May 1996, Fig 14.4) and Danebury (Cunliffe 1984, Fig 7.34). Numerous finds were also recovered from the enclosure that point to the likely manufacture of textiles at Bedale. The assemblage consisted of a very well preserved weaving comb, decorated with 10 dot and ring motifs alongside linear incisions (SF.102), fragments of two other weaving combs (SF. 338 & 353), a spindle whorl made from the femur head of an animal, probably a cow (SF. 111), and a bone awl (SF. 357).Dating to the Late Iron Age and early Roman period, weaving combs are relatively common on both Roman and native sites throughout northern Britain (Walton 2012). Similar examples have been recovered from excavations at Thorpe Thewles (Heslop 1987, 92), Catcote (Long 1988, 30) and Faverdale (Proctor 2012, 172). Although the precise function of the objects has been the subject of much debate (Hodder and Hedges 1977), it is now generally accepted that they were employed in textile manufacture (Tuohy 2000). Weaving comb SF. 102 shares similar features to those found on other Late Iron Age/ Roman sites. Five of the combs at Danebury show breakage and subsequent smoothing of the extreme left hand first and/or second teeth (Sellwood 1984, 375). This pattern can clearly be seen in the Bedale example and also exhibits a similar pattern as two of the weaving combs from Danebury in that the central teeth are substantially longer than those surrounding them (Sellwood 1984, 395). Tuohy's (2000, 143) suggestion that weaving combs were reused and refurbished can also be supported by the example from Bedale since the teeth have at some stage been recut further into the body shaft of the comb as demonstrated by the irregular inter-dentate incisions

7.4.25 The weaving comb, pointed bone tools, spindle whorl, serrated ribs and handles (possible knives) all point to the site being engaged in textile and other forms of craft working. The evidence for bone working is particularly significant, especially when taking into account the animal husbandry that was occurring at the site. It is clear from the archaeological record that the site would have been an important craft working centre with bone, hide and textile material (perhaps wool from the sheep?) acquired from the animals. Furthermore, the evidence of copper alloy working and iron smithing (Appendix 17) further compounds this theory and signifies the importance of the craft working assemblage. Production on this scale has not been found at any other indigenous enclosure in the region and it is clear that this was not solely for domestic use within the enclosure.

7.4.26 Further items of note recovered from the site include the finger ring, sadly missing its intaglio, and a Colchester-derivative brooch; the former representing a purely Roman type of object while the latter is typical of the late first and second centuries AD. Gerrard speculates (Appendix 12) that this may suggest some influences or people from the south of Britain were being felt at the site. The virtual absence of hairpins might also be of significance and perhaps indicates that the inhabitants of the site were not styling their

hair in a Roman fashion. Further evidence of high status activity is observed in the bone toggle object (SF. 182) which when combined with the copper staining (perhaps from no longer extant bridle fittings), might be indicative of horse riding. This would presumably be an elite activity.

7.4.27 As occupation on the site continued into the second century AD and the close proximity of the site to Catterick and the main road of Dere Street to the north, the influence of the Roman army might be expected. However, the only evidence of military activity was a small copper-alloy apron mount (SF.120). The apron mount is considered rather plain but is paralleled by examples from Colchester (Crummy 1983, No. 4219) and South Shields (Allason Jones and Miket 1984, No. 879). The majority of the 220 pottery sherds from the Phase 3.3 backfill deposits were handmade Late Iron Age tradition, however a small component of Romano-British and Roman imported wares demonstrates not only that the inhabitants of the Bedale enclosure had some, albeit restricted, access to Roman pottery, but also that occupation of the enclosure continued into, but did not go beyond, the second century AD. This material includes four sherds of second-century samian ware and oxidised wares (AD 120–200), largely derived from flagons, reinforces this emphasis on tablewares. The low count of sherds from jars is perhaps explained by the inhabitants already having enough locally manufactured jars, but it is still surprising that no BB1 or BB2 was present. All of the jar sherds would seem to be locally manufactured Romanized coarsewares. Furthermore, the absence of mortaria, which were reasonably common at both Faverdale (Gerrard 2012) and Thorpe Thewles (Heslop 1987, 75-76) is also worthy of note.

7.4.28 The enclosure was evidently of some significance as indicated not only by the scale of the metal-working and bone working activity, but by its commanding hill top position as well as the scale of its enclosing ditch and bank. The ditch would have taken a considerable labour force to excavate and to maintain; the circuit of the ditch appears to have been recut on at least two, and possibly more, occasions. The Bedale enclosure was evidently well placed to exploit a range of resources, with the Bedale and Scurf Becks providing pastoral land and the surrounding area on the Magnesium Limestone providing good quality arable land. The environmental evidence recovered from the enclosure indicated the presence of surrounding arable fields, and the faunal remains demonstrated that large stocks of cattle and sheep were raised by the settlement. Given the importance of the enclosure and the size of its herds, this agricultural land may have extended for some distance across the surrounding landscape. Elements of field systems recorded *c.* 1km to the north at Site 122 which predated the Aiskew villa may well have been associated with the enclosure, forming part of its agricultural land. Wood must have been in plentiful supply relatively close to the Bedale enclosure to support the large scale metal working, and it is likely that copper ore was extracted from the nearby deposits in Richmond. Wide spread trade links were suggested by the presence of oyster shell, fish bone and briquetage, although it is likely that these items were acquired in nearby

markets rather than at source on the coast some 50km distant; the small quantities of imported Roman and Romano-British material may similarly have been acquired at nearby market. The Bedale enclosure was situated close to important communication and transport routes; the course of Dere Street in this area follows a much earlier communication route (Vyner *et al.* 2011, 220), in the vicinity of the enclosure running NW-SE and at its closest just under 2km to the north-east. The valley of the River Swale, which runs westwards into Richmondshire and was probably navigable as far as the crossing point with the communication route near Catterick, was accessible from this route *c.*10km to the north of Bedale. By the time occupation at the enclosure ceased, apparently towards the end of the second century AD, numerous markets would be within easy reach of the settlement both north and south along Dere Street. The fort at Catterick *c.* 10km to the north was established by *c*. AD 80 and roadside settlement along Dere Street is thought to have been established to the north of the Swale and *c*. 2.75km to the south of the fort at Bainesse Farm as early as the 80s AD (Wilson 2002). A large civilian town was established at Catterick and roadside settlement flourished, extending for at least 4km along Dere Street. The recent large-scale archaeological excavations undertaken ahead of the widening of the A1 in this area have the potential to provide much information of significance to the Bedale bypass investigations. An extensive roadside settlement was also established at Healam Bridge, *c.* 10km to the south of the Bedale enclosure, by at least the first century AD (NAA 2011). Another potential roadside settlement has been suggested on the north bank of the Bedale Beck where Dere Street crosses the stream (NAA 2011 6-7).

7.4.29 Occupation of the Bedale enclosure evidently ceased at the end of the second century AD and the ditch was deliberately backfilled ahead of the construction of a trackway which led around the enclosure. The reasons for its abandonment may well be connected to the construction of the villa just 1km to the north, the construction of the villa being contemporary with the abandonment of the enclosure. It is tempting to speculate that the occupants of the enclosure had gained sufficient wealth from agricultural surpluses and the production of bone and metal objects that they were able to construct this high status building, despite the small quantities of Roman material culture that were recovered from the enclosure. As with the Bedale enclosure, the third- and fourth-century rural villa estate exploited the prime farming land on which it was situated and was ideally located close to Dere Street and easily accessible markets to the north and south.

### 7.5 Phase 3.4 (Site 58)

7.5.1 Following the deliberate backfilling of the Bedale enclosure, a ditched trackway was constructed which can be seen on geophysical survey and aerial photographs to lead from Bedale Beck north-eastwards, up to and around the western and northern sides of the enclosure, terminating a short distance beyond the eastern side of the enclosure. The track ran around the west and north sides of the enclosure, with the enclosure forming one side of the track in this location demonstrating that the upper part of the ditch and/or

bank still survived as an earthwork feature when the track was constructed. In one area a patch of metalled surface survived within the trackway ditches; this surface may have been more extensive prior to plough truncation. This trackway was up to 16.65m wide in the north and it is considered likely that it was constructed to herd animals to and from the beck avoiding the internal area of the enclosure. Evidence for recutting of one of the trackside ditches indicates that this was a long-lived feature.

7.5.2 Allowing for horizontal truncation through ploughing, the ditches delimiting the droveway may not have been substantial enough to deter cattle from crossing the boundary. Although not observed in the archaeological record, these ditches would have perhaps originally have had an upcast bank running alongside them (from the initial excavation of the ditches) which would have provided an ideal medium in which to grow a hedgerow; without a hedge the small ditch and bank would not have been stock proof (Pryor 2006, 87; Proctor 2009, 68). As seen with the main enclosure of Phase 3.2 and 3.3; the banks on the site would not have survived plough truncation and hedges leave little trace in the archaeological record due to the shallow penetration of their roots (*ibid*).

7.5.3 The abandonment of the droveway saw the ditches filled with five depositional events; four phases of natural silting and a singular episode of backfilling of the northern trackside ditch recut. Artefactual remains recovered from the trackside ditches included 38 sherds of pottery; a mixture of native ware, two sherds of briquetage and one sherd of 2nd-century AD central Gaulish Samian. Other finds of note included a serrated bone tool (SF. 339), two fragments of disarticulated human bone and a reasonably sized collection of animal bones. It may well be that this material originated from the occupation phase of the enclosure, with refuse which was still present in the area infilling the ditches close to the enclosure.

7.5.4 The droveway indicates the importance of pastoralism and it may be that the trackway formed a link between the Bedale Beck (used for watering cattle) and a new focus of habitation, possibly even the Aiskew villa to the north

### 7.6 Phase 3.5 (Site 122)

7.6.1 A key consideration for Site 122 was to establish whether there was any activity pre-dating the villa complex and its associated enclosure landscape. The geophysical survey undertaken at the villa complex and the surrounding area does indicate a multi-period landscape, however phasing of all of these elements is impossible without excavation. It is also worth noting that the geophysical survey did not identify all elements of field systems at the site; archaeological features in the southern part of site 122 North and to the immediate west and pre-dating the villa were not identified as geophysical anomalies

7.6.2 Phase 3.5 remains at Site 122 comprise a series of NNE-SSW and WNW-ESE aligned shallow ditches G122 and G120 that represent the surviving elements of an enclosure of which only parts of the east and south sides survived. The east side was recorded for over 38m and there were indications of an entrance towards the northern end through which a *c.* 2.50m droveway or sheep race may have run, although as only a small

segment was encountered this interpretation is not certain. Although features associated with this field system were only present along the central-eastern edge of the bypass road corridor, within the area of a natural terrace, it is likely they would have extended in all directions with these features truncated to the north, west and south by later agricultural activity. To the east such features could potentially survive below the deeply stratified deposits associated with the villa complex known to be present within this area (Licensed Area).

7.6.3 The ditches had silted up naturally and contained very limited artefactual material, although a single sherd of East Gaul samian dated AD130–160 was recovered. A second-century AD date for the enclosure system is possible, particularly when taken with the stratigraphic relationship of these features which were overlain by a developed soil upon which the villa was constructed. However, this is far from definite given that only a single sherd of pottery was recovered. The small assemblage of faunal remains recovered from Phase 3.5 features was dominated by cattle with sheep/goat also present along with small quantities of equid bone. Bulk samples taken from the fills of the enclosure ditches contained only small amounts of environmental remains including charcoal, uncharred seeds and a small quantity of undiagnostic metal-working debris. It is possible that this material represents small scale metal working activity within the vicinity of the site during the pre-villa phase. The composition of the faunal remains assemblage, the evidence for metal working and the dating evidence all suggest that this field system may have been associated with the Bedale enclosure located *c.* 1km to the south. The enclosure was evidently of some significance, occupying a prominent position in the landscape, and, as discussed above, would have been surrounded by extensive agricultural land.

### 7.7 Phase 3.6: Developed soil (Site 122)

7.7.1 A developed soil directly overlay all Phase 3.5 pre-villa enclosure features. As with Phase 3.5 features, the developed soil was only present within the central-eastern edge of the bypass road corridor and was truncated to the north, south and west by later medieval or post-medieval agricultural activity. It continued eastwards into the Licensed Area below the Phase 4.2 deeply stratified deposits associated with the villa building. The developed soil was also exposed within a sample excavation located at the south-eastern corner of the Licensed Area demonstrating that this deposit continued to the east and south beyond the Licensed Area.

7.7.2 An environmental sample taken from the developed soil recovered no environmental material of significance. The lack of environmental material could possibly represent a period of abandonment once the Phase 3.5 system field enclosures had gone out of use or alternatively a change of use to open pasture fields. A small quantity of finds including ceramic building material and *opus signinum* recovered from the developed soil probably represents intrusive material associated with the villa.

### 7.8 Phase 4: Field Enclosure System (Site 122 North & 68)

7.8.1 Agricultural activity recorded to the north of the villa complex has been assigned to Phase 4 and comprised a series of north–south and east–west aligned ditches forming at least four enclosures associated with a much more extensive system of enclosures and fields as identified by the geophysical survey.

7.8.2 The ditches contained two depositional events including the initial natural silting and later deliberate backfilling. Pottery recovered from the natural silting deposit only provided a broad Roman date with sherds of samian and mortaria providing a date range of AD50-AD350. A larger assemblage of pottery with a date range of 2nd to 4th century was recovered from the backfill deposits and provided. Individual contexts did provide narrower date ranges however these were also broadly of 2nd to 4th century. A copper-alloy trumpet brooch was recovered from the northernmost ditch of Enclosure 1. This is probably of 2nd-century date and is of a 'northern type'. This brooch was recovered from the natural silting deposit and is likely to represent a discarded or lost object rather than a deliberately placed object.

7.8.3 Animal bones recovered from the both the natural silting and backfill depositions comprised similar assemblages of cattle, sheep/goat and pig with horse bone recovered only from the natural silting. In both depositional deposits there is a prevalence of cattle with this high proportion possibly relating to preservation and fragmentation biases. Small quantities of fish bone were recovered from an environmental sample and although only this on makes up a small proportion of the faunal assemblage it does suggest they were exploiting freshwater or estuarine habitats.

7.8.4 As discussed, a few elements of the field system which stratigraphically predated the villa produced 2nd-century artefactual material. It is also possible that some of the field systems and enclosures excavated to the north of the villa and the extensive and intensive activity identified by geophysical survey pre-dated the construction of the villa in the 3rd century AD. A small quantity of 2nd-century artefactual material was recovered from the enclosure and it is evident that systems on different alignments are present, indicating chronological change. As previously discussed, it is possible that the pre-villa field systems and enclosures may have formed part of a wide agricultural hinterland associated with the Bedale enclosure. The field systems to the north of the villa evidently continued in use during the occupation of the villa in the 3rd and 4th centuries as indicated by their alignment.

### 7.9 Layout of the villa and its landscape setting

7.9.1 Geophysical survey (Fig. 23) revealed an extensive network of interconnected enclosures located to the west of Dere Street, which appeared to be an integrated and probably multi-phased landscape of ditched tracks with enclosures and fields (ASDU 2013a figs 2-8). This was recorded over 6 hectares, with a maximum recorded extent of 400m NE-SW by 300m NW-SE, although it evidently continued beyond the surveyed area to the east and south. In this area the course of Dere Street, which follows the line of Leases Lane, was situated *c.* 1.5km directly east of the main villa compound. The villa complex exposed within the road corridor was situated at the western end of this complex, beyond which lay the Scurf Beck *c.* 120m to the west of the western boundary of the villa. The

system of enclosures did not extend beyond the villa's western boundary, and whilst this may be due to ground conditions masking the archaeology, it is also possible that this reflects land use in the Roman period. The strip of land alongside the beck may well have been used as pasture, and is likely to have seasonally flooded being at a lower level than the villa itself. As is typical for rural estates a mixed agricultural regime would have been practiced and the faunal remains assemblage demonstrated that, as with the Bedale enclosure, stock was reared at the Aiskew villa. Where investigations have allowed an exploration of the wider landscape around villas in the region by geophysical survey, aerial photographs, excavation, or a combination of the three, then extensive networks of enclosures have been have identified. Given that these northern rural villas were evidently producing agricultural surpluses for the enrichment of their owners, it is to be expected that large tracts of agricultural land around the villa dwelling would be controlled and managed by the estate. The enclosure system associated with the villa at Quarry Farm, Ingleby Barwick on the south bank of the River Tees also extended over 6 hectares (Willis and Carne 2013).

7.9.2 The archaeological investigations and geophysical survey demonstrated that the villa was set within an enclosure defined by a boundary ditch which delimited a generally WNW–ESE aligned rectangular area; the south-western boundary ran NNW-SSE to form an angled corner. The maximum dimensions of the villa enclosure were 120m by 100m and a possible gap on the eastern side can be seen on the geophysical survey. An entrance into the villa compound would seem most logical on this side, presumably accessed via a track leading to Dere Street less than 1.5km to the east. The line of the northern boundary ditch of the villa is relict in the present day agricultural fields, forming the northern boundary of the field which until recently was the only surviving area of pasture within the surrounding arable fields. The excavated villa building was situated at the western end of the villa compound, with the boundary ditch set *c*. 30m to the west and north of the building. At some stage in the occupation of the villa the northern boundary of the compound seems to have been moved to the south, much closer to the villa, with a ditch (G135) excavated just 3m north of the northernmost room, forming a 70m-wide compound and a creating 30m wide enclosure to the north of the villa. Pottery of fourth-century date was recovered from this G135 boundary ditch, demonstrating that it was certainly in use during the latest occupation of the villa, although it may have earlier origins the evidence for which has been lost through recuts removing traces of earlier versions.

7.9.3 The villa compound was constructed on a natural elevated platform overlooking the Scurf Beck to the west; land along the beck lies at around 32m AOD, sloping up gradually to around 38m AOD the vicinity of the villa and rising to *c.* 40m AOD in the east across the area of the enclosure system identified by the geophysical survey. Land beyond the surveyed area towards the course of Dere Street lies at a maximum of *c.* 52m OD. A length of the Roman road surface was uncovered for a distance of 180m to the north of

the villa beneath the surface of Leases Lane (Highways Agency 2010). The villa building was not aligned parallel with the boundaries of the villa compound, but comprised a north–south aligned corridor with projecting wings at each end. Assessment of the pottery and small finds assemblage has demonstrated that the villa was founded in the third century AD; with the exception of the evidently residual 2nd-century samian assemblage, there was relatively little ceramic evidence for activity pre-dating the third century.

7.9.4 Within the exposed area of the road corridor and Licensed Area, the villa was exposed for a maximum distance of *c*. 48m north–south. The geophysical survey indicated that the full extent of the northern wing was exposed; this comprised four rooms in total with a combined measurement of 23m east–west and 14m north–south. The southern extent of the villa is difficult to identify for certain on the geophysical survey, but an L-shaped anomaly which is indicative of a stone structure may represent the south-western corner of the building, giving a total length of 60m. Without excavation it is not possible to be certain about the phases of construction of the building, but it is clear from the layout of the building which could be seen by the presence of robber trenches, and from the rooms that were excavated, that rooms were added on to a primary building. Excavation of the heated room at the western side of the northern wing demonstrated that this was certainly a later addition. Room 7 in the northern wing also seems to have been a later addition, so the external dimensions of the primary villa building may have comprised two 10m-wide rooms (Rooms 1 and 2) at the end with a combined length of 20m at the end of a 6m-wide corridor. Internally the northern wing comprised a room measuring 6.40m north–south by *c*. 8.70m east–west and a 7m square room accessed at the end of a 4m wide corridor. Within the exposed area the corridor extended for over 32m, and the presence of a dividing wall in the corridor was indicated by a robber trench; the northern corridor was 20m length. The layout of the southern wing of the villa is difficult to determine from the geophysical survey and the area exposed within the licensed area. Room 6, projecting to the east from the southern corridor, seems the most likely candidate for a primary phase room, only the northern side of this room was visible within the exposed area as a robber trench and its internal dimensions were at least 12m north–south by 7.40m east–west, containing to the east and south. If this were the case, then the area between the northern and southern wings to the east of the corridor, designated as Room 5, would have been an open area in the primary phase of the villa and an entrance into the villa must have been situated along the northern corridor. Room 8, which measured 7.40m north–south by *c*. 8.10m, may also have been a later addition to the villa as the walls of this room are not in complete alignment with the primary villa building and it appears to have been added on to the west side, behind the front aspect of the structure. The floor surface exposed within this room also suggests a later build; this was built with cobbles, in contrast to the opus signinum and tessellated floors observed elsewhere, although it has to be acknowledged that this was only the latest floor exposed, and earlier surfaces could potentially exist beneath this more rudimentary floor surface. The layout of

the building in relationship to the villa compound ditches, with the gap in the eastern boundary ditch and the continuous boundary in the west, indicates that the villa have been accessed from the east. This fits with the wider landscape in which the villa sits if one accepts that there would have been a track leading from Dere Street westwards into the villa compound. As with Iron Age enclosures and roundhouses in the region with their ubiquitous east- and south-east-facing entrances, there seems to have been a preference for villas to be constructed with this same orientation. Although the sample size was inevitable small, Burroughs (2001) survey identified an east-facing preference for northern villas.

7.9.5 Villas with a corridor or portico along one side are known in the region, such as at Welton, near Brough on Humber, one of the earlier 'corridor houses' in the region, built in the late first or early second century AD (Mackey 1999). This had five ground floor rooms and, in common with many Roman houses, a corridor along one side which would have allowed access from one part of the house to another without having to go through each room thereby providing more privacy (Ottoway 2013, 134). The majority of the excavated plans of Roman villas in the province are basically elaborations on a simple linear structure comprising a line of rooms; most houses began as a few rooms laid out in a row in a rectangular plan (de la Bédoyère 2001, 127). Such simples houses were often elaborated by the addition of a corridor, allowing the rooms to be accessed individually, which had a chamber at each end creating symmetrical façade; villas with this layout are known as 'winged corridor' villas. As discussed, without excavation it is not possible to be certain of the sequence of construction of the Aiskew villa, but it seems that in its primary construction may have been a winged corridor, rather than beginning as a simple row of rooms to which a corridor was added. Winged corridor houses were sometimes enlarged by extending the wings, as was the case with the Aiskew villa. The ground plan of the main villa building at Quarry Farm, Ingleby Barwick was identified by geophysical survey, but with the exception of an evaluation trench, this remains unexcavated (Willis and Carne 2013, 32). This was a winged corridor building, smaller in scale than the Aiskew villa at 30m long by 16m wide, but with eleven rooms identified. The villa was east-facing with projecting rooms at each end of the corridor at the front of the building which, like the Aiskew villa, was divided in two. At the southern extent of the Tees lowlands area another villa site has been identified by aerial photographic survey at Chapel House Farm, Dalton-on-Tees, on the southern banks of the River Tees. A programme of field walking, geophysical survey and limited excavation at the site recorded a simple winged corridor villa measuring 30m by 17m with a series of internal divisions surviving as stone footings built with field stones and river cobbles (Brown 1999). At Gargrave the earliest villa building on the site was a second century corridor type house which measured 30m by 13m wide with a front corridor and porch on the central entrance between slightly projecting wings. It included a large central room 7m square with mosaic floors. This house went out of use at the end of the third century or the beginning of the fourth and

was then demolished. At the Beadlam villa, to the east of Aiskew at the foot of the North Yorkshire Moors, there were two winged corridor structures, set at right angles to each other, south-facing(Building 1) and east-facing (Building 2) (Neal 1996). Building 2 measured 23.40m by 12.40m wide with 14 rooms including the corridor at the front, with the western end comprising a small bath suite.

7.9.6 Villas were generally set within compounds, with boundaries delimited by ditches and in some cases by walls, although the former is typical of sites in this region. The villa at Gargrave in the Vale of York was surrounded by two enclosure ditches, an outer ditch measuring 225m by 100m and an inner ditch measuring 100m by 60m with an east-facing entrance (Hartley and Fitts 1988), providing a close parallel to the Aiskew villa. The third-century ditched enclosure at Gargrave enclosed the main dwelling and bath house but excluded the farm buildings, perhaps defining zones of residential and agricultural use (Ottoway 2013, 183). At Welton near Brough on Humber a simple stone 'cottage type' villa was built within a newly constructed rectangular ditched enclosure (Mackey 1999). The Quarry Farm villa was also set towards the western side of a large ditched enclosure. Many villa sites in this region developed at Late Iron Age enclosed settlements, so in some cases the ditched enclosures predated the construction of the villa building and were preceded by a roundhouse. This was the case at Holme House on the south bank of the Tees near Piercebridge where a simple 'cottage type' house was constructed within an earlier rectilinear enclosure (Harding 1984; 2008). No dating evidence was found for the establishment of the villa, but it was enlarged in the Antonine period with the addition of two wings, one a bath suite which was built over the infilled enclosure ditch and the other an apsidal suite containing heated dining and reception rooms. The Roman villa complex at Dalton Parlours, near to Wetherby, was also situated within a ditched enclosure and the villa construction of respected some of the pre-existing Iron Age settlement features, particularly enclosure ditches (Wrathmell and Nicolson 1990).

7.9.7 Several anomalies indicative of stone-founded structures were identified by geophysical survey within the Aiskew villa compound. Villas in the Yorkshire and the Tees valley area were generally organised around a main dwelling house and alongside the principal dwelling house, a variety of other structures are found (Ottoway 2013, 182). An anomaly indicating a large rectangular structure adjacent to the central southern boundary of the compound (ASDU 2009, fig. 11) may suggest the presence of an aisled building to the south-east of the main dwelling at Aiskew. Large aisled buildings dating from the mid to late Roman period particularly, are generally viewed as multi-purpose structures, fulfilling a variety of functions associated with the running of the villa estates, and with purpose of their use often changing over time (Morris 1979; Millet 2006). Such structures have generally been viewed as serving an agricultural purpose, for storage of crops and equipment, shelter for animals and as living quarters for estate workers. A large aisled building which was probably a two-storey structure was excavated at Quarry Farm, this was located to the south-east of the villa dwelling and measured 29.5m by 11m (Carne

and Willis 2013). A building of similar proportions is known at Gargrave, though this may not have originated as an aisled building (Hartley and Fitts 1988, fig. 22). To the west of the corridor building at Dalton-on-Tees was an aisled structure of similar dimensions to the winged corridor house with some evidence of footings for an external stone staircase suggesting the possibility that this was a two-storey building (Brown 1999). In the east end of the building soil marks showed the position of large timber beams indicating a suspended floor intended for heavy use, perhaps grain storage. The remains of a possible corn-drier were also recorded inside the building.

7.9.8 Comparative evidence from other third- and fourth-century villas in the region indicates that it is very likely that the Aiskew villa was furnished with a bath house and the geophysical anomalies in the south-east corner of the compound seem a possible candidate for the location of a bath suite. As well as anomalies indicative of stone structures in this area, there is an extensive area of magnetic anomalies suggesting the presence of burnt material as would be expected in the vicinity of a hypocaust system. Bath houses were often constructed as detached suites situated away from the main dwelling; for example, at Dalton Parlours, the bath house was situated 24m to the south of the main dwelling. At Gargrave the dwelling had a small bath suite but by the third century a detached bath suite was also situated within the ditched enclosure compound of the villa, possibly for the use of the estate workers.

### 7.10 Villa construction

7.10.1 Two substantial quarry pits were located in the south-western part of Site 122, the largest of which was identified as an extensive geophysical anomaly (see Fig. 23). The pit was exposed for a maximum distance of *c*. 16m north–south by *c.* 13m east–west, continuing to the west beyond the limit of excavation, and was up to 0.55m deep. The investigations demonstrated that the strength of the signal was due to the large quantities of ash and other fire waste which was infilling the upper part of the pit. The southernmost quarry pit was up to 0.74m deep and was exposed for a maximum distance of *c*. 14m north–south by 12m east–west. At the closest the pits were located *c.* 20m to the south-west of the villa building. The pits were dug to extract the natural clay to be used in the construction of the villa; the composition of the glacial till can vary greatly in this region, but in this part of the site the builders of the villa had discovered an area of firm clay with few inclusions which provided an ideal building material. The wall foundations were built with firm clay mixed with large river cobbles and the clay was used as a levelling layer on top of the foundations upon which the coursed upstanding element of the villa's wall was constructed. It would no doubt have been used in a variety of other ways, such as for floor levelling and foundation deposits and in the construction of features such as ovens and hearths. The quarry pits were left open for a short time, as evidenced by the deposition of shallow natural silting deposits in the bases, before being backfilled with refuse from the occupation of the villa. The assessment of the artefactual material recovered from the pits suggests that this first phase of backfilling occurred during the

earliest years of occupation of the villa in the third century AD, with the final extensive deposit of ash-rich material, which also infilled the upper part of the villa's boundary ditch, taking place towards the end of occupation in the fourth century AD.

7.10.2 As described above, the winged corridor structure was constructed at the western end of the villa compound on a natural slightly elevated platform of land. A compact clayey sand deposit up to 0.26m thick which was exposed across an area measuring c. 14m north–south by 10.5m east–west is interpreted as a levelling and consolidation deposit laid down prior to the construction of the villa.

7.10.3 Where excavated, it was evident that the upstanding walls of the villa had been built on substantial foundations; the construction cut for the foundations measured up to 1.40m wide by 0.90m deep and the foundations were built with large rounded river cobbles and clay, presumably extracted from the extensive quarry pits to the south-west. Although the walls of the villa building within the bypass road corridor and Licensed Area had been largely robbed, a small surviving portion of two courses of the westernmost wall of the northern wing provided evidence for the villa's construction. The 1.10m-wide wall was built on top of a clay levelling layer placed over the clay and cobble foundations and was faced on either side with roughly hewn limestone or sandstone blocks (the largest of which measured 300mm x 260mm x 150mm) with a stone rubble core bonded with clayey sand. The substantial nature of the villa's foundations indicates that they were constructed to support a large two-storey building. A small assemblage of finds recovered from the foundations including two sherds of pottery dated to AD160-300.

7.10.4 Partial excavation of the deposits within Room 1 identified a deeply stratified sequence of consolidation/levelling deposits and floor surfaces, with a combined maximum thickness of 0.70m. This evidence for the repair and replacement of floor surfaces throughout the use of the villa is hardly surprising given the length of occupation from the third century until the late fourth century AD. The latest surviving surface was a degraded *opus signinum* concrete floor. Elsewhere within the Licensed Area only the latest floor surfaces were exposed, but for the primary rooms particularly, it is to be expected that similar sequences of floor surfaces exist. The other two rooms in the northern wing also had final floor levels constructed with *opus signinum* and this concrete floor in Room 2 was particularly well preserved at the time of the investigations, with areas of collapsed wall plaster from the rooms on top of the floor surface. The corridor was evidently well appointed with a tessellated floor which survived in small areas where the floor surface had sunk slightly into underlying deposits, indicative of features or a sequence of deposits below the latest surface. Examination of the tesserae recovered from the *in-situ* floor surfaces and unstratified material in the Licensed Area suggest that the corridor floor comprised individual or intermixed tessellated zones of white sandstone and dark-grey/green Elland Flags with a few yellow dolomites, red tile and cream-yellow Magnesian limestone. A more rudimentary cobble floor was exposed within Room 8, which appeared to represent a later addition to the west of the primary building towards

its southern end, though as discussed an earlier surface may have existed below. To the south floor surfaces were not exposed within Room 6. Without excavation it is also not possible to ascertain if any of the rooms within the structure were heated.

7.10.5 The remnant of the hypocaust system in the room which had been added onto the west end of the northern wing demonstrates that this was a heated room. Heated dining rooms were desirable for entertaining guests in the winter (Cosh 2001, 217), and this far north it is possible that they would have been necessary for longer periods of the year. The relatively small size of this room however, at *c*. 4.80m by *c*. 4.40m internally, in comparison to the primary rooms, and its location at the back of the structure, suggests that this may have been a private dining room for the use of the family. Little survived of the external structure of the heated room; not only had the coursed walls been robbed, but the majority of the foundations had been removed also. The short section of northern wall which did survive, a single course of roughly hewn sandstone blocks (largest 480mm x 180mm x 150mm) with clayey sand bonded rubble core, was 0.90m wide. This was built directly onto a clay and cobble foundation within a 0.90m wide and 0.57m deep construction cut. Although still substantial, the foundations and wall were of slighter proportions than those in the primary build of the northern wing, which may indicate that the heated room was of single-storey construction.

7.10.6 The internal area of the room would have been semi-subterranean to allow the construction of *pilae* stacks, around which the hot gases from the stokehole would have flowed, supporting a floor. The consolidation/levelling deposit which appeared to have been laid down prior to the construction of the primary villa building was within the heated room overlain by a c. 20mm thick spread of light grey lime mortar which extended across most of the internal area and in turn was overlain by a clayey sand deposit up to 40mm thick which extended across the entire internal area of the room. These deposits were presumably laid down to create a level and firm surface on which to place the *pilae* stacks. The room contained a total of 37 pilae stacks constructed with roughly hewn and squared sandstone slabs and blocks bonded with a light grey lime mortar in six north–south rows and seven east–west rows. The majority of the stones had a pinkish hew and had evidently been affected by hot gases of the heating system. In most cases the pilae stacks survived to two or three stone slabs/blocks high with three stacks surviving to five slabs/blocks high to a maximum height of 0.32m. The average height of hypocaust stacks was between 0.65m and 1m as this was the most efficient height to allow the air circulate (Yegül 1992, 357). The stacks within the heated room were built from a level of 38.58m AOD and the latest surviving floor surface in the adjacent Room 1 to the west was at a height of 39.18m OD. If the floor of the heated room had been built at the same height, then the pilae stacks would have been *c*. 0.65–0.70m high. Fragments of floor surface recovered from the demolition deposit within the heated room comprised a coarse gravelly mortar (*rudus*) topped with well smoothed *opus signinum.* This suggests that the floor of the heated room, constructed on top of the pilae stacks, comprised a smoothed

and polished concrete surface. A number of tapered fragments were identified suggesting that the floor sloped upwards at the room edges. Also recovered were fragments of *opus signinum* quarter beading that probably formed the edges of the floor surface.

7.10.7 Only a small portion of the basal remains of the stoking chamber survived, at the northern-central portion of the heated room demonstrating that that the fire for the hypocaust system was locate to the north of the room. Just three upright sandstone blocks (largest 340mm x 240mm x 200mm) set c. 0.40m apart survived, bonded with *opus signinum*. A *c*. 20mm thick ashy silt deposit between the walls of the stoking chamber produced charcoal along with a high concentration of grain, however identification proved difficult as the outer layers had been totally charred. A deposit interpreted as a raking out material excavated to the north of the heated room also produced relatively high concentrations of unidentifiable charred grain, along with sheep, cattle, oyster shell and a single fragment each of chicken bone and fish bone. This material suggests that the fire of the hypocaust may have been used to cook food. A deposit taken from the stokehole of a small bath house at Faverdale, Darlington produced small concentrations of charred cereal remains, including wheat and hulled barley, along with cockle shells and fragments of mussel and oyster shells suggesting that this had also been used to cook food (Proctor 2012, 44–45). The rakings from the furnace of the Old Durham bath house produced mussel shells (Richmond *et al.* 1944, 15). Analysis of the charcoal recovered from both the stokehole of the Aiskew heated room and the raking out deposit has identified taxa that are all native hardwoods and included ash, rowan, blackthorn; cherries, oak, and willow/poplar indicating the range of fuel used for the hypocaust.

7.10.8 Demolition debris excavated from within the heated room provides further information about its construction. The presence of a fragment of tufa, with mortar adhering to it suggests that this room had a vaulted roof. This lightweight calcerous low density rock, which was presumably locally acquired spring deposited tufa, was often selected for use in vaulting where lightness and strength were required and vaulted ceilings are often found in heated rooms. Hollow voussoir tiles also suggest that the room had a heated vault; these were used to construct hollow vaulted ceilings, allowing for the circulation of heat to continue up from the walls through venting in the roof. Combed box-flue tile from the demolition deposits in the heated room show that the walls would have been jacketed with stacked columns of box-flue tile decorated with painted wall plaster. Large quantities of *tegulae* and *imbrices* demonstrate that the room had a tiled roof.

7.10.9 Two main schemes (Schemes 1 and 2) were identified on the wall plaster from the demolition deposits within the heated room, one of which has been renovated. Schemes 1 and 2 are of two consecutive painted plaster schemes the earliest of which has two base coats and a thin lime top coat. Scheme 1 appeared to be a two-dimensional polychrome panel based scheme on a natural white plaster ground. The scheme appears to have red panel borders with blueish-grey framing lines, with yellow ochre over-painting

identified on one small fragment. Also identified was various coloured panels and borders over-painted with various coloured decorative lines or blocks of colours. Other design elements comprise fragments with adjacent red and black with the black over-painted with white stylised flower motifs with a central dot, solid blocks of red applied in fan shapes and red and black specks on white ground with the latter probably in imitation marble that probably forms the base of the wall (dado). Based on a smaller quantity of wall plaster fragments, Scheme 2 was formed by a single base coat and thin top coat and comprised polychrome panels on natural white ground. Panel and panel borders of yellow, red and black, yellow and black and yellow and red were identified. Also identified were red and black specks on white ground of imitation marble probably forming a dado element.

7.10.10 Fragments of demolition debris recovered from elsewhere across the exposed portion of the villa and from robber trenches have provided further information about the construction and appearance of the Aiskew villa. Painted wall plaster was found across the exposed area, including the large patches collapsed on the floor of Room 2 from its walls, yet to be assessed by a specialist. Fragments of a third scheme (Scheme 3) also came from the heated room and the assessed wall plaster from areas outside of the heated room. The Scheme 3 plaster comprises a grey base layer and a thick top coat that compared to the relatively crudely finished Schemes 1 and 2 has a smooth and even finish. Based on the wall plaster recovered it is assumed to be a polychrome panel based scheme, with possible marbled dado with the main zone including decorative elements of foliate motifs and a possible figure. This scheme shares elements in common to that of the wall-decoration from the 4th-century principia in York and is likely to be of a similar date. Other potential schemes may be represented within the assemblage, however due to the fragmentary nature this is difficult to establish. Fragments recovered from unstratified deposits during the initial hand cleaning of the villa building and from a demolition deposit inside the heated room are presumed to be unrelated to the aforementioned identified schemes and may represent painted wall plaster from rooms within the villa building located in the Licensed Area.

7.10.11 As well as tiled roofs, some rooms in the villa were evidently covered with large stone roof tiles. Elland Flag type from the Upper Carboniferous had been used, presumably as this rock splits readily along regular laminae making it ideal for the manufacture of roofing tile. The average thickness of the tiles was about 20mm and nail holes, where present, were either very large circular forms, or chevron cut by a knife. Elland Flags had also been split into much thicker (30-45mm) elements for paving. The large number of burnt examples suggested use as a heated floor surface, indicating other heated rooms were present in the villa. One example had *opus signinum* attached to its underside.

7.10.12 Numerous iron nails and other iron fittings provided evidence for the timber elements of the villa such as doors and fragments of window glass demonstrated that the villa had

glazed windows, though much of the glass had presumably been removed and melted for recycling.

### 7.11 Consumption and economy

7.11.1 The economy of the villa estates in the region was based on agriculture and it is clear that they were producing agricultural surpluses, beyond subsistence levels, for the enrichment of their owners. Villas along the Tees Valley and in Yorkshire were situated on good agricultural land which was capable of producing such surpluses (Ottoway 2013, 181) and it is clear from the material remains, as well as the buildings themselves, that wealth was created for their owners. Most excavated examples have provided some evidence for arable and/or stock production, however as Willis 2013 (188-189) has pointed out, although the evidence indicates that the northern villas were involved in agricultural production, the '*quality of knowledge of such economies is incomplete and not strong. This is partly because so few of these sites have been excavated and published to modern standards, but partly due to the poor survival of bone, or limited fieldwork or sampling'*.

7.11.2 The investigation of the Aiskew villa is therefore of considerable significance to the study of villa estates in the region. Although only a small portion of what is assumed to be the main dwelling was excavated, the artefactual and ecofactual assemblages recovered from the quarry pit and boundary ditch are a valuable source of information about the economy of the villa and the life of its occupants. Assessment of the assemblages has highlighted the considerable significance of this material and the potential for further analysis of the material along with further analysis of the stratigraphic data. The work undertaken to date on the depositional sequence of the largest quarry pit has indicated that the lower backfilling event took place in the third century AD; the occupational debris from within these deposits therefore has the potential to inform about the economy and life of the occupants during the initial occupation of the villa. The large quantity of refuse, including fire debris, deposited in the upper part of the pit and in the boundary ditch to the west of the villa, appears to have been deposited in the fourth century and the boundary ditch to the north of the villa also appears to have been backfilled at the same time. This material will therefore inform on the later occupation of the villa.

7.11.3 The wealth of the owners of the villa was evident in the material culture which they were able to acquire. The jet jewellery, particularly the very finely carved tiny bead from a necklace recovered from an environmental sample, would have been expensive and sought after items, jet was a highly regarded material and sources were very limited. The fine glass vessels represented by second to mid-third-century colourless cups or beakers, including a rare example with an unmarvered trail, and the fourth-century drinking vessels produced in greenish/colourless, thin-walled, bubbly glass also provide an indication of the affluence of the villa's owners throughout the occupation of the villa. Assemblages of glass from rural sites in the region are infrequent and this material is therefore of some significance. The faunal remains assemblage not only informs on the agricultural

economy of the villa, as discussed below, but also provides further indications of affluence, as well as informing on the diet of the inhabitants. The quantity of deer along with various game species including majestic birds as swan, crane and heron, as well as the generally occurring game such as hare and woodcock, could be seen as a sign of an affluent household. Although some researchers have suggested such meats were consumed if available, rather than their presence being an indication of expensive tastes (in terms of purchase or time spent on a hunt), as expounded by Cool (2006, 115), this disregards the obvious affluent association, as found here, and the evidence provided by notably high status urban sites (see Rielly 2005, 166-7). The relatively high proportion of pig bones in the villa assemblage may well equate with the more affluent Roman sites in this province, here following, to a certain extent, the diet practised in the Roman heartlands, in Italy (following King 1984 and see Rielly 2005, 167). The few fish bones may also be indicative of affluence, although the limited quantity indicates that this was only a minor component of the diet of the inhabitants.

7.11.4 The affluence of the villa owners is also evident in the villa building itself. The building was decorated with painted wall plaster and required specialist, and in some cases costly materials, such as half-box and box flue tiles, tufa blocks for vaulted ceilings, *opus signinum* flooring, lead perhaps for plumbing and glazing, and window glass. Construction would have entailed the use of specialist labour. The excavated evidence demonstrated that the heated room and Room 2 had walls covered with painted plaster, but the identification of at least three schemes, and the recovery of better quality plaster retrieved across a number of robber cut backfills and layers in the area of hypocaust room, indicate that most or all of the rooms had painted walls. Wall painting was an expensive commodity and was a widespread expression of prestige in Britain during the Roman period (Davey and Ling 1982, 46). The evidence that the walls in least one of the rooms had been renovated, with new layers of plaster being applied and a new scheme painted, indicates a continuing investment in the property.

7.11.5 At least one room in the villa was furnished with a hypocaust system, and although in the absence of excavation it is not possible to be certain that others were, it is considered likely that this was the case. The main projecting room in the northern wing in Building 2 at the Beadlam villa had a hypocaust system which was visible beneath the remnants of the heated floor and at least one more room was heated as indicated but the presence of flues, but as the concrete floor remained intact the hypocaust system was not revealed (Neal 1996, 32). Hypocausts systems were not only costly to construct, requiring specialist materials such as box flue tiles, but often required further investment to maintain. Rebuilding of hypocausts was often necessary as *pilae* stacks became damaged after a time by the heat from the hot gases of the stokehole; evidence for repair of heating systems in military bath houses is common, such as at Red House, Corbridge (Daniels 1959) and Bewcastle, Cumbria (Gillam *et al.* 1993). There is also epigraphic evidence for rebuilding of bath houses at forts which Welsby (1980, 89–90) argues was

necessary due to damage caused by use over time. Hypocausts would also require a continual investment in terms of the fuel required for the stokehole and the labour to keep the fires burning.

7.11.6 Very few coins were recovered from the Aiskew villa, just four late Roman coins, and whilst it is difficult to know whether this is a facet of archaeological recovery, especially given the very limited excavation of the villa itself, or can be attributed to ancient coin use, site function or even the types of excavated deposits, a similar pattern of low coinage is emerging at sites in Tees Valley and beyond. Although some Yorkshire villas, such as Dalton Parlours (87 coins: Wrathmell and Nicholson 1990, 75) and Beadlam (331 coins: Neal 1996, 63-96) have produced longer coin lists, the recently excavated villa at Quarry Farm in the Tees Valley produced only 19 coins (Willis and Carne 2013, 100). At Faverdale, a near absence of coinage was considered entirely characteristic of northern Romano-British indigenous site (Proctor 2012). The evidence from the northern region therefore points to the absence of adoption of a coinage system (Willis 1999, 102). Although the absence of coinage has been used in the past by some researchers to highlight the negative effect of the Roman army on the local population in the frontier zone and the absence of a 'Romanised' society in the region, the reasons for the absence of coinage are much more complex. If coinage is a manifestation of power, sovereignty and cultural identity, then the rejection of this monetary system may reflect the absence of centralised political organisation in the region (Willis 1999, 103). A coinage system was also not adopted in the Low Countries and some researchers have suggested that this was because in these areas power and prestige were expressed through the possession of cattle (Haselgrove 2004, 15). Similarly, the evident disinclination of the northern British population to adopt coinage may be connected to differences in cultural values, social relationships and exchange systems (*ibid*.). Day to day transactions trading agricultural surpluses for material culture such as pottery, jewellery, tools and food items that the villa was not self-sufficient in could well have taken place on a trade and barter exchange system in local markets. Payment for services such as the specialist labour required for the wall painting or the specialist building materials would presumably have been in silver denarii, valuable high denomination coins unlikely to be apparent in the archaeological record as not likely to be readily 'lost'.

7.11.7 As discussed, the wealth required to invest in the buildings and acquire such items of material culture would have been generated by the production of agricultural surpluses. It is clear from the geophysical survey which identified system of fields and enclosures extending for over 6 hectares around the villa, and continuing beyond, that the villa estate controlled a large tract of prime agricultural land. The size and condition of the cattle and sheep/goat assemblage means that there is considerable potential to provide much information about exploitation practices as well as changes in size/type during the occupation of the villa. Areas of pasture along the Scurf Beck to the west and Bedale

Beck to the north no doubt provided valuable grazing land for stock and some of the enclosures surrounding the villa compound may have been used for stock. Other animals which evidently formed part of the diet of the inhabitants of the villa, chicken and pig, may have been kept much closer to home. The palaeoenvironmental remains also have the potential to provide further information about the arable economy of the settlement; barley and spelt wheat have been identified along with weed species associated with arable crops, indicating the presence of arable fields in the vicinity of the villa building.

7.11.8 The villa was evidently well placed to easily access markets to the north and south along Dere Street. As discussed above, a large civilian town was established at Catterick and roadside settlement flourished, extending for at least 4km along Dere Street, including *c*. 2.75km to the south of the fort at Bainesse Farm (Wilson 2002). An extensive roadside settlement was also established at Healam Bridge, *c.* 10km to the south of the Bedale enclosure, by at least the first century AD (NAA 2011). The Roman tribal town at Aldborough (*Isurium Brigantum*) lay *c.* 26km to the south-east, the area around the town was seemingly densely settled throughout the Roman period and had begun to develop along the lines of other *civitas* capitals in the province by the mid-second century (Ottoway 2013, 170). In common with other Yorkshire villas, the Aiskew villa was located on good agricultural land, capable of producing beyond a subsistence level, close to a Roman road and within a fairly short distance of a large settlement where markets for produce would be located (Ottoway 2013, 181). The villas were generally built on the site of earlier farmsteads and appear to have been occupied by the indigenous population rather than retired soldiers or public servants (Ottoway 2013, 182).

7.11.9 Emerging evidence from the Tees and Durham lowlands suggests that many settlement sites established during the Late Iron Age continued to be occupied throughout the Roman period with the intensive agricultural exploitation of the landscape continuing unabated. This new evidence also demonstrates that some members of indigenous society evidently benefitted economically from the presence of the Roman military in the region; they were evidently able to exploit to their advantage the requirement that the army and *vici* had for substantial quantities of cereals, animals and other products. Alongside the opportunity for direct trade with the Roman military provided by the Roman forts along Dere Street and the extensive *vici*, such as those at Binchester, Piercebridge and Catterick, there is emerging evidence that the market economy in the region may have been much more complex than previously assumed. The economic success of the villa sites along the Tees Valley seems likely to have been based on the production of agricultural produce for trade. Certainly the economy of the Holme House villa is likely to have been based on cereal production on a commercial scale coupled with ready access to suitable markets (Harding 2008, 147). Dalton-on-Tees was also well placed to exploit this fertile agricultural area and it has been proposed that crop processing may have been undertaken there on a massive scale (Brown 1999). Further downstream, the villa at Quarry Farm also presumably controlled an extensive agricultural estate and there is the

suggestion that quarrying of sandstone for building material was another factor in the development of that villa (Willis and Carne 2013). Like the villa sites in the region, the economic success of the indigenous settlement at Faverdale to the north of the Tees may have been linked to the ability of the settlement to exploit the fertile agricultural lands of the Tees Valley and find a readily accessible market for these products (Proctor 2012).

7.11.10 A similar pattern appears to have developed within the area to the south of the Tees Valley along the swathe of agricultural land on the Magnesium Limestone to the west of Dere Street, although fewer sites have been excavated in recent times. It is the populations of the large towns rather than the extra-mural settlements and forts which provided the demand for the agricultural surpluses of these villa estates in this area. At Snape, *c*. 5km south of the Aiskew villa, cropmarks of a Roman building have been tentatively identified as a villa (Moorhouse 1979). It appears to lie inside an Iron Age/Roman rectilinear enclosure that is surrounded by a probably Iron Age/Roman field system. Further south at Castle Dykes, North Stainley is a roman villa dating from *c* 120 AD to the late third century. Excavations in 1866 revealed a detached building with two heated rooms and mosaics and further foundations were revealed during road widening in 1929. An unusual complex of buildings is known at Well (Gilyard Beer 1951), *c.* 7km south of the Aiskew villa. A building of simple plan, three rooms linked by a corridor, had a mosaic in the central room. To the east was a substantial bath suite and to the south of that a large stone pool lined with lead. Between house and baths was another structure furnished with a hypocaust, but this has not been investigated. Although the complex was most likely a villa, it has been suggested that the size of the baths and the pool may indicate a ritual/cult or therapeutic use (Ottoway 2013, 185). The extensive excavations undertaken in this area and recently completed during the widening of the A1 have the potential to provide significant information about the relationship between rural settlements and Catterick town and the Dere Street Roman roadside settlements.

### 7.12 Abandonment and robbing of the villa

7.12.1. Unlike some other rural settlements in the region, such as Quarry Farm in the Tees Valley, no evidence was discovered within the exposed areas to indicate that occupation continued after the fourth century AD. There was no evidence for post-Roman occupation in the rooms where floor surfaces survived and no pottery or other artefactual material dating from after the late fourth century AD was recovered.

7.12.2. There was compelling evidence to suggest that the part of the villa exposed during the excavations was not demolished on abandonment, but instead lay derelict for some considerable time. The large patches of painted wall plaster which had collapsed onto the concrete floor in the northern wing room had evidently fallen from the walls which must have remained standing for a considerable length of time to allow the plaster to fall from the tiles. The plaster would not have fallen onto the floor had the stone walls been robbed soon after occupation ceased. The large numbers of frogs in the hypocaust system also indicates that the villa lay derelict but not demolished. The damp environment which

would have developed in the subterranean area below the floor surface of the room providing an ideal habitat for amphibians.

7.12.3. Robbing of the stone us likely to have occurred from the medieval period and into the post-medieval period. The villa would have been a valuable source of building stones for the local inhabitants in and around Aiskew and Bedale There is some documentary and cartographic evidence to suggest that the ruins of the villa could still be seen in the early post-medieval period. A ‘rental and particular’ map drawn up in 1585 traced and transcribed by Kathleen Rudd (1975; Fig 2 opp. p62) for a local history course, showed 'grey stones' in the area of Aiskew villa. A reference in Hird's *Annals of Bedale* to an ancient Benton Castle at Micklebrack may perhaps refer to an area of ancient walls that were quarried by the locals over many years

# 8. ORIGINAL AND REVISED RESEARCH QUESTIONS AND SIGNIFICANCE OF SITE DATA

## 8.1 Aims and Objectives

8.1.1 For each site, specific aims and objectives were outlined in the WSI (Jacobs 2013, 22-23). At the outset of the work it was considered that the archaeological investigations had the potential to make a significant contribution to archaeological knowledge of the Vale of Mowbray within North Yorkshire, for the Late Iron Age and through the Roman period. The *Yorkshire Archaeological Research Framework* (Roskams & Whyman 2007) highlights the importance of research as a vital element of development led archaeological work.

**Site 58**

8.1.2 Five site specific aims and objectives were set out for Site 58 (Jacobs 2013, 22-23)

i. *To understand the development of the site and establish a date range for its occupation*

As described in detail in Sections 5 and 7 of this report, a long sequence of activity was identified at Site 58 with the earliest (Phase 2) including a ditch truncated by the south-east corner of the Bedale enclosure. This was identified on the geophysical survey extending for over 47m, indicating the presence of a significant field boundary system or enclosure predating the establishment of the Bedale ditched enclosure. The small assemblage of local handmade Iron Age tradition pottery recovered from the natural silting deposits within the ditch is not closely datable and so the date of this earliest phase of activity is unknown. The upper part of the ditch appears to have been deliberately backfilled ahead of the construction of the Bedale enclosure ditch and the material recovered from this deposit, including occupation debris such as faunal remains and metal-working debris, may therefore be contemporary with the use of the enclosure.

Three possible phases of boundary definition have been identified at the Bedale enclosure to date. The earliest, a narrow V-shaped ditch (Phase 3.1) produced two AMS dates (408 to 212 cal BC and 380 to 202 cal BC) indicating a Middle Iron Age date. However as this feature only survived truncation by the subsequent phases of ditch within the location of the entrance into the enclosure, it has not been proven conclusively that this represents the earliest phase of the Bedale enclosure.

The full circuit of the substantial Phase 3.2 ditch did survive and this provides the first unequivocal evidence for the origin of the Bedale ditched and banked enclosure. An AMS date of 377 to 197 cal BC was obtained from one of the lowest fills in the south-eastern corner of the enclosure and a date towards the latest end of this range at the beginning of the 2nd century BC is suggested when the AMS dates from the Phase 3.1 activity are taken into account. The date of the final recutting event has not yet been established, but the presence of the two burials in the base of the recut provides good potential to refine dating of the sequence of activity. The artefactual material recovered from the upper fill clearly demonstrates that occupation of the enclosure continued into the 2nd century AD;. the Roman pottery demonstrates that material was reaching the site in both the late 1st and 2nd

centuries. The absence of any of the later Roman material found at the Aiskew villa site would suggest that activity ceased before the middle of the 3rd century.

ii. *To determine whether there were any structural features within the enclosure or elsewhere*

It was evident that the upper interface of the superficial geology had been truncated to such an extent that internal features within the enclosure were almost non-existent. With the exception of a small number of postholes adjacent to the north-eastern part of the enclosure ditch, there were no surviving structural features inside the enclosure. The presence of an internal bank within the enclosure was evident in a band of redeposited boulder clay along the internal slope of the ditch. No traces of this bank survived *in situ* due to the severe plough truncation which had taken place in the site.

*iii. To record the spatial distribution of artefacts and ecofacts in order to elucidate the location of differing processes at the site*

It is evident from the assessment of the artefactual and ecofactual assemblages that the spatial distribution of material in the excavated slots has considerable potential to identify zones of activity within the enclosure, possibly throughout its entire occupation. The work undertaken to date has identified the presence of possible zones of activity during the earlier use of the enclosure through the material recovered from the lower fills of the ditch. Iron-smithing debris was identified in the lower fills of the ditch in the south-eastern corner of the enclosure. Most of the pottery came from slots excavated through the northern side of the enclosure ditch and the largest proportion of the faunal remains assemblage came from a slot excavated through the northern side of the enclosure. The wide distribution of skeletal parts of the three major domesticates perhaps indicated that processing took place within this part of the enclosure. Another focus of bone processing may have been in the south-eastern corner where a concentration of many equid bones was found with many skeletal elements represented.

The south-eastern corner and northern side of the enclosure evidently continued to be a focus of metal-working activity during the latest occupation with significant evidence for ferrous and non-ferrous metal production recovered from slots excavated through the latest ditch re-cut in these areas. The fragments of crucible with copper rich residues, as well as possible copper-alloy casting and working waste in the small finds recovered, suggest that copper alloys were being produced in the immediate vicinity. The recovered evidence suggests that copper based alloy was being melted (or indeed smelted) and cast at the site, and the scraps/offcuts of worked metal suggest that a craft person(s) may have been manufacturing items on the site. A significant concentration of metal-working debris indicative of iron/steel blacksmithing was recovered the south-eastern corner of the enclosure. The numerous fragments of fired clay recovered from the site, many of which were heavily slagged, suggests that the clay may have formed the lining of a smithing hearth, or small furnace that was being used to produce non-ferrous metals at the site.

Assessment of the substantial faunal remains assemblage recovered from the latest enclosure ditch recut backfill has demonstrated that this represents craft-working and food waste. The northern side of the enclosure produced particularly large quantities of animal bone. Full analysis of the entire

assemblage will identify bones with evidence for butchery, i.e. food waste, and bones which represent craft-working waste with the aim of plotting the distribution of these different classes of material.

The majority of the slots excavated through the latest backfill deposits produced pottery; plotting of the relative quantities of the pottery assemblage, in particular focusing on pots with evidence for cooking, has the potential to identify possible areas of habitation within the enclosure.

The presence of charcoal and charred grain in the environmental samples taken from deposits throughout the enclosure ditch indicates that the site was under constant occupation, with low levels of charcoal indicating burning as a function of everyday life, as well as for industrial purposes. In several areas peaks in charcoal concentration coincided with the presence of metal-working debris in the latest ditch deposits. The initial observations gained from the samples support the identification of a landscape of open areas of grassland and the consumption of cereals on the site. The later Bedale ditch deposits also produced the highest concentrations of seeds and grain and this and the low concentrations of charred grain that occur throughout the sample set, are a further indication of near constant occupation, though the lack of glume and base fragments indicates that whilst cereals may be being consumed at the site, they are being processed elsewhere, perhaps even traded locally.

iv. *To understand the different processes at the site;*

Elements of the artefactual and ecofactual assemblages recovered from the enclosure ditch indicated the presence of habitation within the enclosure. Many of the pottery sherds were sooted and some had internal carbonised residues demonstrating that they had been used for cooking. Food waste was represented by butchered bones, fish bone and oyster shell.

The analysis of the artefactual and ecofactual assemblages has demonstrated that during the latest occupation of the Bedale enclosure, bone and antler craft working and metal working was taking place at a scale well above subsistence level. Along with the abundant evidence for copper-alloy production and iron/steel blacksmithing, there was some evidence to suggest that lead may also have been worked at the site. The presence of a craft person(s) manufacturing metal items at the site is strongly indicated by the scraps and offcuts of worked metal and the significant small finds assemblage. A wide range of bone artefacts has been identified in the small finds assemblage, and, given the abundant evidence for bone craft-working waste, it seems likely that bone objects were also manufactured at the settlement.

Tools such as weaving combs and spindle whorls indicated that textile production took place at the Bedale enclosure, supported by the plentiful evidence for sheep amongst the faunal remains. The environmental samples did not produce chaff, however the presence of quernstones suggested that cereal processing took place at the settlement, although it is possible that some may have been used for processed involved with metal production. The bulk samples produced generally low concentrations of environmental material, but indeterminate wheat, barley and rye were identified along with species associated with arable crops indicated the presence of arable fields in the vicinity of the enclosure.

Assessment of the faunal remains assemblage has also demonstrated that animals were reared at the settlement, with bones from calves identified. Dog bones and mallard may provide evidence for hunting of wild species. Equid bones and the bone toggle which formed part of a horse harness indicate that some inhabitants rode horses.

It is evident that by the time occupation ceased, the Bedale enclosure was a settlement of some considerable significance which was manufacturing bone and metal artefacts on a scale beyond the levels of subsistence. Wide trade links were indicated by items such as briquetage, fish and oyster shell and contact with Roman markets was evident in items of Roman material culture such as pottery, brooches and rings, albeit in relatively small quantities. Evidence for Roman influence also extended to the use of the cleaver to butcher animal bones and an increase in pig in the diet of the inhabitants. The bone stylus suggested some of the inhabitants may have been literate. The relatively small quantities of Roman material culture is worthy of further consideration. Handmade pottery continued to be used throughout the occupation of the enclosure and the fact that it continued to be used at the settlement in large quantities in the 2nd century AD could be interpreted as being due to the intermittent availability of Romano-British pottery. However retention of local potting traditions seems to be a regional trait; handmade pottery continues to form a major element of pottery assemblages at the Tees Valley villa sites of Holme House, Quarry Farm (Willis and Carne 2013) and Dalton-on-Tees (Graeme Stobbs pers. comm.) and the major Tees Valley settlement at Faverdale (Proctor 2012). Recently it has been discovered that local traditional handmade pottery is present in small but significant amounts at Roman forts in the central and eastern sectors of Hadrian's Wall (Bidwell 2009, 124–125). As well as providing an indicator of trade and exchange between military and civilian sites, the presence of this pottery may perhaps suggest that this was still a valued commodity in areas where Romano-British wares were presumably more readily available. The pottery assemblage from Bedale is highly significant not least because it demonstrates the desire of the community to maintain some aspects of their own identity. The Romano-British and imported pottery that were acquired seems to have been items that were not available in the local pottery tradition repertoire, such as flagons and samian ware. The samian assemblage was however notably small when compared to contemporary rural sites in the region such as Faverdale, and it may be that the 2nd-century samian assemblage recovered from the Aiskew villa in fact originated from the Bedale enclosure and was transported to the villa when the inhabitants moved to the site of the Aiskew villa, discussed below.

v. *To investigate the nature of any relationship with Site 122 (the villa), so far as possible within the constraints of the available investigation area.*

The artefactual evidence demonstrates that occupation of the Bedale enclosure ceased by the middle of 3rd century. Excavation of the part of the villa at Site 122 within the road corridor revealed a few elements of a field system stratigraphically predating the villa which produced 2nd-century material. It is also possible that some of the field systems and enclosures excavated to the north of the villa and identified by geophysical survey pre-dated the construction of the villa in the 3rd century AD as it is evident that systems on different alignments are present, indicating chronological change. The

excavation of Site 58 produced evidence for arable and pastoral agricultural and it seems likely that this significant enclosure would have been surrounded by a relatively extensive agricultural hinterland, possibly extending to the north and including field systems around Site 122 where the Aiskew villa was to be constructed. It may be possible to distinguish different phases of field system through further analysis of the excavated evidence and examination of alignments of features on the geophysical survey.

The abandonment of this successful settlement may well be linked to the construction of the villa in the 3rd century and it is possible that the inhabitants of the Bedale enclosure constructed a Romanised villa a short distance to the north as discussed below.

**Site 123**

8.1.3 Aims specific to Site 123, the apparent trackway south-west of Bedale Beck, were

*i. To confirm the nature of the site and establish its date, so far as possible;*

*ii. To investigate and confirm the nature of other features within the excavation area and determine their date and relationship with the trackway, if any.*

Excavation of the ditched trackway revealed that this was a long-lived feature, with evidence for recutting events identified in some elements; where recuts were not visible it is possible that the surviving element represents a recutting event which had removed all traces of the original ditch. Stratigraphic relationships identified in the south-west corner of the Bedale enclosure demonstrated that the latest phase of the ditched trackway cut through the uppermost surviving backfill deposits of the latest Phase 3.3 U-shaped enclosure ditch. However it was evident that the enclosure ditch and internal bank must have survived as earthwork features as the west and north sides formed one side of the ditched trackway. The majority of artefactual material recovered from the trackway ditch came from the upper deposits of the northern ditch to the north of the Bedale enclosure and it is likely that much of this represents residual material from occupation of the enclosure. A further research aim will be to establish if there is artefactual or ecofactual material available to establish a date for the origin and use of the trackway.

**Site 122**

8.1.4 Aims specific to Site 122, the Aiskew Roman villa were

*i. To understand the development of the site from its inception. As discussed by Roskams and Whyman (2007), is there a continuum from the Iron Age or the late-pre Roman Iron Age through to the time when stone buildings were erected or was there a clear break between sequences*

vi. *To investigate the relationship with sub-square enclosure at Site 58, about 800m to the south-west. At present there is no visible connection between the two sites but Site 58 may be part of the estate around Site 122. Site 58 is connected by a trackway to the Bedale Beck.*

No evidence was recovered to demonstrate the presence of Iron Age activity at Site 122, however, as discussed above, a few elements of a field system stratigraphically predating the villa produced 2nd-century material. It is also possible that some of the field systems and enclosures excavated to the north of the villa and the extensive and intensive activity identified by geophysical survey pre-dated the construction of the villa in the 3rd century AD. A small quantity of 2nd-century artefactual material was recovered from the enclosure and it is evident that systems on different alignments are present, indicating chronological change. As previously discussed, it is possible that the pre-villa field systems and enclosures may have formed part of a wide agricultural hinterland associated with the Bedale enclosure.

The abandonment of settlement at the Bedale enclosure may well be linked to the construction of the villa in the 3rd century and it is possible that the inhabitants constructed a Romanised villa a short distance to the north. A recently published research project examining rural settlement in Roman Britain has identified twenty villa sites in the North East region within which the BALB site lies (Smith *et al.* 2016, 255–256). Around half of these were constructed in the 2nd century and the other half the 3rd century and most developed from an earlier farmstead. Continuity of occupation is not always easy to demonstrate, but seven villas provided evidence for pre-villa occupation extending back to the late Iron Age. In this case, the excavated element of the villa only represents a small proportion of a much larger occupation site and earlier activity could be present elsewhere within the occupation area. Topography may have been one of the principal reasons for the settlement moving to the north. The Bedale enclosure occupied a relatively narrow ridge of land, sloping up to the north-east, which would not have provided a large enough area on which to site the villa and its compound and associated buildings which have been identified by geophysical survey. The villa was constructed on a natural elevated platform overlooking the Scurf Beck and the west face of the villa would have presented an impressive façade from the river. It was set within a ditched compound which measured 120m by 100m, entered from the east from the direction of Dere Street and was surrounded by an extensive network of interconnected enclosures recorded over 6 hectares. Dere Street was also closer to the Aiskew villa *c.* 1.5km directly east of the main villa compound, than the Bedale enclosure, which may have been another factor in the selection of this site for the construction of the villa.

No artefactual material of 3rd- or 4th-century date was recovered from Site 58 and it is evident that habitation at the Bedale enclosure ceased by the end of the 2nd century. The stratigraphic evidence demonstrates that by the latest phase of use of the ditched trackway the Bedale enclosure ditch had been largely backfilled and habitation may well have ceased. The trackway was presumably designed to herd animals around the Bedale enclosure to and from the Bedale Beck and the fact that it seems to have been operational after habitation ceased means that an associated settlement must have been located in the vicinity with the Aiskew villa being the likely location of this.

ii. *To determine when occupation and activities ceased on the site and whether they continued into the 5th century or later*

No evidence was discovered within the exposed areas of the villa and surrounding fields to indicate that occupation continued after the 4th century AD. There was no evidence for post-Roman occupation in the rooms where floor surfaces survived and no pottery or other artefactual material dating from after the late 4th century AD was recovered from the investigations.

iii. *To elucidate whether main domestic, agricultural and other activities remained static in one building or whether they moved to other structures around the whole site over time and if so to record that movement*

iv. *To establish the contemporary arrangements of each structure (and structural phase) across the villa estate and the wider hinterland, so far as possible within the constraints of an investigation confined within the road corridor*

Due to the limited area of the villa structure that was excavated, it was not possible to address these research aim in terms of the use of rooms within the villa. It was evident from the plan of the villa building exposed within the Licensed Area and road corridor that this main dwelling had increased in size over time with rooms added to the original construction in the south-west, north-east and north-west. Excavation of the room which was added to the north-west side of the original structure demonstrated that this was a heated room which had been richly decorated with painted wall plaster. The size of the room indicated that it may well have been used as a heated dining room; such facilities were desirable for entertaining guests in the winter (Cosh 2001, 217), and this far north they would have been necessary for longer periods of the year.

Geophysical survey indicated the presence of other buildings within the villa compound, beyond the investigated area. The anomaly indicating a large rectangular structure adjacent to the central southern boundary of the compound may suggest the presence of an aisled building to the south-east of the main dwelling. Large aisled buildings date from the mid to late Roman period, and have in the past tended to be viewed as barn-like structures serving an agricultural purpose, for storage of crops and equipment, shelter for animals and as living quarters for estate worker (Morris 1979). However, recent assessments, particularly from the south of England, suggest they could have served in various different roles, including a main villa building, a secondary building for housing the extended family, servants or slaves, or a large undercover meeting place (in the central ‘nave’) (Bird 2016).

The geophysical anomalies in the south-east corner of the compound seem a possible candidate for the location of a bath suite; comparative evidence from other 3rd- and 4th-century villas in the region indicates that it is very likely that the Aiskew villa was furnished with a bath house.

The geophysical survey and excavation to the north of the main villa building demonstrated that the villa compound was surrounded by a large expanse of interconnected enclosures and fields, which would have been used for pastoral and arable agriculture.

v. *To maximise the potential to understand the spatial use and function of individual structures, rooms, features and areas and thereby the site as a whole through a rigorous sampling programme for artefactual and palaeobotanical evidence*

Due to the limited area of the villa structure that was excavated, it was not possible to address this research aim in terms of individual rooms within the main domestic building. The excavation and sampling strategy employed at Site 122 provided a rich source of artefactual and palaeobotanical evidence, particularly from the extensive quarry pits and boundary ditch surrounding the villa buildings. Assessment of this material has highlighted the huge potential for providing information about diet, arable and pastoral economy and processing and manufacturing activities which took place at the Aiskew villa throughout the entire period of occupation during the 3rd and 4th century AD. Further work on the sequence of construction and infilling events relating to the quarry pitting, associated boundary system and field system extending to the north of the villa will aim to identify assemblages from different periods.

## 8.2 Revised Research Agenda

### Site 58

Further analysis of many elements of the data set recovered from Site 58 has the potential to address research aims set out in the Regional Research Framework (Roskams & Whyman 2007)

- ***Iron Age funerary evidence****: mostly restricted to the Wolds and the uplands immediately north of the Vale of Pickering. This prominence of burial evidence in the east of the region has tended to mean that histories of the period have been written with a focus on the Wolds, continuing the antiquarian tradition of concentrating on monumental burial. However, recent evidence from West Yorkshire (Roberts 2005), shows how wide ranging approaches to body disposal might be.*
- ***Social hierarchy:*** *the emergence of elite groups is clear within the area, but the basis of their social power needs more consideration. Halkon and Milett (2000) have suggested that control of iron production may have been pivotal to the consolidation of aristocratic power in the Foulness area. However, even this relationship must have been predicated on more general control of the landscape as this was essential for the transport facilities and food resources on which surpluses of food being vital if central authority was to reproduce itself in the long term. Furthermore, in discussions of the emergence of social hierarchies it is often assumed that such groups were sedentary. However the possibility of itinerant authority needs to be allowed for. The Iron Age could be the period which sees a long term process of social consolidation coming to fruition, the point when once-mobile aristocratic authority moved beyond the use of gathering places to the permanent sites.*
- ***Iron Age landscapes****: there are all too few attempts to examine habitation sites in relation to the evidence of landscape enclosure and to the more general development of the agricultural*

*and pastoral economies. The requirement for more study into the relationship between the development of field systems, evident from aerial photography, and needs of extensive cattle and sheep farming is not sufficiently discussed. There is also the need to move beyond burial evidence to concentrate on landscape boundaries, droveways and settlements.*

*Can scientific dating methods further define the development of the site and refine the date range for its occupation?*

The principal aim of additional AMS dating would be to determine for certain when occupation began at Site 58, how long the enclosure was in use for, and whether the enclosure was under constant occupation.

The earliest phase of activity identified at the site, Phase 2, is as yet undated and a key aim of further research will be to identify material suitable for AMS dating to determine the date of this extensive pre-enclosure boundary. The pottery recovered from the lower silting deposits will be examined for the presence of carbonised residues suitable for AMS dating. The upper deposits of this ditch contained artefactual and ecofactual material which may be contemporary with the earliest phases of occupation of the Bedale enclosure and identifying material suitable for AMS dating is also be a key research aim; the faunal remains assemblage clearly has considerable potential to provide such material. The upper part of the Phase 3.1 ditch was also deliberately backfilled ahead of the construction of the substantial ditched and banked Bedale enclosure and the potential for obtaining an AMS date from the assemblage of animal bone recovered these deposits will also be explored. AMS dating of the skeletons, and by inference the latest recutting of the Bedale enclosure ditch, is a key priority for further analysis of the recovered data.

It is apparent that some sections excavated through the Bedale enclosure ditch display evidence for more frequent recutting events than have been identified to date. Analysis of this sequence in conjunction with AMS dating might enable further refining of the chronology of this sequence of recutting events. A broad dating framework has been established for the enclosure, but the recovered data has the potential to develop an independently well-dated sequence through the use of AMS dating and this presents an almost unique opportunity to address one of the major lacunae of the Iron Age to Roman transition in the area – what happens on rural occupation sites. Despite work on the A1 providing evidence of Late Iron Age occupation across North Yorkshire, there is a scarcity of excavated rural occupation sites that extend from the Late Iron Age into the Roman period. The work undertaken to date indicates that the earliest origins of the enclosure may date from the Iron Age and, at the widest dating based on that and the pottery, give the enclosure a period of use of in excess of 500 years. The possibility of a well-dated sequence through the ditches could help address questions of settlement continuity in the western Vale of Mowbray. Overlapping dates, particularly if coupled with Bayesian analysis of the results, might allow the case for continuous, or near continuous occupation, to be proven and to determine for certain how long the enclosure was in use for. This would be a valuable result on a regional level.

*Can the use of GIS analysis to plot the spatial distribution of artefacts and ecofacts further elucidate the location of differing processes at the site?*

The strategy employed for the excavation of the Bedale enclosure means that GIS will be a suitable tool for plotting spatial and temporal distribution of all classes of material with the aim of identifying areas of the enclosure where processes may have taken place, and to plot potential changes over time.

*What information can further analysis of the handmade pottery assemblage provide?*

The handmade pottery assemblage from the Bedale enclosure is of regional significance due to its size, date range and the securely stratified deposits from which it was recovered. Given the importance of understanding the early Roman transition in the North East of England, the assemblage takes on an even greater importance. At 289 sherds, the assemblage is relatively substantial for the region and full quantification by EVE is required in line with guidelines for the analysis of pottery assemblages (PCRG 2011). Many sites excavated in the Tees Valley area have produced less than 100 sherds (Sherlock 2012 table 5.1). Site 9 at Stanwick only produced 912 sherds and provides readily accessible comparative evidence (Haselgrove 2016, table 11.9) and Gerrard's work on other sites in the region provides further comparative data for this assemblage.

Petrographic analysis using thin sections will aim to characterise the geological and technological attributes of the fabrics (Historic England 2015, 25). Mineral inclusions within the clay can be identified and related to the underlying geology of the area of origin. Clay preparation processes may be revealed in thin section by fabric textures and the grain size frequency distributions of the non-plastic components. Chemical analysis using XRF will aim to identify raw materials derived from different geological settings (Historic England 2015, 26). This analysis would greatly advance understanding of the handmade pottery assemblage from Site 58. The aim of this research would be to determine the range of origin of the numerous different pottery fabrics identified by binocular microscopy within the assemblage and to help develop an understanding of ceramics in the late Iron Age/Early Roman period in the region. Such scientific analysis has the potential to provide significant information about pottery consumption and production. If the different fabrics at the Bedale enclosure can be isolated, they may have distinct chronological ranges within the life of the site. This has proved successful for the Stanwick Site 9 handmade pottery assemblage by tempering agent and period (Haselgrove 2016, table 11.9). Thin section analysis of similar handmade pottery assemblages with a wide range of fabrics has produced significant results at other sites, for example at the Needles Eye enclosure, Berwick-upon-Tweed (Morris 2012). Such an understanding of the fabrics at the Bedale enclosure, underpinned by AMS dating of appropriate samples (bone, residues etc.), would provide a stronger chronological and therefore interpretational framework for Site 58.

Quantification of sooting and carbonised residues on the pottery sherds will be undertaken with the aim of quantifying the number and range of pots used for cooking throughout all periods of use and to

identify material suitable for AMS dating. Another key aim in the analysis of the surviving carbonised residues is to attempt to shed light on diet and chronology (via high precision AMS dating).

Organic Residue Analysis (ORA) of the pottery assemblage has the potential to provide significant information about diet, economy and subsidence at the Bedale enclosure. The recently published ORA guidance for good practice has highlighted a range of research questions which can be successfully addressed by this technique (Historic England 2017). The aim of the ORA to be undertaken on the Bedale pottery assemblage will be to identify what food products were processed or stored in the pottery, thus providing significant information about diet as well as cooking technique. ORA undertaken on the Faverdale pottery assemblage demonstrated that beef and mutton/goat had been regularly cooked in the pottery vessels, however no traces of porcine fats were found (Cramp 2012). Pig bones were abundant in the faunal remains assemblage, therefore may have been cooked in a different way to the ruminant meat, perhaps roasted rather than stewed in pots. The Faverdale analysis also identified the presence of pitch pine in a mortaria; given the extensive evidence for metal-working and metal and bone object production at the Bedale enclosure, a key aim of the ORA will be to identify if any of the pottery vessels were used for functions other than cooking.

*What information can further analysis of the small finds assemblage provide?*

For an indigenous site in the north of England the small finds assemblage is large and extensive. The worked bone assemblage is of regional, and probably in context of national, significance. Comparison to material from other indigenous and Roman sites will be undertaken with the principal aim of demonstrating if there are differences in worked bone assemblages from 'native style' and more 'Romanised' sites. Are there different influences at work or is there a single, possibly regional, tradition? The serrated rib bones offer an opportunity to undertake use-wear analysis to determine their function which at present is unknown. Similarly the metal small finds assemblage and the evidence for manufacture of copper-alloy objects is of regional significance and comparison with other indigenous and 'Roman' sites will be undertaken with the aim of identifying points of comparison.

*What information can further analysis of the faunal remains assemblage provide?*

Preservation of bone from sites on the acidic clay soils of the region is generally poor and the recovery of over 10,000 bones in moderate to good condition recovered from the Bedale enclosure is therefore of considerable regional significance. To provide some indication of the importance of the Site 58 assemblages it can be noted that the main excavation area on The Tofts at Stanwick only produced 34,000 bones in five seasons of excavation and of 26 sites considered by Sherlock in the Lower Tees Valley, only six have assemblages of over 100 fragments of bone (Sherlock 2012, 58; table 5.1). The published assemblages from Faverdale and Stanwick will provide readily accessible comparative evidence. The regional significance of this assemblage is further enhanced by the fact that Site 122 also produced a significant faunal remains assemblage dating from the 3rd and 4th century AD which will allow patterns of consumption and production to be analysed for a considerable span of time from the mid to late Iron Age into the 2nd century AD and through to the end of Roman

occupation. The assessment of the assemblage has identified that that it is of such significance that full analysis and publication should be undertaken as recommended in Historic England's Animal Bones and Archaeology *Animal bones and Archaeology Guidelines for best practice* (Baker and Worley 2014, 10).

The assemblage has potential for in-depth studies of cattle and sheep/goat usage and the major aims of further analysis will concern exploitation practices, their size (and possibly type, here looking at the notable collection of cattle horn cores) as well as butchery methods (largely limited to cattle). It can be suggested that the large collection of bones denotes a sizeable population, largely involved in cattle herding. It will of course be of some interest to learn whether these animals were principally used for their meat and/or for some secondary product as milk. There is certainly evidence for local production as demonstrated by the presence of young calves, although also of interest here was the high proportion of older calves. This could also be indicative of a production centre, the culled youngsters representing those animals not required for breeding or working purposes. Further analysis of the age structure will therefore aim to determine whether this site also functioned as a supply centre.

The assemblage will undoubtedly provide additional evidence concerning the size and type of cattle and sheep/goat which can be compared to similar information gleaned from contemporary excavations within this general area. The assessment of the faunal remains assemblage undertaken to date has indicated that changes in exploitation of the three main domesticates can be seen throughout the long period of occupation of the Bedale enclosure. Full recording and analysis of the entire assemblage, particularly the large assemblage, which to date has been scanned, recovered from the Phase 3.3 latest ditch fills between the excavated sections will be undertaken. This scanned material is securely-dated to the 2nd century AD and therefore merits full recording. This work will aim to improve interpretation of the data relating to exploitation practices and the size/stature of the domestic stock by providing a larger dataset. Additional recording of butchery on the well dated and better represented Phase 3.3 collection. This provided 159 butchered items. Further work on this aspect should also include the vertebrae and ribs, accompanying quantification of these skeletal parts.

The recent assessment of Roman rural settlement has concluded that bones from wild species are sparse (Smith *et al*. 2016, 278). The large and small game species found at the site are therefore of some significance and full recording of the scanned assemblage will aim to identify the range and abundance of wild species and compare this data to other regional sites.

A small number of soil samples from the latest fills of the enclosure ditch remain unprocessed. Processing of these will take place with the principal aim of recovering additional fish bones. The recovery of fish bones from the Bedale enclosure is of regional significance; fish provided a very small part or indeed no part of the pre-Roman diet (see Dobney and Ervynck 2006 in Locker 2007, 154). Fish consumption undoubtedly increased with Romanisation or rather, greater quantities of fish bones have been found at recognisably Romanised sites, in particular those in urban areas and also from villas (*ibid*, 155). However, in the north-east, the quantities are rather smaller (see Stallibrass 1997, 38). Rarer still are Romano-British sites with fish bones, with the notable exception of certain sites in

south-east England as Great Holts Farm (Locker 2007, 155). It is therefore of some significance that a few fish bones were recovered from site 58, with an additional small collection collected during the evaluation excavations at this site (Jacque 2009, 52).

*What information can further analysis of the metallurgical residues assemblage provide?*

In line with Historic England's *Archaeometallurgy Guidelines for Best Practice* (2015), basic assessment of the metallurgical residues assemblage has been undertaken to date and the potential for further analysis has been identified. The metallurgical evidence from Site 58 is certainly of regional, and probably national, significance. Further quantification of the assemblage is required in conjunction with the GPS spatial analysis with the aim of identifying areas within the enclosures where metalworking production processes may have been carried out. Full chemical analysis is also required with the aim of identifying information on processes and products. Demonstrating if the copper alloy being used was being recycled or was being smelted from ore would undoubtedly inform our understanding of Late Iron Age/Early Roman metallurgy and possibly allow the identification of the sources of that ore (the copper deposits at Middleton Tyas are an obvious potential source). The value of the metallurgical evidence is increased by the discovery of 'contact'/'conquest' period metalworking at Scotch Corner during the A1 project – which will provide comparative data. Haselgrove (2016, 428) points to the paucity of late Iron Age metal-working evidence in North Yorkshire and further north. Another key aim of further research on the assemblage is to try and determine if lead was being worked at the site.

In relation to the industrial residues recovered from Site 58, Metals and Metalworking (HMS 2008) provides a research framework for archaeometallurgy in Britain and identifies major gaps in knowledge. These comprise multi-period topics relating to methods in fieldwork and scientific examination, and other topics divided by period from prehistoric to the present day, and ultimately outlines a strategy for promoting best practice in the discipline. The identification of priority areas for research involved both consideration of multi-period issues and those that apply to specific periods. The following list identifies research aims associated with archaeometallurgical remains recovered from the Bedale enclosure at Site 58:

*Multi Period Themes*

- *Develop holistic approaches to the description and interpretation of landscapes associated with metallurgical material. Mining ore benefication, smelting, fuel supply, transport, metalworking, associated industries (such as ceramics), metal artefact production and distribution may all occur, situated within complex social and geographical contexts which may be largely unrelated to metallurgy;*

- *Broaden understanding through identification and investigation of sites with unusual or innovative processes, and sites where the archaeometallurgical residues of poorly understood processes may be investigated;*

- *Identify early production sites for non-ferrous metals;*

*Prehistoric Topics*

- *Investigate the relationships between site types, the types of artefacts manufactured and the techniques used, particularly for bronze working in the Iron Age.*

*Roman Topics*

- *Investigate whether specific alloys were selected for different types of objects or different methods of manufacture, and whether date or place of manufacture affected the alloys used;*
- *Identify where the raw materials for making Roman copper alloys came from;*
- *Investigate regional patterns of copper alloy use and their changes through time in non-Romanised parts of the British Isles.*

*What information can further analysis of the palaeoenvironmental remains provide about the landscape surrounding the Bedale enclosure, arable agriculture, exploitation of wood and activities carried out at the settlement?*

In line with Historic England's guidelines on Environmental Archaeology (2011), the assessment of the palaeoenvironmental remains has highlighted the significance of the assemblage and the good potential for further analysis. A principal the aim of this analysis would be to provide information about the landscape around the enclosure and the activities which took place within. The value of this data is further enhanced by the palaeoenvironmental remains recovered from the Aiskew villa. This presents an opportunity to provide evidence for the context of the sites and potentially for change over time as represented in the landscape surrounding the two sites. Further analysis of the assemblage will address several key aims; what was the environment in the vicinity of the Bedale enclosure like at the time of occupation and how did it change over time? How did people procure food? How did people prepare food? What did they throw away and where? What did people exchange, buy or sell?

Initial observations from the Bedale enclosure assemblage support the presence of open areas of grassland and the consumption of cereals on the sites and a principal aim of the analysis would be to confirm this. High concentrations of charcoal were found throughout the sequence of deposits in the Bedale enclosure ditch, though the majority of pieces were too small for a proper identification to be carried out. This indicates that the site was under constant occupation; with low levels of charcoal indicating burning as a function of everyday life, as well as for industrial purposes. There is value to be had from further analysis of viable charcoal- and grain-containing samples, for both the information that can be gained regarding land use, trade and environment in the area, as well as the potential for creating a better chronology for the site using radiocarbon dating. In several areas, the peaks in charcoal concentration coincide with the presence of hammerscale, slag and other industrial materials in the latest Bedale ditch deposits. A selection of the viable charcoal from all phases of activity will be analysed; the principal the aim is to identify the types of wood that were being used for fuel during in this area during the Iron Age and into the 2nd century AD. Further analysis of charcoal may identify

taxa not recorded during the assessment phase with the aim of determining if any taxa were used preferentially or not. Again the value of this analysis is further enhanced by the charcoal assemblage recovered from the Aiskew villa, allowing the patterns of exploitation of wood for fuel to be examined throughout the 3rd and 4th centuries as well.

The later Bedale ditch deposits also produced the highest concentrations of seeds and grain and this and the low concentrations of charred grain that occur throughout the sample set, are a further indication of near constant occupation, though the lack of glume and base fragments indicates that whilst cereals may be being consumed at the site, they are being processed elsewhere, perhaps even traded locally. Due to the importance of this material in understanding the diet and economy of the area, samples which contain greater than 30 grain fragments will be subject to further specialist analysis. Of particular interest in this case is sample <269> which contains a substantial concentration of grain and both charred and un-charred seeds; full qualification of the species present may shed light on the types of agriculture undertaken locally. Similarly, samples <159> and <160> would benefit from further study, as they contain the highest frequencies of uncharred seed remains; identification of the taxa could be an important step in understanding the make-up of the local landscape during the Late Iron Age and, in conjunction with the evidence from the material assemblage, hypothesising how this may have altered over time.

**Site 122**

Further analysis of many elements of the data set recovered from Site 122 has the potential to address major research aims set out in the Regional Research Framework (Roskams & Whyman 2007)

**Roman Settlement:** *in order to elucidate the rural context in which the more well-known foci of fort, town and villa subsisted and developed (or failed to develop), it will be necessary to undertake consistent quantification of artefactual and ecofactual assemblage data from the whole range of site and landscape contexts. Only in this way can the relationship between settlement development and the production of agricultural surplus be directly appreciated*

*Can further analysis of the stratigraphic data provide refinement of the dating of the artefactual and ecofactual assemblages?*

Further analysis of the sequence of construction and infilling events relating to the quarry pits and villa boundary system will aim to provide refinement of the dating of the artefactual and ecofactual assemblages. The work undertaken to date indicates that the earliest fills of the most substantial quarry pit may date form the earliest occupation of the villa in the 3rd century. The upper fill of the quarry pit apparently accumulated at the same time as that of the villa boundary ditch in the 4th century AD. Further analysis will aim to identify any chronological distinctions within the assemblages.

*What information about the construction of the Aiskew villa could be gained from further analysis of the painted wall plaster, mortar, opus signinum and ceramic building material?*

The painted wall plaster assemblage is sizeable for the region and assessment of the material has determined that there is further information to be gained in terms of decorative schemes used and, potentially, evidence for the replacement or renewal of schemes. Such information would be regionally important given the limited number of large and well-published assemblages there are to date.

The mortar, *opus signinum* and wall plaster will inform directly on the construction and internal appointment of the villa. In examining application, finish, painting skill and the range of pigments used, the wall plaster in particular, can provide information on the level of time and money invested, and consequently the affluence or pretentions of the commissioning clients. Successive schemes also have the potential to reveal information about changing tastes for decoration. The wall plaster from the site is of moderate to good quality and is typical of the later Roman period, depicting two dimensional polychrome panel based schemes, for the most part on a natural white ground. It is possible some figurative elements are represented but the majority of diagnostic components appear to indicate foliate and floral motifs in the main zone of decoration. Some attempt at three dimensions, in the form of rudimentary architectural schemes, might be suggested by the tonal shading on some pieces and the possible modillions, although the latter are only tentatively identified. There is evident mixing of the schemes within and between deposits. Further work should include a full analysis of the composition of the wall plaster in order to refine the individual schemes. A closer examination of distribution might reveal if particular schemes can be attributed to certain rooms, although a brief overview indicates much of the plaster was recovered from the same demolition and robbing deposits in the area of the hypocaust so the potential in this respect may be limited. The schemes also need to be compared with others from the region, particularly from villas, but also from other classes of building. This will not only inform on the social strata or aspirations of the inhabitants of the Aiskew villa, but add to a broader understanding of the regions taste in decorative schemes, how these compare to rest of Roman Britain and develop over time.

*What information could be gained from further analysis of the ceramic building material?*

The assemblage is sizable, in good condition and from a structure of known date and function excavated under controlled conditions and as such has significant potential for further research. Full analysis of the entire assemblage will therefore provide valuable information. It is already apparent that there is more than one fabric group, although at this stage it is not clear if these derive from different sources, or have a chronological significance, representing differing phases of construction or modification. Local and regional stone types were clearly exploited for much of the buildings superstructure and internal appointment but it is equally evident that both standard and specialised types of ceramic brick and tile were acquired to construct the roof and the hypocaust.

The ceramic building material not only reveals information about construction and appointment, however, but also about broader issues of connectivity and the organisation of supply in the late Roman period. Comparison of the fabrics to local and regional assemblages of earlier and contemporary date will aim to explore these themes. Thin section and chemical analysis (ICP-AES) of fabrics from site, alongside samples available from other sites in the region will aim to enhance an understanding of the range and distribution of fabrics. This analysis has the potential to inform on tile supply and add to an understanding of this how this develops in the region over time.

Further consideration should be also be given to reuse and if it is prevalent within a particular fabric group, or to specific forms. This should include an understanding of the distribution of reused material to see if it is restricted to later modifications or part of the original build. Further south, in the London region, a greatly reduced tile industry is evidenced in the late Roman period and consequently high levels of reuse, to the point where salvage is likely to have become an organised industry. It will be interesting to see how much of a role salvage played at the Aiskew villa.

The level and method of use of ceramic building material should also be established. This should be undertaken alongside the stone analysis to determine how the differing materials were used and if there is any functional or chronological significance to this. Certainly, both types were used for roofing and in the construction of the hypocaust, although in the former case not together. The initial impression is that there appears to be a relatively considerable exploitation of ceramic building material, in line with Catterick and perhaps Piercebridge, and in contrast to sites like Ingelby Barwick where only stone appears to have been used (McClaren et al 2008, 85). As a key route way, the location of the former sites on Dere Street is likely to be significant.

An overview of the use of specialised tile in region should also be attempted. Some settlements favour the use of half box-flue tile (tegulae hamatae), including Faverdale and Dalton-on-Tees (Sudds 2012, 117), or wall tile as at Binchester and Langton (implied by the recovery of spacer bobbins; Brodribb 1987, 69), whilst others, including Catterick and now Aiskew use combed box-flue tile. It will be important to determine if there is any chronology to this, as may be expected with improvements in wall-cavity technology, or if the picture is more complicated and other issues play a role, including relative affluence, or accessibility and differential supply.

*What information can further analysis of the faunal remains assemblage provide?*

Most excavated examples of villas in the region have provided some evidence for arable and/or stock production, however as Willis 2013 (188-189) has pointed out, although the evidence indicates that the northern villas were involved in agricultural production, the '*quality of knowledge of such economies is incomplete and not strong. This is partly because so few of these sites have been excavated and published to modern standards, but partly due to the poor survival of bone, or limited fieldwork or sampling*'. The recent assessment of Roman rural settlement has also concluded that animal bone assemblages from villas are rare (Smith *et al*. 2016, 276).

The Aiskew faunal remains assemblage is therefore of considerable regional significance and is considered suitable for further analysis with the major aims of demonstrating the local and perhaps traded use of domesticates and evidence pertaining to status. The presence of the substantial assemblage from Site 58 will allow changing patterns of consumption and production to be analysed over a considerable period of time, from the Iron Age and into and throughout the Roman period. In contrast to Site 58, the villa collection provided a lesser proportion of cattle with a corresponding increase in pig bones. Also in contrast to site 58, there is a lesser proportion of age, size and butchery evidence. The data concerning cattle and sheep/goat, however, is sufficient to attempt some analysis of exploitation practices as well as changes in size/type. An aim of the further analysis of the faunal remains from the Aiskew villa will also be to compare with the data now available from other Roman rural sites in the region in the recent assessment of rural settlements (Smith *et al*. 2016).

There is also some scope for an environmental analysis of the villa as demonstrated by the presence of the incidental species, namely the small rodents and the amphibians. It is of interest that the fish bones, alongside the game species suggest the exploitation essentially of freshwater and/or estuarine habitats. This may provide evidence for trade and/or the availability of particular environs for hunting purposes. As discussed with Site 58, this evidence for consumption of fish and game is scare in the region (Smith *et al*. 2016, 278).

*What information can further analysis of the palaeoenvironmental remains provide about the landscape surrounding the Aiskew villa, arable agriculture, exploitation of wood and activities carried out at the settlement?*

As discussed with Site 58 above, In line with Historic England's guidelines on Environmental Archaeology (2011), the assessment of the palaeoenvironmental remains from the Aiskiew villa has highlighted the significance of the assemblage and the good potential for further analysis. A principal the aim of this analysis would be to provide information about the landscape around the villa and the activities which took place at the site. The value of this data is further enhanced by the palaeoenvironmental remains recovered from the Bedale enclosure. This presents an opportunity to provide evidence for the context of the sites and potentially for change over time as represented in the landscape surrounding the two sites. Further analysis of the assemblage will address several key aims; what was the environment in the vicinity of the Aiskew villa like at the time of occupation and how did it change over time? How did people procure food? How did people prepare food? What did they throw away and where? What did people exchange, buy or sell?

As recommended in the discussion there is value to be had from further analysis of viable charcoal- and grain-containing samples, for the information that can be gained regarding land use, trade and environment in the area. The principal aim of analysis of charcoal fragments large enough to be identifiable to species level will be to provide information on local environment and resource use during the occupation of the site. This analysis will aim is to identify the types of wood that were being used for fuel if any taxa were used preferentially or not.

# 9. UPDATED PROJECT DESIGN

## 9.1 Updated Project Design

The following section sets out the further analytical work required to ensure that this project attains its full research potential, based on recommendations made in individual specialist reports as well as those arising from the analysis of the stratigraphic sequence. The intention is to provide a synopsis of the aims and objectives for future research prior to publication and outline the analytical techniques that will be employed to achieve those aims. A more detailed breakdown is provided in Appendices 4–21. The recommendations arising from the assessment work carried out in order to produce this post-excavation assessment report may be added to or modified during the course of the further analysis.

## 9.2 Revisit phasing and apply to specialist reports

A broad scheme of phasing has been applied to the archaeological remains encountered. It may be possible to further refine this scheme in particular areas.

1. It is apparent that some sections excavated through the Site 58 Bedale enclosure ditch display evidence for more frequent recutting events. These are likely to be concentrated on the southern side of the enclosure, where the ditch was more prone to infilling from downslope hillwash. Analysis of this sequence in conjunction with AMS dating (see section 8.2.3 below) might enable further refining of the chronology of this sequence of recutting events.
2. Attempts should be made to refine the Aiskew villa sequence in relation to ground plan of the unexcavated elements within the licenced area, following an examination of the building sequence focussing on rooms which might have been added to the original structure, in particular rooms 5 to 8, which superficially appear to be later additions to a simple winged corridor villa structure. Analysis of building techniques, foundation dimensions, internal floor surfaces *etc*. might help to refine this chronology along with comparison with plans of other villa complexes.
3. The sequence of construction and infilling events relating to the quarry pitting, associated boundary system and field system extending to the north of the villa might also benefit from further analysis.

## 9.3 Complete outstanding cataloguing and recording

As set out in the WSI for the post-excavation assessment phase of work, in order to maximise the available resources, a 20% sample of the largest assemblages, i.e. the faunal remains and ceramic building material, was quantified. Further analysis of the artefactual and ecofactual assemblages will include quantification of the remaining parts of these assemblages as well as specific tasks for other assemblages as listed below.

1. The handmade indigenous pottery assemblage from the Site 58 enclosure should be quantified by Estimated Vessel Equivalent (EVE) before publication.

2. For the pottery from the Aiskew villa, key groups should, if possible and viable, also be quantified by rim EVE.
3. The amphora should be examined and reported on by a qualified specialist
4. A sample of 20% of the ceramic building material assemblage has been quantified by fabric for the purposes of this assessment. It is recommended that fabric analysis of the remaining 80% of the assemblage should be undertaken.
5. Further recording of the wall plaster to identify the fabric and thickness of individual layers should be undertaken as part of the identification of individual schemes.
6. Permission should be sought to record and catalogue the painted wall plaster removed from Room 2 in the Licenced Area.
7. The millstone and possible millstone should be examined by a specialist.
8. Coins SF63 and SF65 should be examined to determine whether they can be more closely dated following cleaning.
9. The bone and antler small finds should be examined by the faunal specialist to identify species.
10. A more thorough separation and quantification of metallurgical micro-residues from the bulk samples should be undertaken.
11. Certain sections of the faunal remains collections from Sites 58 and 122 should be re-recorded, either fully (following the methods described in Appendix 19) or accounting for specific attributes (as butchery) and/or specific skeletal parts (as cattle-size vertebrae and ribs).
12. The sieved animal bone collection from the Site 122 villa quarry pit should be fully recorded. This amounts to 1,187 bones with 237 identifiable to species. The completion of this task should significantly increase the available age and size data related to the occupation phase of the villa.
13. Butchery should be recorded in a similar fashion to other fully recorded collections, supplemented by more detail –a pictorial representation drawing the position of the cut and the direction of chop (if relevant) onto bone proformas. Similar techniques should be employed to record the cattle- and sheep-sized vertebrae and rib butchery accompanied by a quantification of these skeletal parts. 50 butchered bones were recorded from the villa. The extra information related to these parts as well as other butchered items should also extend to the fully recorded bones from other parts of the villa.
14. The age and size parts of the faunal remains recovered from the upper deposits between the 24 excavated slots at the Site 58 Bedale enclosure should be recorded, amounting to *c*. 1,000 bones (cattle, sheep/goat and pig). In addition to this, the extra butchery recording suggested for the villa collection should equally apply to the bones from this site, although here limited to the well dated and better represented Phase 3.3 collection. This provided 159 butchered items. Further work on this aspect should also include the vertebrae and ribs, accompanying quantification of these skeletal parts.

15. Further work has yet to be undertaken on specific bone groups, including additional analysis of the amphibian bones from the hypocaust deposit within the villa (site 122) and bird bones requiring positive identification.

16. The small quantity of bone, one box from each site, recovered during the evaluation stage of this project should be re-recorded using the full recording system.

17. Any remaining samples should be processed and sorted in an attempt to recover more fish bone.

18. Further analysis of samples processed at the assessment stage would help to determine the presence of open areas of grassland and the consumption of cereals on the sites, along with providing supporting evidence for blacksmithing or other metalworking.

19. Further analysis of viable samples containing charcoal, seeds and grain, would help elucidate theories regarding land use, trade and environment at both sites.

20. Charcoal analyses specifically targeted on contexts associated with the *praefurnium* of the hypocaust have the potential to answer questions regarding fuel availability, exploitation and preference at the Aiskew villa site.

21. Charcoal analyses of specifically targeted on contexts associated with the metal-working activity at the Site 58 Bedale enclosure have the potential to answer questions regarding fuel availability, exploitation and preference of wood resources.

## 9.4 Scientific analyses

It is recommended that a range of different scientific techniques should be employed to answer specific research questions.

**AMS dating**

1. AMS dating should be undertaken on the two crouched burials within the base of the final recut of the Site 58 enclosure ditch to try to refine their dating; this will also provide Carbon and Nitrogen isotopic information to inform on diet.

2. Further AMS dating should be undertaken on material recovered from deposits infilling the enclosure boundary ditch at Site 58 to help to determine the use life of this feature. This will be dependent on identifying suitable material (animal bone or charcoal) from the most appropriate sections of ditch.

3. The dating of the Site 58 trackway is poorly understood and would also benefit from AMS dating on suitable material (animal bone).

4. The site 58 Group 1 ditch, which potentially represents the earliest activity on the site, would also benefit from AMS dating on samples of animal bone.

**Thin section and pXRF**

5. It would be extremely desirable to place the study of the indigenous pottery fabrics on a sounder empirical fashion through a comprehensive programme of thin section analysis. Thin sections

(perhaps as many as 80) and pXRF analysis is recommended as a way of advancing our understanding of this material.

6. It is recommended that the fabric of the Aiskew handmade mortarium is compared to that of an example from Faverdale, Darlington (Hartley 2012, 102), as the description of the fabric suggests that these sherds are very similar. This comparison would benefit from the use of thin-section analysis.

7. Further work should include thin section and chemical analysis (ICP-AES) of ceramic building material fabrics from the Aiskew villa site, alongside samples available from other sites in the region. This could be compared to the results from York (Betts 1985) to enhance an understanding of the range and distribution of fabrics, and if these can be distinguished under x20 magnification. Any results have the potential to inform on tile supply and add to an understanding of this how this develops in the region over time.

**Residue analysis**

8. It would also be desirable to make a detailed survey of the handmade pottery sherds from Site 58 to determine the presence of residues. Residues have been noted in passing but have not been systematically recorded. Some surviving residues might have the potential to shed light on diet and chronology (via high precision AMS dating). Provision should be designed into any publication programme to undertake this sort of analysis.

**Metallurgical analysis**

9. Metallurgical, including chemical, analysis of a selection of the copper-alloy metal/metalworking residues from the Site 58 Bedale enclosure should be carried out, prioritizing the scraps of worked metal and small lumps of solidified casting debris present in the small finds assemblage.

10. Characterization of a selection of the slag from Site 58 by metallurgical analysis should help to identify the process(es) from which it derived (i.e. smelting, remelting of copper/lead alloys).

**Use-wear analysis**

11 use-wear analysis should be carried out on the serrated rib bones to determine their function.

**Soil micromorphology**

12 The column sample taken through a sequence of floor and make-up deposits inside a room in the villa should be submitted for soil micromorphology in an attempt to identify activities which may have taken place inside the room.

**Spatial and temporal distributions**

The analysis of patterns of distribution of materials, and in the combination of artefacts and ecofacts deposited in particular locations, has the potential to significantly advance our understanding of aspects of the Aiskew villa and Bedale enclosure, including site use, function and economy. The application of a Geographic Information System (GIS) to investigate spatial and temporal distribution, would greatly facilitate any such interpretations. The following are specifically recommended.

1. Quantified distribution of finds of all types from the Site 58 Bedale enclosure ditch, and trackway ditches, should be undertaken using GIS. This would include all finds categories. Particularly relevant to this study might be the evidence for craft-working debris, pottery, animal bone and disarticulated human bone. This analysis would enable examination of trends in spatial or temporal patterning, to try to determine any zoning apparent within the enclosure, and the extent to which that might change over time.
2. Distributional analysis of CBM fabrics from the Aiskew villa to determine if there is any chronological significance to the types used would similarly benefit from the use of GIS. This should include an understanding of the distribution of reused material to determine the extent to which it was restricted to later modifications or part of the original build.
3. A closer examination of the distribution of the painted wall plaster from the villa might reveal if particular schemes can be attributed to certain rooms, although a brief overview indicates much of the plaster was recovered from the same demolition and robbing deposits in the area of the hypocaust so the potential in this respect may be limited.
4. A detailed discussion of the small finds and their distribution should also form an integral part of the publication. In particular the distribution of the objects from the Site 58 enclosure should be studied to see if there is any evidence for spatial zoning of activities;
5. The production residues and metal small finds from the Site 58 enclosure should be plotted on relevant site plans to explore the spatial distribution of the material and how this relates to archaeological features and other materials excavated. It is suggested that the distribution of both ferrous and non-ferrous residues and metals should be identified as different material types on plots.
6. In addition to the above site-specific analyses, and given the current gap in our knowledge of the types of stone used in mosaics especially in pavements from the northern half of the province (Neal & Cosh 2002), any review of the findings should also be incorporated into the text with a distribution map of the source of the rock types.

### 9.5 Research, comparative sites and subject specific considerations

The results of the excavation should be published within a broader contextual framework at a regional or national level, where appropriate. In the course of compiling this assessment a series of subject specific recommendations have been made, which are outlined below. This should also include research necessary to contextualise each site with regional or wider comparisons.

1. A full publication report on the handmade indigenous pottery from the Site 58 Bedale enclosure should form an integral part of any publication. The indigenous ceramics are of regional importance and, given the importance of understanding the early Roman transition in the North East of England, take on a greater significance. As part of the publication programme it will be necessary to undertake a detailed contextual analysis of the distribution of the pottery.

2. A discussion of the Romano-British pottery from the Aiskew villa site by phase (including quantification and consideration of local and regional context) should be included in any publication text.

3. The samian from the villa site is noteworthy for its very limited range of vessel forms, a paucity of decorated wares, an absence of stamped sherds or repaired vessels, and an unusually large number of Drag 38 bowls, most of which display signs of heavy or prolonged use. It is demonstrably different from northern villa sites and indigenous settlements and should be published, with illustrations. The smaller groups from site 58 and 122 are valuable for site phasing and their presence should be summarised in the publication report

4. Further consideration should be given to reuse of CBM and its prevalence within particular fabric groups or forms, including an understanding of its distribution and potentially its source. Elsewhere, in the London region, a greatly reduced tile industry is evidenced in the late Roman period by high levels of reuse, to the point where salvage is likely to have become an organised industry.

5. The level and method of use of ceramic building material alongside the stone should be undertaken to determine how the differing materials were used and if there is any functional or chronological significance to this.

6. An overview of the use of specialised tile in the region should also be attempted, including preferences for half box-flue tile (*tegulae hamatae*), (Sudds 2012, 117), wall tile (implied by the recovery of spacer bobbins; Brodribb 1987, 69), or combed box-flue tile. It will be important to determine if there is any chronology to this, as may be expected with improvements in wall-cavity technology, or if the picture is more complicated and other issues play a role, including relative affluence, or accessibility and differential supply.

7. Initial examination of the wall plaster demonstrates mixing of the schemes within and between deposits. Further work should include a full analysis of the composition of the wall plaster in order to refine the individual schemes. The schemes also need to be compared with others from the region, particularly from villas, but also from other classes of building, to inform on the social strata or aspirations of the inhabitants of the Aiskew villa, and assist in a broader understanding of the region's taste in decorative schemes, how these compare to rest of Roman Britain and develop over time.

8. No further analysis of the mortar or *opus signinum* is required, although both materials, along with the painted wall plaster, should be written up for inclusion within any future publication.

9. A section on the stone types and function should be included in future publication.

10. The worked bone small finds assemblage from the Site 58 enclosure is of regional (and probably in context national significance) and a detailed discussion of the objects by phase should be provided in the publication which will draw upon the final stratigraphic account of the site. A detailed comparison to other indigenous and Roman sites will be included in the publication text to identify points of comparison.

11. The small finds assemblage from the villa is an important contribution to the growing corpus of from late Roman villas in the north of England. Given the potential for identifying regional differences between assemblages, artefacts types and patterns of usage this collection is of national importance and a full and comprehensive report on the small finds and their distribution should be an integral part of any publication. The finds should be compared with other villa and non-villa assemblages of the same date in the region and beyond.
12. The quernstone group merits publication.
13. The coins should be included in any published account of the excavations.
14. The range of vessels identified within the Roman glass assemblage represents an important addition to the understanding of the use of Roman glass in rural sites in Britain. A catalogue and description, as well as the illustration of selected fragments, is strongly recommended.
15. The results of analysis of the metals should be presented in a written report, which should include a comparison with other relevant metal production sites from the same period in the region
16. The animal bone collections from sites 58 and 122 and associated assemblages from the evaluation stages of work, are more than worthy of further analysis with the major aims of demonstrating the local and perhaps traded use of domesticates from the former site and evidence pertaining to status from the latter site. Both will undoubtedly provide additional evidence concerning the size and type of cattle and sheep/goat which can be compared to similar information gleaned from contemporary excavations within this general area. There is also some scope for an environmental analysis of the villa site as demonstrated by the presence of the incidental species, namely the small rodents and the amphibians.

### 9.6 Illustrative work

In addition to locations and other maps, phased site plans, photographs, charts and interpretive reconstructions, specific recommendations for object illustrations are presented below.

1. All diagnostic rims, bases and other sherds from the assemblage of handmade indigenous pottery should be illustrated in any publication.
2. Selected diagnostic sherds from key groups within the Romano-British pottery assemblage ought to be illustrated
3. The handmade mortaria should be photographed.
4. The samian Drag 38 sherds should be illustrated to show the range of wear patterns and form variations.
5. Any future publication report on the ceramic building material would require up to 20 illustrations.
6. A selection of the wall plaster schemes should be photographed/reconstructed.
7. As much of the stone assemblage is in a fragmentary condition, very little needs to be illustrated.
8. Forty small finds from the enclosure (detailed on the database) should be illustrated.

9. Thirty six small finds from the villa (detailed on the database) should be illustrated.

10. Five quernstones (1, 2, 4, 5 & 6) merit drawing to publication standard.

11. Approximately 15 glass vessels and objects are worthy of illustration.

### 9.7 Additional research potential

In addition to the requirements for publication set out above, further avenues of analysis have been identified, should sufficient resources be available. It is possible that some of these elements could be undertaken as collaborative projects with University departments as student research projects

1. pXRF to identify the wall plaster pigments.
2. Oxygen and Strontium isotopes of the human remains to answer questions of mobility and movement.
3. Three thin sections on different stone types to try to identify the stone types used, to provide material for future research.
4. The nails could be typologised.
5. Alder and willow/poplar present in small quantities within the charred assemblage indicate the presence of wetland or riverine habitats along with deciduous woodland and scrub. Further analysis may identify taxa not recorded in this study and would make it possible to better determine if any taxa were used preferentially or not.

### 9.8 Publication proposal

Ideally the results of the fieldwork should be reported on in as comprehensive a manner as possible, preferably in monograph format. This would include an integrated stratigraphic sequence, full reports on all categories of finds (see Appendices 4–21) and thematic discussions which would place the findings within a broader regional or national context, as appropriate, accompanied by illustrative material including maps, plans, photographs, charts, tables and reconstructions.

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**PCA Credits**

*Project Management:* Paul Johnson

*Post-excavation Management:* Jennifer Proctor, Frank Meddens and Victoria Ridgeway

*Finds Management:* Gail Drinkall

*Site Supervisors:* Aaron Goode (Site 122 and 122 North), Scott Vance (Site 58)

*Site Staff:* Paul Braham, Ariane Buschmann, Sam Corke, Lesley Dagleish, Graham Dixon, Constance Durgeat, Ciaran Grace, David Green, Mark Jackson, Tanja Karlsen, A, Kelly, Tom Lally, Susannah Mansfield, Aaron Mohler, Sam Oates, Danni-Louise Parker, Mike Parsons, Steve Porter, Robert Scott, Donald Sutherland, Chris Tubman, Laura Watson.

**PCA Credits Report**

*Text*: Aaron Goode, Scott Vance and Jennifer Proctor

*Illustrations*: Mark Roughley

*Animal Bone:* Kevin Rielly

*Ceramic Building Material and Painted Wall Plaster*: Berni Seddon

*Human Bone*: James Langthorne

*Mortaria*: Enikő Hudák

*Palaeoenvironmental Remains*: Marta Perez and Kate Turner

*Stone*: Kevin Hayward

**Other Credits**

*Academic Advisors:* James Gerrard, Martin Millett, Pete Wilson

*Amphora*: C. Capelli and M. Bonifay

*AMS Dates*: Scottish Universities Environmental Research Centre

*Charcoal*: P. Austin & D.S. Young (QUEST)

*Coins:* James Gerrard (Newcastle University)

*Conservation:* Karen Barker

*Drone photography:* Ian Watkins

*Flint*: Barry Bishop

*Glass:* Sally Worrell

*Medieval Pottery:* Jenny Vaughan (NCAS)

*Metallurgical Residues*: Rod MacKenzie

*Quernstones*: David Heslop

*Roman and Handmade Pottery:* James Gerrard (Newcastle University)

*Samian:* Jo Mills

*Small Finds:* James Gerrard (Newcastle University)

*Wall Plaster Lifting*: Mags Felter and Ian Panter (York Archaeological Trust)

# 11 BIBLIOGRAPHY AND OTHER SOURCES

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Chartered Institute for Archaeologists, 2014d. *Standard and guidance for the creation, compilation, transfer and deposition of archaeological archives, C*IfA.

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British Geological Survey website, at: *http://www.bgs.ac.uk*

# P C A

**PCA CAMBRIDGE**
THE GRANARY, RECTORY FARM
BREWERY ROAD, PAMPISFORD
CAMBRIDGESHIRE CB22 3EN
**t:** 01223 845 522
**e:** cambridge@pre-construct.com

**PCA DURHAM**
UNIT 19A, TURSDALE BUSINESS PARK
TURSDALE
DURHAM DH6 5PG
**t:** 0191 377 1111
**e:** durham@pre-construct.com

**PCA LONDON**
UNIT 54, BROCKLEY CROSS BUSINESS CENTRE
96 ENDWELL ROAD, BROCKLEY
LONDON SE4 2PD
**t:** 020 7732 3925
**e:** london@pre-construct.com

**PCA NEWARK**
OFFICE 8, ROEWOOD COURTYARD
WINKBURN, NEWARK
NOTTINGHAMSHIRE NG22 8PG
**t:** 01636 370410
**e:** newark@pre-construct.com

**PCA NORWICH**
QUARRY WORKS, DEREHAM ROAD
HONINGHAM
NORWICH NR9 5AP
**T:** 01223 845522
**e:** cambridge@pre-construct.com

**PCA WARWICK**
UNIT 9, THE MILL, MILL LANE
LITTLE SHREWLEY, WARWICK
WARWICKSHIRE CV35 7HN
**t:** 01926 485490
**e:** warwick@pre-construct.com

**PCA WINCHESTER**
5 RED DEER COURT, ELM ROAD
WINCHESTER
HAMPSHIRE SO22 5LX
**t:** 01962 849 549
**e:** winchester@pre-construct.com