# AN ARCHAEOLOGICAL EXCAVATION AT NORTH ROAD INDUSTRIAL ESTATE, BERWICK-UPON-TWEED, NORTHUMBERLAND

**Post-Excavation Assessment Report**

PCA

PRE-CONSTRUCT ARCHAEOLOGY

# An Archaeological Excavation at North Road Industrial Estate, Berwick-upon-Tweed, Northumberland

## Post-Excavation Assessment Report

*Central National Grid Reference: NT 9880 5540*

*Site Code: NRB 05*

*Commissioning Client:*
**Berwick-upon-Tweed Borough Council**
**Council Offices**
**Wallace Green**
**Berwick-upon-Tweed**
**TD15 1ED**

**Tel: 01289 330 044**

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

**Tel: 0191 377 1111**

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# *PART A: PROJECT SUMMARY*

# 1. NON-TECHNICAL SUMMARY

1.1 An archaeological excavation was undertaken by Pre-Construct Archaeology Limited on land to the north of North Road Industrial Estate, Berwick-upon-Tweed, Northumberland. The central National Grid Reference of the site is NT 988 554. The excavation was undertaken between the 30th March and the 3rd June 2005, in advance of development of the land as an extension to the existing industrial estate. The work was commissioned and funded by Berwick Borough Council.

1.2 The North Road development site is rectangular in shape covering *c.* 10 hectares in size. It is located on the northern outskirts of Berwick-upon-Tweed, immediately to the north of an existing industrial estate, between the A1 trunk road and the East Coast Mainline railway. Prior to the archaeological project, the site was an open field, recently under plough.

1.3 The excavation was part of a phased programme of archaeological work conducted in advance of the development. An initial desk-based assessment indicated that the site lies in an area of high archaeological potential. A number of prehistoric sites are known in the vicinity and aerial photographic evidence suggested that part of a large enclosure, possibly of prehistoric origin, occupied the north-eastern corner of the site. Geophysical survey identified anomalies probably indicative of an enclosure ditch, including the locations of probable entranceways, along with other features of possible archaeological interest.

1.4 An archaeological evaluation was undertaken to investigate anomalies recorded by the geophysical survey, as well as to provide a sample of the development area. Substantial, ditches delineating part of the western side of a multi-phase enclosure were recorded, along with associated internal features. Pottery recovered during the evaluation suggested an Iron Age date for the enclosure. The evaluation demonstrated that archaeological remains of significance were confined to the eastern portion of the development site. Other archaeological features recorded by the evaluation were derived from medieval agricultural activities and post-medieval drainage.

1.5 The archaeological excavation was required because there was no possibility of preservation *in situ* of the remains in the eastern portion of the site. All such remains would be destroyed by the development proposals. Accordingly, Berwick Borough Council commissioned archaeological excavation of the eastern portion of the site, where significant archaeological remains had been demonstrated by the earlier phases of work.

1.6 Approximately 10% of the area of the enclosure lay within the limits of the archaeological excavation. The perimeter ditches were substantial, in general more than 3m wide and 1m deep, but no evidence of an upcast bank was recorded. Several instances of recutting of the perimeter ditch had taken place, perhaps suggesting that the site was occupied on an annual, seasonal or intermittent basis, with each recut perhaps relating to a distinct episode of reoccupation. A radiocarbon date obtained from food residue adhered to a sherd of pottery recovered from one of the ditch recuts demonstrates that the enclosure was in use during the Iron Age. Two entrances to the enclosure were recorded within the limits of excavation, the most northerly of which proved to have undergone a series of substantial alterations to its position, with a gradual increase in width.

1.7 A further substantial ditch was associated with northern entrance, extending away from the enclosure at roughly 90 degrees. The function of this outlying south-western ditch is uncertain, but it may have been related to the control of livestock.

1.8 No evidence was recorded for features related to structural habitation within the enclosure, although this could be due to the limited extent to which it was possible to investigate the interior. Notwithstanding this absence of structural remains, artefactual and ecofactual material recovered from enclosure ditch fills is broadly suggestive of domestic occupation in the immediate vicinity.

1.9 A series of features was recorded in the easternmost portion of the excavation area which evidently post-dated abandonment of the enclosure, although traces of its ditch would have survived as contemporary earthwork remains. Iron Age tradition pottery and a distinctive ceramic material known as briquetage were recovered from many of these features, the briquetage providing evidence of saltmaking. A substantial natural depression was recorded in the north-eastern corner of the excavation area which, following modification by human activity, was probably used as a 'working hollow'. The abandonment fills of the enclosure ditches yielded further briquetage, in contrast to their earlier fills, which were entirely devoid of such material.

1.10 It is possible that saltmaking was actually undertaken in three broad, shallow pits recorded adjacent to the north-eastern limit of the excavation area. Each contained numerous stones apparently selected for their size and these may have been the remains of either collapsed structures or disturbed surfaces. A radiocarbon date from the later pre-Roman Iron Age was obtained from charred material within a deposit surrounding the stones in one of these features. A stone yard surface may also have originated during the same phase of activity.

1.11 A number of shallow pits, some clay-lined, appeared to post-date the putative saltmaking features. The purpose of these pits was not ascertained but artefactual material – including a fragment of glass bangle and a sherd of samian ware, of 1$^{st}$ to early 2$^{nd}$ century AD date - suggests a degree of Romanisation of the population during the period when these features were in use.

1.12 In summary, the data from the North Road site has the potential to provide significant information concerning Iron Age activity in the Tyne-Forth region. The site produced the largest assemblage of briquetage yet found in Northumberland and is the most northerly prehistoric saltmaking site yet discovered in Britain. The significance of salt to ancient communities cannot be underestimated; its preservative qualities for foodstuffs have long been recognised and it was employed extensively in other activities, such as tanning and cheesemaking. In addition, there is evidence that, such was its value, it was used as a currency in some ancient cultures.

1.13 The artefactual material from North Road included one of the largest assemblages of Iron Age tradition pottery yet recovered from a site in Northumberland. Many of the sherds are derived from unusually robust vessels, with evidence for their original use surviving in the form of burnt residues.

1.14 Evidence recovered from the site indicates that its Iron Age inhabitants practised a mixed agricultural economy. Bulk samples of deposits produced a variety of plant remains, mostly cereal grains, including oat, barley and wheat, as well as charred remains of wild taxa. Quernstones were also recovered, indicating that cereal processing was being undertaken at the site. A bulk sample taken from a fill of one of the enclosure ditches produced an assemblage of plant and insect remains, including a weevil, preserved by anoxic waterlogging, this being a particularly rare occurrence in deposits of this period from Northern England.

1.15 Faunal remains were poorly preserved at the site, although small quantities of cattle, caprovid, pig and horse bone indicated the presence of domesticated species, probably demonstrating that pastoralism played a role in the subsistence economy of the inhabitants of the site. Quantities of marine shell, specifically limpets and periwinkles, within archaeological features, and charred hazelnut fragments recovered from bulk soil samples, also suggest that wild resources were exploited by the Iron Age population.

1.16 This Post-Excavation Assessment Report is divided into four parts (Parts A-D). Part A, the Project Summary, includes an introduction to the site, its location, geology and topography, planning and archaeological background, and a full description of the archaeological methodology employed during the investigations. It concludes with detailed descriptions of the archaeological remains representing each of the main phases of occupation supported by summary discussions and detailed illustrations.

1.17 Part B, the Data Assessment, quantifies the written, graphic and photographic elements of the project archive and contains specialist assessments of the artefactual and palaeoenvironmental evidence, with recommendations for further analysis for each category.

1.18 Part C, the Conclusions and Research Agenda, sets out the conclusions of the project to date, as well as the project's original research questions and new questions which came to light during the course of the post-excavation assessment. In some cases, research questions can be answered with the data already available, while in others further analysis is required. Part C, therefore, also includes a discussion of the significance of the project data in local, regional and national terms, a summary of its potential for further analysis and an outline of the proposed publication format.

1.19 Part D contains the acknowledgements and bibliography. The report has four appendices.

# 2. INTRODUCTION

## 2.1 General Background

2.1.1 This report details the results and working methods of an archaeological excavation undertaken by Pre-Construct Archaeology Limited (PCA) on land to the north of North Road Industrial Estate, Berwick-upon-Tweed, between 30th March and 3rd June 2005. The work was commissioned by Berwick Borough Council and was conducted in advance of development of former agricultural land as an extension to the industrial estate. The central National Grid Reference of the site is NT 988 552 (Figure 1).

2.1.2 The site lies on the northern outskirts of Berwick-upon-Tweed, directly to the north of North Road Industrial Estate, between the A1 trunk road and the East Coast Mainline railway. Prior to the excavation, the site was agricultural land.

2.1.3 The archaeological excavation was undertaken as a planning condition, upon the recommendation of the Northumberland County Council Conservation Team (NCCCT). An archaeological desk-based assessment, a geophysical survey and an archaeological evaluation preceded the excavation. The evaluation recorded important archaeological remains of probable Iron Age date. In view of the nature of the proposed development, preservation *in situ* of the remains was not an option and, therefore, NCCCT recommended that archaeological excavation of the eastern portion of the site was required to preserve the remains by record.

2.1.4 A Brief for the archaeological excavation was prepared by NCCCT,[1] in response to which a Project Design, incorporating a 'written scheme of investigation' was compiled by PCA.[2]

2.1.5 The archaeological fieldwork comprised excavation and recording in two areas (Areas 1 and 2) within the eastern portion of the development site. Area 1 occupied the north-eastern corner of the site and measured *c.* 105m north-south by *c.* 55m north-south. Area 2 was a western extension to Area 1, forming an irregularly-shaped area measuring a maximum of *c.* 36m x *c.* 9m (Figure 2).

2.1.6 At the time of writing, the project archive is housed at the Northern Office of PCA, at Unit N19a Tursdale Business Park, Durham. The completed project archive, comprising written, graphic and photographic records, as well as all retained artefactual and palaeoenvironmental material, will be deposited with Berwick Museum and Art Gallery, under the site code NRB 05.

2.1.7 The **O**nline **Acces**S to the index of archaeological **I**nvestigation**S** (OASIS) reference number for the project is: preconst1-7293. At the end of the project, the online OASIS form at *http://ads.ahds.ac.uk/project/oasis/* will be completed. Once a report has become a public document by submission to or incorporation into the Northumberland Sites and Monuments Record (SMR), the SMR will validate the OASIS form thus placing the information into the public domain on the OASIS website. PCA has agreed to this procedure.

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[1] NCCCT, 2005.
[2] PCA, 2005.

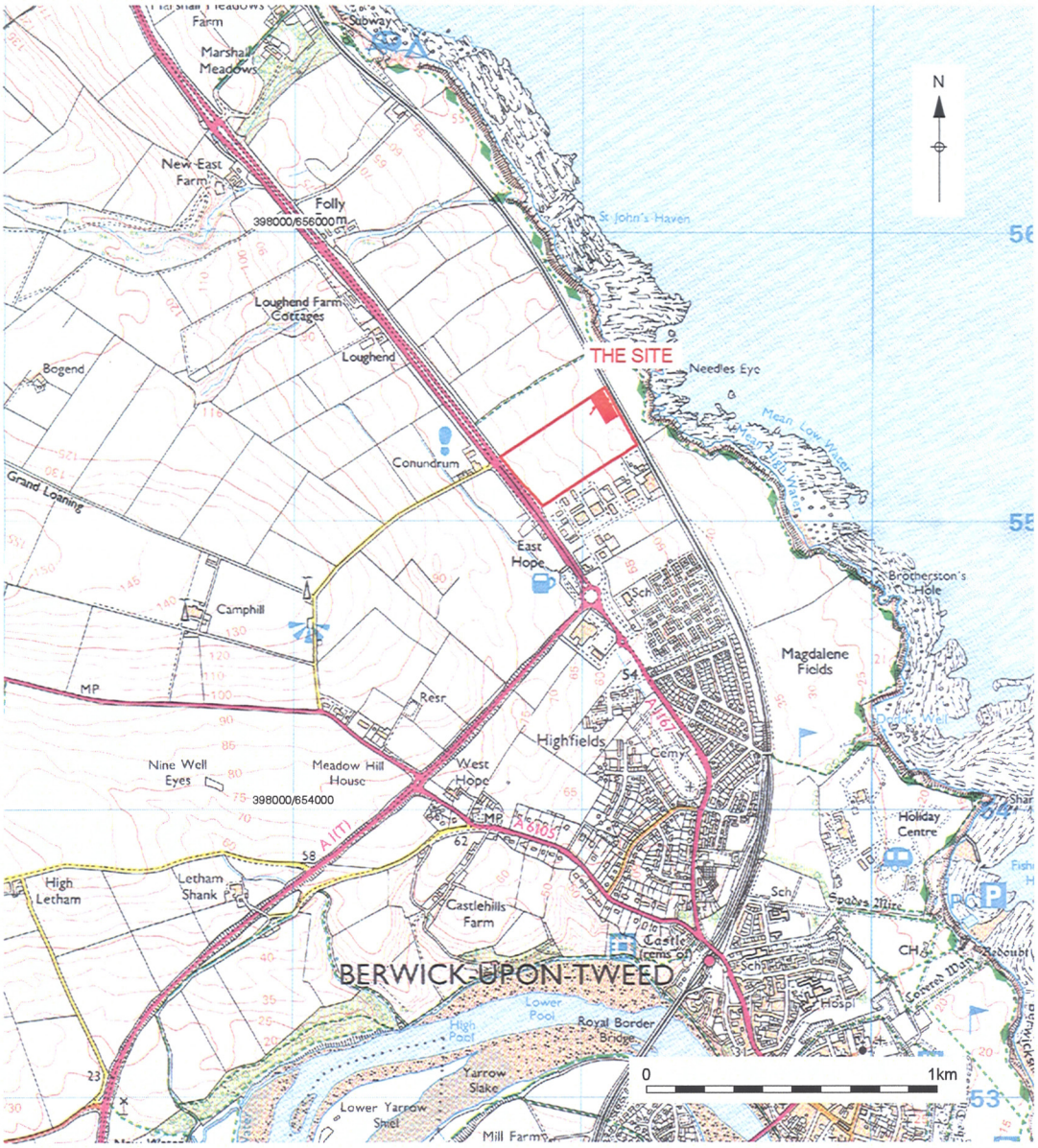


Figure 1. Site location
Scale 1:25,000

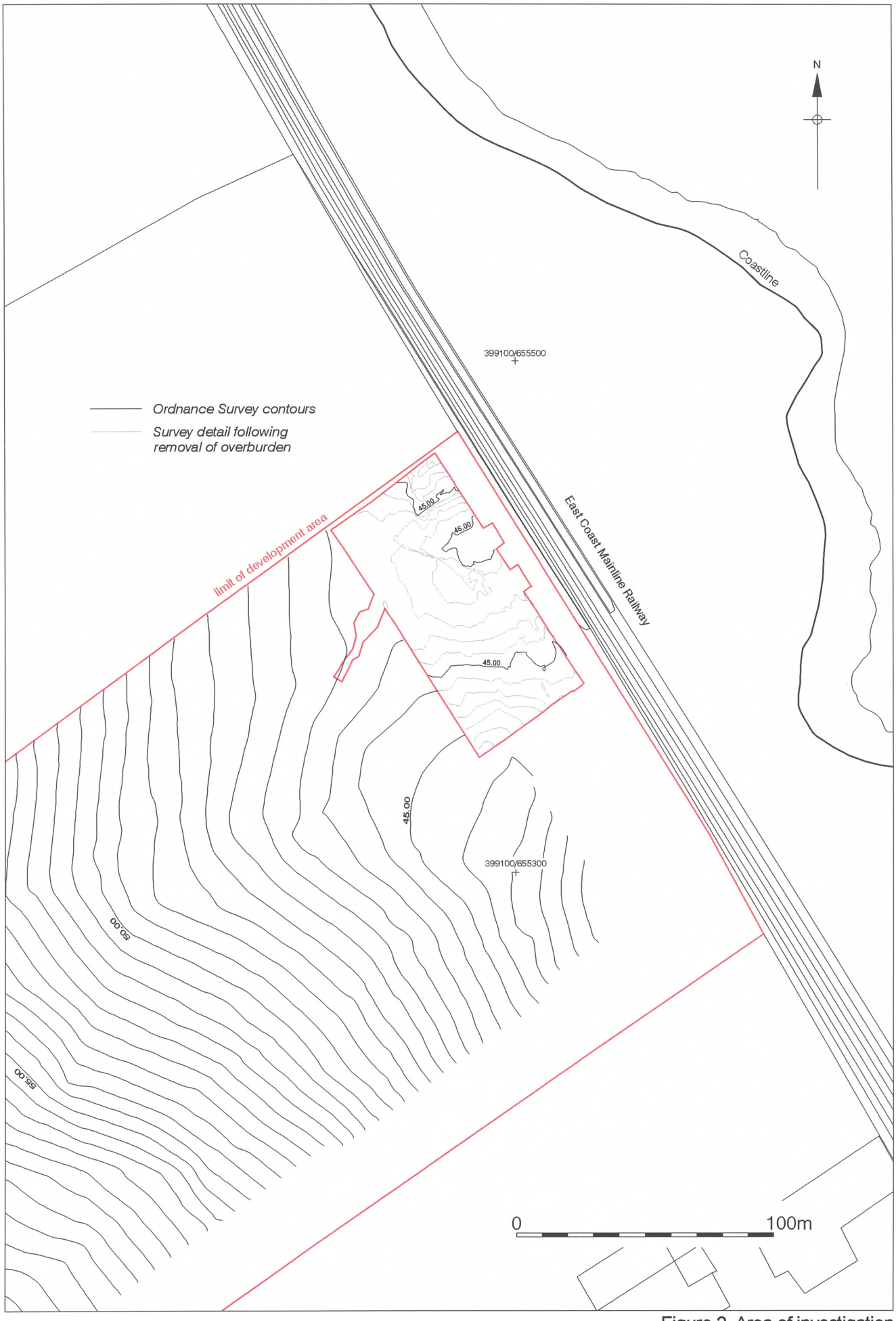


Figure 2. Area of investigation
Scale 1:2,000

## 2.2 Site Location and Description

2.2.1 The site is located on the northern edge of Berwick-upon-Tweed, Northumberland. It is bounded by North Road Industrial Estate to the south, the East Coast Mainline railway to the east, the A1 trunk road to the west and open fields to the north. The central National Grid Reference of the site is NT 988 552.

2.2.2 The overall development site is a rectangular parcel of land of *c.* 10 hectares in size, located some 90m to the west of the steep sea cliffs of Needles Eye. Prior to the archaeological excavation, the site was an area of open agricultural land.

2.2.3 Archaeological excavation was confined to the easternmost portion of the development site, as guided by the results of the earlier phases of archaeological work. Two adjoining open areas were investigated. The main area of excavation, which was located to encompass the known area of archaeological activity, was rectangular in plan and measured *c.* 105m x *c.* 55m. An irregularly-shaped western extension, which was located to further expose archaeological remains that continued beyond the western limit the main excavation area, measured a maximum of *c.* 36m NE-SW x *c.* 9m NW-SE. The total area investigated measured *c.* 0.55 hectares.

## 2.3 Geology and Topography

### *Geology*

2.3.1 The underlying 'solid' geology of the area north of Berwick, running up to the Scottish Border, comprises sediments of Lower Carboniferous age. Beneath the North Road site are rocks of the Bernician Limestone Group.[3]

2.3.2 The 'drift' geology of the area north of Berwick is characterised by boulder clay, often of relatively little thickness and often with a decidedly red tint on the approach to the sea-coast. Patches of glacial sand and gravel occur in many places, usually overlying the boulder clay and often assuming mound-like form.[4]

### *Topography*

2.3.3 In broad terms, the overall development site slopes down from west to east (Figure 2). The highest ground is along the south-western boundary of the site, close to the A1 road, at *c.* 63.5m OD. The lowest ground is towards the south-easternmost corner of the site, adjacent to the railway line and the existing industrial estate, at *c.* 42m OD. Within the general slope are considerable localised undulations, with raised spurs, mounds and platforms.

[3] Taylor, *et al.*, 1971; Fowler, 1926.
[4] Fowler, *op. cit.*

2.3.4 Beyond its boundaries, the site is overlooked by higher ground to the west. To the east, beyond the railway line, the general slope seen at the site continues, albeit at a lesser gradient, to the top of sheer cliffs at Needles Eye overlooking the North Sea. Some erosion of the cliffs has occurred, although it is not possible to suggest a rate at which erosion took place between prehistoric times and the early post-medieval period. At present, the cliff tops are located *c.* 100m from the site.

2.3.5 The excavation area occupies the north-eastern corner of the development site where, in broad terms, there was a distinct, roughly level, platform at *c.* 46m OD. To the south and west, the ground slopes away gradually, leaving the majority of the excavation area on a slightly raised platform. In the extreme north-eastern corner of the excavation area, was a distinct depression, extending beyond the northern and eastern boundaries of the development site.

## 2.4 Planning Background

2.4.1 The archaeological excavation was undertaken as a planning requirement associated with the proposed development of land adjacent to North Road Industrial Estate. Berwick-upon-Tweed Borough Council (BBC) intended to develop the site as an extension to the present industrial estate. The overall area affected by the proposed development is *c.* 10 hectares in area.

2.4.2 At a national level, the need for early consultation in the planning process in order to determine the impact of development schemes upon the archaeological resource is identified in the document '*Planning Policy Guidance Note 16: Archaeology and Planning*' (PPG16).[5] That document provides guidance for planning authorities, property owners, developers and others on the preservation and investigation of archaeological remains.

2.4.3 At regional and local levels, development plans are used to inform decisions regarding archaeological issues where these arise during the determination of applications for planning permission. For Berwick-upon-Tweed Borough, the statutory development plan is formed by the '*Northumberland County and National Park Joint Structure Plan, Deposit Plan 2003*' and the '*Berwick-upon-Tweed Borough Local Plan 1999*'. The former contains Policies HC3, HC4 and HC5, concerning the protection of unscheduled archaeological sites of regional or local importance.

2.4.4 Northumberland County Council Conservation Team (NCCCT) has responsibility for archaeological development control throughout Northumberland, including within Berwick-upon-Tweed Borough. On the recommendation of NCCCT, and prior to submission of the application for planning permission for the development of the North Road site, the aforementioned archaeological desk-based assessment and geophysical survey were undertaken because the site lies in an area of known archaeological potential.

[5] Department of the Environment, 1990.

2.4.5 The desk-based assessment identified cropmarks on aerial photographs, which suggested that a substantial enclosure of possible prehistoric date was located within the easternmost portion of the site. The geophysical survey appeared to confirm the presence of part of a substantial enclosure within the eastern portion of the site, as well as recording other geophysical anomalies of possible archaeological interest.[6]

2.4.6 Prior to determination of the planning application for the proposed development, the aforementioned trial trenching evaluation was undertaken on the recommendation of NCCCT. In the period between the geophysical survey and the trial trenching evaluation, the area proposed for development at the site was reduced. As a consequence, the northern part of the geophysical survey area lay beyond the northern limit of the development area. The evaluation took place between the 14th December 2004 and 1st February 2005.

2.4.7 The archaeological evaluation confirmed the presence of significant archaeological remains within the easternmost portion of the site. Of particular note was a substantial ditch, of which three major phases were identified, which formed the enclosure identified by cropmark evidence and geophysical survey. Pottery recovered from the ditches suggested a likely Iron Age origin for the enclosure. A number of archaeological features were recorded within the 'interior' of the enclosure. Some medieval and post-medieval remains were recorded at the site, these being consistent with low intensity agricultural activity in more recent archaeological eras.

2.4.8 In light of the findings of the evaluation, it was considered that groundworks associated with the proposed development would impact severely upon archaeological remains in the easternmost portion of the site. Therefore, NCCCT considered that further archaeological work would be required to preserve the archaeological remains by record. Accordingly, BBC was advised that planning permission for the development should be granted, with a condition attached requiring an archaeological excavation prior to construction work commencing at the site.

2.4.9 The aforementioned Brief for the excavation was prepared by NCCCT, setting out its justification for the investigation, its objectives and the strategy and procedures to apply to the programmed of archaeological recording. In response, PCA, upon being commissioned by BBC to undertake the archaeological excavation, compiled the aforementioned Project Design, incorporating the 'written scheme of investigation' required by the planning condition.

[6] The geophysical survey was undertaken by GSB Prospection Ltd, on behalf of Northern Archaeological Associates.

## 2.5 Archaeological and Historical Background

2.5.1 This summary of the historical and archaeological background to the site uses information extracted from the desk-based assessment along with the findings of additional research. County Sites and Monuments Record (SMR) numbers are included.

***Prehistoric***

2.5.2 The site lies within a relatively rich prehistoric environment. Several potential prehistoric sites have been located through examination of aerial photographs within the vicinity of Halidon Hill, which lies c. 2km to the west of the site at North Road. Halidon Hill is a Scheduled Ancient Monument, 'Halidon Hill' (SAM Northum591; SMR 2445) which has long been interpreted as an Iron Age hillfort. Cropmarks visible on aerial photographs indicate a circular ditched enclosure. A prehistoric mace head (SMR 2459), possibly of Bronze Age origin, was found on Halidon Hill in 1967. Cropmarks (SMR 2399) on the north-west side of Halidon Hill have been interpreted as representing a possible Neolithic long barrow.

2.5.3 Another Scheduled Ancient Monument, 'Camphill Settlement' (SAM Northum592; SMR 2444) lies to the east of Halidon Hill, thus *c.* 1.5km to the south-west of the North Road site. Concentric circular cropmarks, possibly with an annexe, have been revealed on the crest of a ridge. The precise date of the monument is unknown, although a later prehistoric date has generally been suggested.

2.5.4 Further potential prehistoric activity is suspected at West Edge Farm, west of Halidon Hill and thus *c.* 3km to the west of the North Road site, where an aerial photograph has shown a line of pits (SMR 2406), possibly delimiting a prehistoric land boundary. Slightly to the west of that, a Neolithic flint axe (SMR 2441) was recovered at Baitstrand Farm in the 1960's.

2.5.5 Closer to the North Road site, the upper part of a rotary quern was discovered in 1963 at Folly Farm, less than 1km to the north-west. This is of probable late prehistoric or Romano-British date. Within the boundaries of the site itself, cropmarks on aerial photographs initially suggested the presence of a substantial curvilinear enclosure - known at the Needles Eye enclosure (SMR 2401) - within the north-eastern portion of the site. The photographic evidence indicates that the enclosure continues beyond the northern and eastern limits of the site. While a full ditch circuit is not readily apparent on any available aerial photograph, an enclosure measuring in the order of *c.* 120m x 100m is indicated. Beyond the limits of the site to the north and east, the enclosure may be at least partially bounded by a second ditch.

2.5.6 As previously described, the location of a portion of the western side of the Needles Eye enclosure was determined by geophysical survey in 2004. The subsequent archaeological evaluation exposed both the enclosure and probably associated internal features. Pottery recovered tentatively suggested a Late Iron Age date for prehistoric activity at the site, with the material consistent with that expected from a habitation site. At least three phases of recutting and alteration to the enclosure were recorded and an entranceway was proposed within the limits of the development site. The form of the enclosure ditch was also considered to be more representative of that expected in association with a settlement site rather than, for example, a stock enclosure.

***Roman***

2.5.7 Evidence for Roman occupation in the Berwick area is relatively scarce. No settlement from the period is known from the immediate vicinity of the site. The nearest possible settlement is at Springhill (SMR 4131) in Tweedmouth, which was once thought to be the site of a small Roman fort, but is now generally considered to be a probable rural settlement of the period. There have few stray finds of coinage and other artefacts in the area, such as a coin of Constantine I (AD 274-337) (SMR 2460), also from Tweedmouth in 1961.

2.5.8 The aforementioned quern stone from Folly Farm, *c.* 0.75km to the north-west of the site, has been suggested as being of possible Roman date. However, the investigation at the North Road site perhaps suggests that a later prehistoric date is more likely.

***Medieval***

2.5.9 Little is known about the site and its environs during this period. There are no known sites of this date in the immediate vicinity of the site.

2.5.10 The battle of Halidon Hill, which took place in 1333 between the Scots and the English, was fought on the slopes of Halidon Hill some 2km to the west. This prehistoric significance of the site is discussed above and the site of the medieval battle is a Registered Battlefield. The battle is important in both historic and military terms, as it left Berwick in English hands and saw the development of English military tactics that were later used to great effect at Crecy and Poitiers.

2.5.11 Historical sources also suggest that the 'Hermitage of Segden' (SMR 2392), a hermitage which belonged to the medieval hospital of St. Mary was located in the vicinity of the site during the medieval period. Its exact location is unknown, although is shown on the County SMR as being *c.* 0.75m to the north-west, close to the line of the A1 road.

***Post-medieval***

2.5.12 There are no known sites of archaeological significance from this period in the vicinity of the site. Map regression suggests that the North Road site has been used as agricultural land, since at least the survey of the Tithe map in 1850.

## 3. AIMS AND OBJECTIVES

3.1 In broad terms, the aims and objectives of the excavation were:

- to provide a detailed record of archaeological features considered to be of high significance, *i.e.* those related to Iron Age settlement. Such features were to include: enclosure boundary ditches, definite arrangements of structural features such as postholes and stakeholes, roundhouse dwellings, complete pits of whatever function, 'working hollows' and possible hearths.
- to provide a 'rescue' level of record for archaeological features considered to be of lesser significance, such as features – including ditches, gullies and plough furrows – derived from medieval and post-medieval agricultural activity and isolated structural features (postholes and stakeholes) of uncertain date.

# 4. ARCHAEOLOGICAL METHODOLOGY

## 4.1 Fieldwork

4.1.1 The archaeological fieldwork was undertaken in accordance with the relevant standard and guidance document of the Institute of Field Archaeologists (IFA).[7] PCA is an IFA-Registered Organisation. The Project Design compiled by PCA and submitted prior to the fieldwork set out an outline methodology for the excavation and there was little or no requirement for any variation to that methodology during the course of the fieldwork.

4.1.2 Archaeological excavation was confined to the eastern portion of the development site. No investigations took place in the western portion, as the evaluation had indicated that there were no significant archaeological remains therein. Two adjoining areas were subject to archaeological excavation. The main area of excavation was rectangular in plan and measured *c.* 105m north-south x *c.* 55m east-west. An extension to the west was irregular in plan and measured *c.* 36m NE-SW x *c.* 9m NW-SE. The total area investigated measured *c.* 0.55 hectares.

4.1.3 To the south and west, the limits of the main excavation area were defined by the conjectured extent of archaeological remains on the basis of the results of the geophysical survey and evaluation phase of work. To the north and east, the limits of excavation were defined by the limits of the site boundary, with an additional constraint being that a 20m wide wayleave was maintained between the excavation area and the overhead cable associated with the railway line to the east. The western extension to the main excavation area undertaken as a contingency. Its limits were largely defined by the location and extent of an archaeological feature that extended beyond the western limit of the main excavation area and the extension was designed to expose as much of this feature as possible as part of a contingency arrangement defined by NCCCT.

4.1.4 Across the excavation areas, topsoil and, where present, sub-soil were removed by a tracked 360° mechanical excavator, with all such work carried out under archaeological supervision. At all times, the machine was fitted with a wide blade 'ditching' bucket. The thickness of overburden varied between *c.* 0.40m and 1m below present ground level. For the most part, removal of overburden exposed the upper interface of the natural 'drift' sub-stratum, with archaeological features cut into the variable clayey or sandy deposits. In places, 'horizontal stratigraphy' derived from ancient usage of the site survived and, during machining, such deposits were left in place for subsequent examination by hand.

## 4.2 General Archaeological Methodology

4.2.1 Following machine clearance of overburden, the archaeological field team, comprising 1 Site Supervisor and up to 10 Archaeologists, cleaned all exposures that required examination or recording with appropriate hand tools.

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[7] IFA, 1999.

4.2.2 All excavation and recording was carried out in accordance with recognised archaeological practice and following the methodology set out on PCA's '*Field Recording Manual*'.[8] All archaeological features (layers, fills, cuts and structures) within the limits of the excavation areas were excavated by hand tools and recorded in plan at 1:20 or in section at 1:10 using standard 'single context planning' methods. In order to locate plans and sections, a site grid was established across the excavation areas using a Geodimeter Total Station Electronic Distance Measurer.

4.2.3 Close attention was paid to the top of stratigraphic interfaces. These were cleaned carefully with trowels to establish the presence or absence of archaeological features at these levels. All features were excavated, recorded and sampled, as appropriate.

4.2.4 The excavation strategy for the project was as follows:

- Complete features, such as pits and postholes, were normally half-sectioned to determine and record their form, and then fully emptied to aid recovery of dateable material, effectively therefore 100% excavation was undertaken.
- A minimum of 10% of each linear feature was excavated.
- Deposits at junctions of, or interruptions in, linear features were removed over a sufficient length to determine the stratigraphic relationships between components.
- The terminals of all linear features were fully excavated.
- Positive features, such as stone surfaces, were excavated in their entirety.

## 4.3 Site Recording

4.3.1 *Pro forma* recording sheets were used to compile a full and proper record of all written, graphic and photographic work undertaken. Detailed written records were made of all archaeological features and deposits encountered, comprising both factual data and interpretative elements. Drawings were executed on polyester-based drawing film, at scales of 1:10 or 1:20, as appropriate, and were related to the aforementioned site grid. A unique site code, NRB 05, was pre-printed on all *pro forma* sheets and was written on all plan and elevation drawings as they were compiled.

4.3.2 Three Temporary Bench Marks (TBM's) were established on the site from existing Ordnance Survey data. The TBM's had a value of 44.29m OD, 45.03m OD and 46.00m OD. The elevation of all principal strata and features was calculated in metres above Ordnance Datum (m OD) and the values indicated on the appropriate plans and section drawings.

4.3.3 A 'Harris Matrix' stratification diagram was compiled to record stratigraphic relationships.

4.3.4 A detailed photographic record of the investigations was compiled utilising SLR cameras. This included black and white prints and colour transparencies (on 35mm film), illustrating the principal features and finds discovered in detail and in general context. All photographs of this nature included a clearly visible, graduated metric scale. The photographic record also included 'working shots' to illustrate more generally the nature of the archaeological operation mounted.

[8] PCA, 1999.

## 4.4 Artefacts and Palaeoenvironmental Remains

4.4.1 All artefacts recovered from the investigations were treated in an appropriate manner and were exposed, lifted, cleaned, marked, conserved, bagged, packaged, boxed and stored, as appropriate and in accordance with recognised guidelines.[9]

4.4.2 Specialist assessment was undertaken on all categories of 'finds' (*e.g.* organic, ceramic, metallic).

4.4.3 All processing of artefacts and ecofacts was undertaken away from the site. Assessment of artefactual and ecofactual material was undertaken by suitably qualified personnel. For each category of artefact and ecofact an assessment report has been produced including a basic quantification of the material and a statement of its potential for further analysis and recommendations for such work.

4.4.4 All materials that required stabilisation were transferred to a specialist conservation facility as soon as possible. The conservation of vulnerable materials commenced with an initial assessment of all recovered artefacts and X-radiography of iron objects and selected examples of non-ferrous material. Quality of preservation was assessed and the long-term conservation and storage needs of all excavated material identified. Conservation assessments, which were carried out in collaboration with relevant 'finds' specialists, identified the potential for further analysis of the material in each case.

4.4.5 The strategy adopted for sampling archaeological and environmental deposits is set out in the following sections. The strategy was developed in consultation with Palaeoecology Research Services (PRS), PCA's nominated palaeoenvironmental consultants and approved by Jaqui Huntley, the English Heritage Regional Advisor for Archaeological Science.

4.4.6 Sampled deposits were uncontaminated and, where possible, well-dated by artefactual or stratigraphic evidence. Bulk sediment samples normally comprised 40 litres (where sufficient material was available).

4.4.7 In total, 105 bulk samples were collected during the excavation, and from these a sub-set of 25 were prioritised for assessment by PRS in order to obtain a representative selection of feature types and phases of occupation. The remaining samples were stored to allow for possible future assessment if necessary.

4.4.8 Bulk samples collected for biological and other remains during the excavation were processed and assessed by suitably qualified personnel. Sieving was used when necessary to recover small items, both organic, such as fish and small mammal bones, seeds, insects, *etc.*, and inorganic, such as technological residues.

4.4.9 Techniques of laboratory processing for material recovered through sampling varied according to the nature of the deposit. Assessment was made in respect of:

- the approximate proportions and types of mineral and organic components, including comments relating to presence/absence of industrial spatter and hammerscale or other technological material;
- the nature of biological remains;

[9] Watkinson and Neal, 1998; UKIC, 1983.

- qualitative estimates of the amounts of each type of remains and their states of preservation;
- a broad indication of habitats represented;
- indications of origin of material;
- research questions that should be formulated if full analysis of any material is recommended.

## 4.5 Post-Excavation Assessment

4.5.1 This report sets out the findings of the archaeological excavation at the site. It includes a post-excavation assessment of the stratigraphic, artefactual and palaeoenvironmental data recovered, in accordance with the guidelines of English Heritage, as set out in '*Management of Archaeological Projects (2nd Edition)*' (MAP2). Following MAP2 guidelines, the site data collected during the fieldwork has been assessed for its potential for further analysis in relation to the project's research aims and any additional questions which came to light during post-excavation analysis. This post-excavation assessment report, enumerating the different kinds of evidence (stratigraphic, artefactual and palaeoenvironmental) from the site and their potential for further analysis, has been prepared as the first phase of that process.

4.5.2 Assessment of each category of artefactual and palaeoenvironmental material was undertaken by suitably qualified archaeological specialists as soon as possible following the completion of the fieldwork. Survival of all materials recovered during or generated by archaeological projects depends upon suitable storage. The complete project archive, comprising written, drawn, and photographic records (including all material generated electronically during post-excavation) and all recovered materials will be packaged for long term curation according to relevant guidelines.[10] An acceptable standard for archives generated by archaeological projects has been defined in MAP2.[11] The archive will be quantified, ordered, indexed, and internally consistent. The archive will also contain a complete site stratigraphic matrix. A copy of each report, article and academic paper resulting from the project will also be included. The depositional requirements of the receiving body, in this case Berwick Museum and Art Gallery, will be met in full.

4.5.3 Data will be prepared for accession to the Northumberland Sites and Monuments Record.

4.5.4 Unless overridden by National Law, any artefacts and ecofacts recovered from the site belong to the landowner, although in every case the landowner is urged to donate the material to an appropriate body. PCA will, with the agreement of the landowner, arrange for deposition of the material with a suitable repository, in this case Berwick Museum and Art Gallery. Alternative arrangements for the curation of all or part of the project archive require prior written approval from a representative of NCCCT. For example, if the artefacts are not to be donated to the appropriate museum, arrangements will be made for a comprehensive record to be compiled of all relevant materials (including detailed drawings, photographs and descriptions of individual finds), which can instead constitute that part of the archaeological archive.

[10] UKIC, 1990.
[11] English Heritage, 1991.

# 5. PHASED SUMMARY OF THE ARCHAEOLOGICAL SEQUENCE

## 5.1 Phase 1: Natural

Deposit [5]

5.1.1 Natural sub-stratum, [5], was exposed across the excavation areas and considerable variation was observed within the glacial drift material. In general, natural deposits comprised loose yellowish brown, pinkish brown and grey sandy silt with sandy clay patches. Large patches of dark brown mineralised deposits, manganese panning, were also observed throughout the main deposit, along with occasional lenses of coal fines and iron panning. Natural sub-stratum occurred at a highest level of 46.15m OD in the central eastern portion of the main area of excavation, and was relatively flat and level in the northern and central portions of this area. The sub-stratum sloped down towards the south to a lowest level of 43.56m OD in the south-western corner of the main excavation area. In the western extension, the sub-stratum sloped gently downwards from east to west from a high point at the eastern end of the area of 45.40m OD to a lowest point of 45.05m OD towards its western limit.

5.1.2 The previous archaeological evaluation had encountered natural drift material across the majority of the development site, largely consisting of clay rich deposits with patches of gravel. The areas of investigation were located on a slightly raised sandy plateau, a localised free draining area compared to relatively poorly-drained land around it. The evaluation had also demonstrated that the natural sub-stratum was overlain by a varying thickness of overburden across the development area. The undulations in the topography at the development site are likely to have been more pronounced in past times as colluvium had accumulated in the bases of natural depressions, resulting in a less undulating landscape. The sandy plateau on which the areas of investigation were situated, part formed by deposit [5], may therefore have once been more pronounced than in recent times.

## 5.2 Phase 2: Linear Features

### 5.2.1 Ditches (Figure 4; Sections 4 and 5, Figure 14; Section 6, Figure 15; Plate 4)

Ditch [169], fill [170]
Ditch [171], fill [172]
Ditch [161], fill [162]
Ditch [95], fill [94]

5.2.1.1 The western edge of a heavily truncated linear feature, [169], was recorded in the central portion of the main excavation area. It was oriented NW-SE and its surviving dimensions were 1.10m x 0.25m x 0.21m deep, with steep sides and a concave base. It contained a single fill, [170], comprising mid brown sandy silt.

5.2.1.2 Approximately 3.40m to the south-east of feature [169], the western edge of another heavily truncated linear feature, [171], was encountered running on the same alignment. This measured 0.80m x 0.18m x 0.24m deep and its single fill, [172], comprised mid brown sandy silt.

5.2.1.3 The similarity in form and alignment of features [169] and [171] suggest that they represent parts of the same truncated ditch, extending over a total distance of *c.* 5.0m, which may have continued to the north-west and south-east prior to truncation by later features.

5.2.1.4 Both features were truncated by a NW-SE aligned short linear feature, [161], which had a rounded terminus at either end and measured 3.40m x 0.90m x 0.39m deep. Again, only the western side of this feature survived and it had moderately steep sides with a concave base. Its single fill, [162], comprised mid brown sandy silt with lighter laminations. Interpretation of feature [161] cannot be certain due to later truncation, but it is likely to represent a short ditch segment and, given its location, it may be associated with ditches [169] and [171], although its precise function is uncertain.

5.2.1.5 A linear feature, [95], was encountered *c.* 6.0m to the south-east of feature [171]. This was aligned NW-SE and towards its southern extent turned towards the east. It measured 6.60m x 0.60m x 0.40m deep and had been truncated at either end by a later (Phase 3.6) feature and its southern extent was disturbed by animal burrows. A single deposit, [94], comprising mid brown sandy silt and gravel, filled the feature.

### *5.2.2 Phase 2: Summary discussion*

5.2.2.1 Features [169], [171], [161] and [95] are interpreted as parts of relatively shallow ditches of similar form. They were orientated approximately NW-SE and were in close proximity to the later Phase 3.5 and Phase 3.6 enclosure ditches, which truncated the features to the east. Their similarity suggests that they are likely to have performed a similar function. The preferred interpretation for these features is that they represent a phase of activity which predates the enclosure. Due to the degree of truncation, it is difficult to be certain about the form or extent of this activity. A lesser possibility is that they are related to the setting out of the Phase 3 enclosure, possibly representing marker features for laying out the boundaries of the enclosure, ahead of its excavation.

## 5.3 Phase 3: Enclosure

*A portion of the enclosure identified by cropmarks on aerial photographs and geophysical survey, and examined during the archaeological evaluation of the site, was investigated during the open area excavation. Activity associated with the main enclosure, with the exception of possible marking out features, has been assigned to Phase 3. The enclosure perimeter consisted of an interrupted circuit of ditches delimiting an enclosure, which was located to the east, with two distinct entrances, hereafter described as the northern and southern entrances, along with an outlying ditch extending south-westwards from the northern entrance. Evidence of successive redefinitions of the enclosure boundary ditches was recorded, particularly at the northern entrance. These redefinitions have been assigned to a number of broad sub-phases based on stratigraphic evidence. The outlying ditch, contemporary with the final two sub-phases of enclosure ditch, is also assigned to Phase 3 along with other features interpreted as being directly associated with activity conducted with the enclosure ditches.*

### 5.3.1 Phase 3.1: Enclosure ditches at northern entrance (Figure 5; Section 11, Figure 16; Plate 1)

Ditch [103], fills [173] [125], [105], [104]
Pit [106], fill [107]

5.3.1.1 Towards the northern end of the main excavation area, the south-eastern terminus of a linear feature, [103], was encountered. The feature was orientated NW-SE and measured 2.10m wide x 1.30m deep and its surviving length was 3.45m, truncated to the north by a Phase 3.2 feature, [126]. It had a square terminus with rounded corners and steep sides, which became noticeably steeper towards the base, which comprised a very steep-sided slot with a concave base. The slot measured *c.* 0.60m deep and was up to 0.90m wide. The feature is interpreted as the terminus of an enclosure ditch, which would have originally continued to the north-west. The terminus marks the north side of a northern entrance to the interior of the enclosure, to the east.

5.3.1.2 Ditch [103] had a distinctive primary fill, [125], recorded against its upper sides but not in the basal slot. It comprised an evenly deposited stiff reddish pink sandy clay, *c.* 0.15m thick, thus appearing to form a deliberate lining. The preferred interpretation of the material is that it was deposited to consolidate the upper sides of the ditch. The edges of any feature cut deeply into loose sandy natural sub-stratum would have been subject to considerable erosion and collapse.

5.3.1.3 The fill, [173], of the basal slot of ditch [103] comprised loose yellowish brown silty sand and gravel, up to 0.83m thick. It was not possible to ascertain the stratigraphic relationship between this material and the clay lining, described above. The material in the basal slot probably derived from weathering and slumping of the sides of the feature. Given the composition of the natural sub-stratum, the accumulation of fill [173] is likely to have been relatively rapid. A secondary fill, [105], comprising silty sand and gravel 0.45m thick, was recorded within the upper portion of the ditch.

5.3.1.4 Fill [105] had been truncated by a small sub-circular feature, [106], measuring 0.17m in diameter and 0.07m deep. The base of a softly fired vessel (Small Find 15) completely filled the base of the feature and was overlain by a deposit, [107], comprising mottled sandy clay. The purpose of this feature, evidently to deliberately house the ceramic vessel, and its location, towards the terminal of the ditch, strongly suggest that its deposition may have had ritual connotations.

5.3.1.5 The latest deposit, [104], within ditch terminus [103] comprised sandy silt up to 0.20m thick, which formed the tertiary fill of the ditch and overlay feature [106].

### *5.3.2 Phase 3.1: Summary discussion*

5.3.2.1 The ditch assigned to Phase 3.1 has been interpreting as representing the earliest definite evidence – given that the Phase 2 evidence is inconclusive- for an enclosure at the site. The ditch had been completely truncated to the north so that only the southern terminus survived. This terminus therefore represents the northern-western part of an entrance into the enclosure. An opposing terminal could not be identified due to extensive truncation by later phases of activity. However, the entrance was at least 3.60m wide as a 'causeway' of undisturbed ground was exposed to the south-east.

5.3.2.2 The clay lining surviving in the upper parts of the ditch terminus suggests that an attempt had been made to consolidate the upper sides of the ditch. Such a lining may have been an *ad hoc* approach to overcome the problems of weathering and slumping of the ditch sides caused by the very loose composition of the material into which the ditch was cut. There was no evidence to suggest that the basal slot was clay-lined.

5.3.2.3 It has been suggested above that the ceramic vessel buried within the Phase 3.1 ditch terminal had ritual connotations. 'Structured deposits' are now well recognised within the archaeological record, and entranceways are a particularly common location for such activity.

### 5.3.3 Phase 3.2: Redefinition of northern enclosure entrance (Figure 5; Section 3, Figure 14; Sections 10 and 11, Figure 16; Plates 1 and 2)

Ditch [126], terminus fills [148], [143], [159], [158], [160], [142], [132], [128], [127]
Fills to north [210], [211], [212], [213], [218], [219], [214], [215], [216], [217]
Ditch [331], fills [340], [341], [342]

5.3.3.1 A curvi-linear feature, [126], truncated Phase 3.1 ditch [103] and this had a broad, rounded terminus at its south-eastern end, with steep sides falling to a steeper sided slot, 0.50m deep and 0.80m wide, with a concave base. A step, *c.* 0.40m wide, was recorded in the north-eastern side of the feature, above the basal slot. In total, the feature measured 2.70m wide x 1.20m deep, extending for a distance of 4.40m to the north-west at which point it was truncated by Phase 3.6 feature, [168]. The feature is interpreted as a redefinition of the Phase 3.1 enclosure ditch, its terminus representing reorganisation of the north-western side of the enclosure entrance, which Phase 3.1 ditch [103] had previously marked.

5.3.3.2 Two sections were excavated through ditch [126]; one at its terminus, the other *c.* 2.0m to the north-west, at its intersection with Phase 3.6 ditch, [168]. At the ditch terminus, the primary fill, [148], comprised brownish grey silty sand, 0.15m thick, from which a single sherd of Iron Age tradition pottery was recovered. This fill is likely to have derived from weathering and slumping of the sides of the ditch. A secondary fill, [143], comprised firm reddish pink sandy silty clay, up to 0.25m thick. This deposit was broadly similar to Phase 3.1 deposit [125] from ditch [103], however, its situation suggests that in this case the material did not represent an *in situ* lining. The preferred interpretation is that the material is redeposited clay lining from the Phase 3.1 ditch.

5.3.3.3 Another primary fill, [159], comprising dark greyish brown silty sand up to 0.06m thick, had accumulated on the step on the north-eastern side of ditch [126]. A deposit, [160], comprising orange brown silty sand, partially overlay fills [143] and [159] and another deposit, [158], comprising brownish yellow sand, partially overlay fill [159]. Both of these deposits were consistent with rapidly accumulated material derived from weathering of the sides of the ditch. These fills were sealed by a 0.15m thick deposit, [142], comprising reddish pink sandy clay, recorded across the upper sides of ditch [126]. Its composition is comparable to fill [125] of ditch [103]. Again, the preferred interpretation is that this material is an *in situ* clay lining deposited to consolidate the sides of the ditch.

5.3.3.4 Three deposits, [132], [128] and [127], formed the upper fills of the ditch. Fill [132] was located directly above the clay lining [142] and comprised greyish brown sandy silt with pink clay mottling, from which a single sherd of Iron Age tradition pottery was recovered. This fill is likely to have derived, at least in part, from disturbance of the underlying material, possibly through weathering and/or animal disturbance. The two upper fills, [127] and [128], were broadly similar, comprising charcoal-rich sandy silt deposits. In contrast to the other fills of the ditch, which were generally sterile, the relatively high concentrations of charcoal within these deposits suggests that weathering of the ditch sides was unlikely to have been a major factor in their deposition. Their composition is perhaps more consistent with material derived from domestic or industrial activity, either deliberately utilised to backfill the ditch or gradually accumulating within the ditch. A single sherd of Iron Age tradition pottery, originating from a very large vessel, was recovered from fill [128].

5.3.3.5 A similar sequence of deposition was recorded within the section excavated across ditch [126] to the north. The basal primary fill, [210], comprised orange pink silty clayey sand from which a single sherd of Iron Age tradition pottery was recovered. A deposit, [218], comprising greyish pink clay, was recorded on the upper portion of the north-eastern edge of the ditch and a 0.24m thick deposit, [211], comprising hard brownish pink clay was recorded on the south-western side of ditch [126], partially overlying fill [210]. A deposit, [219], of similar composition, up to 0.15m thick, overlay deposit [218]. Deposits [211], [218] and [219] are interpreted as further lining material.

5.3.3.6 Deposit [211] was overlain by a deposit, [212], comprising brownish pink silty clayey sand up to 0.09m thick. A further deposit, [213], comprising greyish pink sandy clay was recorded in the lower part of the ditch against its north-eastern edge. The composition of fills [212] and [213] suggest that they are comprised of material derived in part from the clay lining.

5.3.3.7 A series of deposits, [214]-[217], comprising similar greyish brown and brownish grey silty sands formed the upper ditch fills. A small assemblage of Iron Age tradition pottery was recovered from fill [214] and this assemblage was consistent with pottery originating from a domestic setting. Food residue adhering to the internal surface of two of the sherds also probably suggests domestic activity. One sample of this residue produced a radiocarbon date of cal. BC 500-460 and cal. BC 430-380 (Beta-208953; 2370 +/-40 BP).

5.3.3.8 To the south-east of ditch [126], a heavily truncated linear feature, [331], aligned NW-SE was encountered within a sondage excavated across the intersection of several features, to be described in due course. Feature [331] had a squared terminus at its north-western end and was revealed for a distance of 6.85m, continuing to the south-east beyond the excavated area. The maximum surviving width was 1.20m and it was up to 0.71m deep. In profile the feature had steep sides and a concave base. Feature [331] has been interpreted as the opposing terminal to that formed by ditch [126], therefore being the south-eastern side of the northern entrance to the enclosure. The interval between the two ditches was 7.0m wide, although originally the entrance would have been slightly narrower as ditch [331] had been truncated. If both ditches had been originally of similar dimensions, then the causeway can be suggested as being 6.0m to 6.50m in width. Three fills, [340], [341] and [342], were recorded within ditch [331], each comprising sandy silt or silty sand, probably derived from weathering of the sides of the feature or having accumulated as windblown deposits.

### *5.3.4 Phase 3.2: Summary discussion*

The ditches assigned to Phase 3.2 have been interpreted as representing redefinition of an existing enclosure entrance, previously defined by Phase 3.1 ditch [103] and an unidentified ditch to the south-east. Both sides of the entrance were identified and the causeway is likely to have been in the region of 6.0m to 6.50m wide. The northern ditch comprised a steep-sided feature with a narrow basal slot, the southern entrance ditch had been horizontally truncated so that, in most places, only the basal slot survived. The purpose of the slot is not certain; it may have been a working trench created by the original excavators, as employed on some Roman military sites, or could have formed during subsequent cleaning out of the ditch. Evidence of similar features is not confined to military sites and has been found for instance at the native Iron Age settlement at Burradon, Tyne and Wear[12] and Hartburn, near Morpeth.[13] Both of these sites were situated on boulder clay and Jobey suggests that the slippery nature of the clay sides would have necessitated some flat working space in the ditch bottom. At North Road, the unstable nature of the sandy sub-stratum may have also meant that such a basal working trench was required. There was evidence that the northern entrance ditch had been clay lined, presumably to consolidate its sides and prevent erosion.

### 5.3.5 Phase 3.3: Repositioning of northern entrance ditch (Figure 5; Section 10, Figure 16; Plate 2)

Ditch [209], fills [330], [249], [250], [251]

5.3.5.1 A NW-SE aligned linear feature, [209], was recorded immediately to the west of Phase 3.2 ditch [126]. It was 6.70m in length, truncated at both ends, x 1.20m wide x 0.60m deep. Despite the truncation at its south-eastern end, it was evident from the profile and the narrowing of the feature that a rounded terminus was present at this point. Feature [209] has been interpreted as the surviving section of a ditch delineating the repositioned north-western side of the northern entrance to the enclosure. The dimensions of the ditch are noteworthy, this being a far narrower and shallower feature than the enclosure ditches assigned to the preceding and subsequent phases.

5.3.5.2 Three sections were excavated across ditch [209], one at its south-eastern terminus, one at its north-western limit, and a third in its central portion. A comparable sequence of deposits was recorded in each of the excavated portions. A deposit, [330], comprising stiff brownish pink clay, lined the sides and base of the ditch. This material, *c.* 0.10m thick on average, has been interpreted as the *in situ* remains of a deliberate clay lining, laid down to consolidate the edges of the open feature.

5.3.5.3 Three similar deposits, [249], [250] and [251], were the material infilling ditch [209]. Each comprised silty sand, with some clay noted within fill [250]. These deposits would have accumulated when the feature fell into disuse. No artefactual material was recovered from any of the deposits associated with Phase 3.3.

[12] Jobey, 1970, 63.
[13] Jobey, 1973, 18.

### *5.3.6 Phase 3.3: Summary discussion*

5.3.6.1 Ditch [209] was the only feature assigned to Phase 3.3. It represents a redefinition of the enclosure ditch, on a similar alignment to the previous position but slightly to the south-west.. The position of the north-western side of the northern entrance to the enclosure also appears to have been altered, the ditch terminus moving *c.* 3.0m to the south of the terminus of Phase 3.2 ditch [126]. This perhaps suggests a narrowing of the northern entrance. Truncation by later features removed all evidence of the opposing terminal of the entrance.

### 5.3.7 Phase 3.4: Northern enclosure entrance realignment (Figure 5)

Ditch [320], fills [345], [346], [344], [343]
Gully [333], fill [332]
Feature [294], fill [293]
Pit [309], fills [308], [307]
Ditch [306], fills [305], [304], [303]

5.3.7.1 The south-eastern end of Phase 3.3 ditch [209] had been truncated by a NW-SE orientated linear feature, [320], which was 5.60m x 2.10m x 1.05m deep. It had a rounded terminus at its north-western end, steep sides with a relatively flat base incorporating two distinct steep-sided slots. The northernmost of the two slots was at least 3.40m in length x 0.50m deep. The feature has been interpreted as part of an enclosure ditch, with its terminus forming the south-eastern side of a redefined northern entrance to the enclosure. As with the previously described entranceway ditches, the purpose of the basal slots was not ascertained but they may have been related to the original excavation of the ditch or formed during subsequent clearing out.

5.3.7.2 A deposit, [345], comprising lenses of loose sand and sandy clay of varying colours, filled the basal slot within the terminus of ditch [320]. The composition of the material suggests that it was derived from weathering of the sides of the feature. A similar deposit, [346], was recorded filling the basal slot in the southern portion of ditch [320]. Both deposits were overlain by a deposit, [344], comprising laminated lenses of yellowish brown and pink silty clay and sand. This deposit was essentially sterile and was probably derived from a combination of material weathered from the sides of the ditch and wind-blown material. In turn, this deposit was sealed by the latest surviving fill, [343], which comprised brown clayey sand.

5.3.7.3 To the south-east of ditch [320], a short length of a NW-SE aligned feature, [333], was recorded. It measured 1.85m x 0.40m x 0.26m deep. The remains of a rounded terminus survived at its south-eastern end and it had been truncated to the north-west. Although the feature had suffered extensive horizontal truncation, the surviving portion had steep sides and a flat base, and it has been interpreted as a continuation of the basal slot of ditch [320]. A single fill, [332], comprised grey and brown sand, probably deriving from weathering of the sides of the ditch.

5.3.7.4 A sub-oval feature, [294], with moderately steep sides and a concave base, truncated the north-western end of feature [333]. It measured 0.69m NE-SW x 0.46m x 0.24m deep, truncated to the north-east. It is interpreted as a possible posthole or a truncated gully, although its precise function remains unclear. It has been assigned to this phase of activity, as it may have been associated with ditch [320] and feature [333]. However, it could equally be assigned to the subsequent phase of activity. Its single fill, [293], comprised pinkish greyish brown sandy silt.

5.3.7.5 A short NW-SE aligned linear feature, [309] was recorded to the north of feature [294]. This was 0.65m wide x 0.49m deep x 1.72m, truncated to the south-east, and had a rounded terminus at its north-western end, near vertical sides and a flat base. It has been interpreted as the surviving portion of a possible elongated pit, although its precise function remains uncertain. The location of the feature, within the interior of the enclosure, close to the northern entrance defined in part by ditch [320], suggests that it may have been associated with the entrance, possibly being the setting for a post. Its primary fill, [308], comprised pinkish brown clayey silt and its upper fill, [307], comprised greyish brown clayey silt.

5.3.7.6 The south-eastern end of pit [309] had been truncated by a linear feature, [306], which was orientated NE-SW, with a rounded terminus at its north-eastern end and truncated to the south-west. The feature had had steep sides, a concave base and measured 3.46m x 2.90m x 0.60m deep. This was seemingly part of a ditch, possibly with a structural function related to the enclosure entrance or perhaps to facilitate drainage into the enclosure ditch. Three deposits were recorded within the ditch. The primary fill, [305], comprised brownish grey silty sand mixed with pink sand, and is likely to have derived from weathering of the sides of the ditch. Similarly, the secondary fill, [304], comprising laminated brownish grey silty sand, also likely to have been the result of weathering. This deposit produced a single sherd of Iron Age tradition pottery. The tertiary fill, [303], comprised soft greyish brown sandy silt with gravel inclusions and also yielded a sherd of Iron Age tradition pottery.

### *5.3.8 Phase 3.4: Summary discussion*

5.3.8.1 The location of the terminal of ditch [320] provides evidence of another alteration and repositioning of the northern entrance to the enclosure. Ditch [320] formed the south-eastern side of the enclosure entrance and truncated the south-eastern end of ditch [209], which, when in use, had formed north-western side of the entrance in Phase 3.3. It was not possible to determine the width of the Phase 3.4 entrance, as the terminal opposing ditch [320] could not be identified, due to truncation by subsequent activity. However, assuming the north-western side of the entrance was located in the vicinity of the later, Phase 3.5 feature, then the Phase 3.4 entrance would have been of the order of 6.50m wide.

### 5.3.9 Phase 3.5: Redefinition of enclosure ditches and addition of outlying ditch

#### *5.3.9.1 Redefinition of enclosure ditch* (Figure 6; Sections 3-5, Figure 14; Sections 6-8, Figure 15; Plates 4 and 5)

Ditch [120], fills [146], [147]
Ditch [196], fills [195], [188]
Ditch [202], fills [220], [205], [203]
Ditch [227], fill [226]
Ditch [245], fill [246]
Ditch [257], fills [262], [261], [260], [259], [133], [258]
Feature [150], fill [151]

5.3.9.1.1 Several NW-SE aligned linear features, [120], [196], [202], [227] and [257], have been interpreted as representing elements of the same enclosure ditch. A later ditch, assigned to Phase 3.6, had removed the majority of this feature, so that it survived in only fragmentary fashion. From the excavated evidence, the feature, which formed part of the south-western side of an enclosure, appeared to be *c.* 4.0m wide x 1.40m deep and in total measured *c.* 52.50m in length.

5.3.9.1.2 Four sections were excavated through the ditch to show that it had steep sides and a predominantly concave base. The excavated evidence suggests that the ditch may have had a broadly V-shaped profile, with some localised variations possibly the result of weathering and subsequent slumping. The ditch had a squared terminal at its north-western end, recorded as feature [257], which represented the south-eastern side of the northern entrance to the enclosure.

5.3.9.1.3 A similar, although truncated, terminal at its south-eastern end, feature [196], formed the north-western side of the southern entrance. At this southern entrance, it was not possibly to establish - with any degree of certainty - the location of the opposing terminal to the south-east. It is possible that a Phase 3.6 feature, [49], could represent the south-eastern terminal of the southern entrance in Phase 3.5, rather than Phase 3.6, in which case the southern entrance would be *c.* 11m wide. However, the preferred phasing for ditch [49] is Phase 3.6. Similarly, the north-western side of the northern entrance was not identified in Phase 3.5. While the terminus of a ditch, [168], could represent this side of the entrance, the preferred phasing for this ditch is again Phase 3.6. Assuming that that feature had completely removed the ditch from Phase 3.5, a minimum width of 10m can be reasonably argued for the northern entrance during Phase 3.5.

5.3.9.1.4 Part of a linear feature, [245], was encountered close to the junction of the enclosure ditch [257] and the outlying ditch [282]. This was slightly curvilinear in plan and had been largely truncated by feature [80]. It measured 3.80m x 0.52m x 0.24m deep and was orientated largely NW-SE, but bearing more westerly at its north-western end. It is most likely that this feature was the truncated remnants of the southern side of enclosure ditch [257], at the point at which it turned to the south-west to become outlying ditch [282]. Its fill, [246], comprised brownish grey sandy silt and is broadly consistent with such an interpretation.

5.3.9.1.5 Part of a small feature, [150], was recorded towards the base of the Phase 3.5 enclosure ditch, in the area where it was recorded as ditch [120]. The feature was linear in plan and orientated NW-SE. It had steep sides and a concave base, with a rounded terminus at its south-eastern end, and measured 0.38m x 0.25m x 0.20m deep. It was not possible to determine a stratigraphic relationship between ditch [120] and feature [150], which has been interpreted as part of an elongated pit, possibly a post setting. Its single fill, [151], comprised laminated clayey sand and sand, probably derived from weathering.

5.3.9.1.6 A series of deposits, [146], [147], [195], [188], [220], [205], [203], [226], [262], [261], [260], [259], [133] and [258] were recorded as the fills of the Phase 3.5 enclosure ditch, with unique context numbers assigned to fills within each excavated section. The fills largely comprised brown sandy silts and silty sands of varying hues. Sandy laminations recorded in primary fills [146], [220] and [205] are indicative of deposits derived from either weathering of the ditch sides or wind-blown sediments. Although there was little variation in the composition of the remaining fills, two deposits, [188] and [147], were noteworthy for their inclusions. Occasional small- and medium-sized fire-cracked stones were observed within fill [147] and a concentration of limpet and periwinkle shells, along with 20 fragments of bone including a small mammal shaft and a rib fragment, were recovered from fill [188], towards the south-eastern terminus of the ditch.

#### *5.3.9.2 Outlying ditch (Figure 6; Sections 1 and 2, Figure 13)*

Ditch [282], fills [281], [280], [279], [278], [277]
Ditch [311], fills [310], [337]

5.3.9.2.1 Features [282] and [311] have been interpreted as parts of a substantial linear feature, running to the south-west, away from the south-eastern side of the northern entrance to the enclosure. This ditch has been interpreted as being contemporary with Phase 3.5 of the enclosure and while it appeared to conjoin with the perimeter ditch, it was external to the enclosed area. Although the Phase 3.5 version of the outlying ditch had been largely truncated by subsequent activity enough survived to establish that, in general, it had steep sides and a concave base. Overall the feature was traced for distance of 42.50m, before it appeared to turn to the north at its south-western limit. Its maximum recorded with was 2.05m and it was 0.96m deep at its north-eastern end and *c.* 0.60m deep at its south-western limit.

5.3.9.2.2 A series of deposits, [281], [280], [279], [278], [277], [310] and [337], filled the outlying ditch in Phase 3.5. At its north-eastern end, adjacent to the northern enclosure entrance, a deposit, [281], comprising greyish yellow silty sand formed the primary fill of the ditch, overlain with similar, yellowish sandy fills, [280] and [279]. The composition of these fills suggests that they accumulated as a result of weathering of the ditch sides or through other natural processes. Two other deposits, [278] and [277], were distinct from the earlier fills and comprised brown or greyish brown silty sands. Towards the south-western extent of the feature were two fills, [310], and [337], which comprised grey silty sand and greyish brown sandy silt, respectively. Both deposits appeared to have leeched post-deposition.

#### *5.3.9.3 Linear features (Figure 6; Section 3, Figure 14)*

Feature [319], fill [318]
Gully [329], fills [326], [327], [328]
Gully [325], fills [322], [323], [324]
Ditch [272], fills [295], [273]

5.3.9.3.1 A short linear feature, [319], was encountered at the south-western limit of outlying ditch [311]. It measured 1.35m NE-SW x 0.46m x 0.42m deep and had moderately steep sides, a concave base and a rounded terminus at either end. It was not possible to ascertain a stratigraphic relationship between ditch [311] and feature [319]. As there was no discernible difference between the fills of the features, it is possible that they may have been in use contemporaneously. Feature [319] is interpreted as an elongated pit, possibly the setting for a post.

5.3.9.3.2 A sinuous linear feature, [329], extended from the south-westernmost extent of ditch [311]. Its overall orientation was NE-SW and it was traced for a distance of 18.0m. It was 0.60m wide x 0.23m deep, and had moderately steep sides, a flat base and a rounded terminus at its south-western end. Three sections of the feature were excavated, one within each terminus and the third within its northern portion, at the point at which it was truncated by feature [325], as described below. Within the north-eastern terminus, a single fill, [327], comprising brownish grey sandy silt was recorded. Within the south-western terminus, its fill, [326], comprised greyish brown sandy silt with frequent iron panning. The other portion to be excavated had a fill, [328], comprising brownish grey sandy silt with moderate iron panning.

5.3.9.3.3 Running roughly parallel with feature [329], but on it western side, was a very similar feature, [325]. This had a rather pointed terminus at its south-western end and a truncated, but slightly irregular, terminus at its north-eastern end. It was traced for a distance of 20.0m and had a maximum width of 0.70m and was up to 0.26m deep. Three portions of the feature were excavated and these exposed moderately steep sides and a concave base. At the north-eastern terminus, its single fill, [323], comprised brownish grey silty sand. The fill, [322], at its south-western terminus comprised greyish brown sandy silt with frequent iron panning. Excavation of the third portion demonstrated that this feature post-dated feature [329]. A single fill, [324], was recorded, comprising brownish grey sandy silt with occasional iron panning.

5.3.9.3.4 The exact function of these sinuous linear features is uncertain. It is possible that they were for drainage, discharging into the outlying ditch. However, the preferred interpretation is that they represent fencelines, possibly related to the stock control function postulated for the outlying ditch. The relationship between the two features and the outlying ditch is uncertain. It is possible that each was associated with a different phase of the outlying ditch; thus feature [325] could represent a fenceline associated with Phase 3.6 ditch [276], as discussed below. However, whilst such an interpretation is plausible, it cannot be proven and both features have therefore been assigned to this broad sub-phase of activity.

5.3.9.3.5 In the central eastern part of the site, a linear feature, [272], was recorded. It was aligned approximately north-south, curving to the east in its southernmost portion. It measured 9.10m x 0.88m, had a rounded terminus at its northern end and was truncated to the south-east. Within the northern terminus the feature was 0.12m deep, but its depth increased as it extended southwards – its full depth to the south is likely to have been in excess of 0.60m, prior to truncation. The feature is interpreted as a drainage ditch, the gradient of its base indicating that it drained southwards, possibly discharging into the enclosure ditch. A deposit, [295], comprising orange brown sandy gravel formed the primary fill of the ditch, and this was overlain by a deposit, [273], comprising dark bluish brown sandy silt.

#### *5.3.9.4 Phase 3.5: Summary discussion*

5.3.9.4.1 This broad sub-phase of activity included further redefinition of the enclosure ditch and the addition of an outlying ditch lying to its south-west. The earliest evidence for features associated with the southern entrance to the enclosure has been assigned to this sub-phase. However, the presence of undisturbed ground at the causeway of the southern entrance indicates that an entrance was present during earlier sub-phases. However, it is assumed that features assigned to Phases 3.5 and 3.6 had removed all trace of earlier versions of the southern entrance. In fact, truncation by Phase 3.6 features meant that only part of the Phase 3.5 southern entrance survived. However, a minimum width of *c.* 11m has been estimated. At the northern entrance, a minimum width of 10m for the causeway has been estimated.

5.3.9.4.2 The south-western outlying ditch extended away from the enclosure approximately at right angles. There is no convincing evidence that this feature was in existence during earlier phases. The function of the external ditch is uncertain but the preferred interpretation is that the feature was utilised as an aid to stock control, effectively to facilitate the passage of animals towards the northern entrance of the enclosure. Possible fencelines continued the line of the outlying ditch to the south-west. At its south-western limit, the outlying ditch turned to the north at an acute angle. The form of this portion of the feature, although only partially exposed, further supports the notion that the main purpose of the feature was stock control rather than, for example, drainage or as an annexe to the main enclosure.

5.3.9.4.3 A drainage ditch, which discharged into the main enclosure ditch mid way between the northern and southern enclosure entrances, has been assigned to this phase of activity. The feature extended for 9m away the internal edge of the enclosure, implying that if the enclosure ditch had an associated upcast bank, then the bank did not lie internal to the ditch. At the site in general, no evidence for an upcast bank either internal or external was recorded, although it is assumed that such a feature had been destroyed by the combined effects of erosion and ploughing.

### 5.3.10 Phase 3.6: Redefinition of enclosure ditches, outlying ditch and additional features

#### *5.3.10.1 Redefinition of enclosure ditches and outlying ditch (Figure 7; Section 2, Figure 13; Sections 3-5, Figure 14, Sections 6-8, Figure 15; Section 9, Figure 16; Plates 4 and 5)*

Ditch [80], fills [88], [121], [149], [154]
Ditch [276]
Ditch [168], fills [174], [175], [176]
Ditch [49]

5.3.10.1.1 The latest major recut of the enclosure ditch, [80], ran on a NW-SE alignment from a rounded terminus that formed the north-western side of the southern entrance to the enclosure. It extended for a distance of 50m before turning and continuing to the south-west, effectively becoming a recut of the Phase 3.5 south-western outlying ditch. At the point of its right angle turn, ditch [80] formed the south-eastern side of the northern entrance to the enclosure. The portion forming the outlying ditch extended for a distance of 42.0m, before turning sharply to the north for a distance of 7.0m, at which point it met the limit of excavation. The south-westernmost portion was recorded as ditch [276].

5.3.10.1.2 Seven sections were excavated across the full width of the main Phase 3.6 enclosure/outlying ditch, along with two investigative sondages, which were excavated to examine intersections between the ditch and adjoining features.

5.3.10.1.3 The portion of the ditch which formed a recut of the Phase 3.5 enclosure ditch measured between 3.0m and 5.0m in width and was up to 1.24m deep. It had steep sides, becoming steeper towards its concave base. There was some indication of a slot along the base of the ditch, although it is possible that this had either been, at least in part, caused or disguised by the effects of weathering on the ditch sides.

5.3.10.1.4 In the south-eastern terminus of ditch [80], deposit [149] formed the primary fill. This comprised brown silty sand and was consistent with material derived from the weathering of the ditch sides. The next excavated section of the ditch to the north-west revealed a primary fill, [88], comprising pinkish brown sandy silt, also likely to have derived from weathering. A similar deposit, [121], formed the primary fill in the next complete section excavated across the ditch to the north-west. A single sherd of Iron Age tradition pottery was recovered from deposit [121]. A section excavated across the ditch at the point at which it turned to the south-west to form the outlying ditch revealed a primary fill, [154], comprising orange greyish brown silty sand, this material likely to have derived from weathering. A single sherd of Iron Age tradition pottery was recovered from this primary fill.

5.3.10.1.5 Where ditch [80] formed the south-western outlying ditch, it measured between 2.0m and 3.50m wide, with a maximum depth of 1.10m. It had moderate to steep sides, with some irregularity in places, and a concave base, with some evidence for the presence of a segmented, steep-sided basal slot. Where the ditch, [276] at this point, turned to the north, it measured *c.* 3.0m wide x *c.* 1.10m in depth.

5.3.10.1.6 A substantial linear feature, [168], was recorded towards the northern limit of excavation. It measured 4.40m wide x 1.19m deep, extending on a NW-SE orientation for a distance of 10.40m from the northern limit of excavation. It had a broad rounded terminus to the south-east with moderately steep sides, becoming steeper towards a flat base. This ditch has been interpreted as the north-western side of the northern entrance to the enclosure in Phase 3.6, thus making a causeway 13.0m in width. A series of deposits, [174], [175] and [176], comprising loosely compacted silty sands, formed the primary, secondary and tertiary fills of this ditch, respectively. Their composition suggests that they were probably derived from weathering.

5.3.10.1.7 Feature [49] was recorded adjacent to the eastern limit of excavation, to the south. The feature was 3.10m wide and extended into the excavation area for a distance of 1.24m, with a maximum depth of 0.64m, the base of the feature lying beyond the limit of excavation. The location and form of the feature suggest that it was part of a ditch terminus that formed the south-eastern side of the southern entrance to the enclosure. The feature was located 11.0m to the south-west of the southern terminus of ditch [80], indicating the maximum width of the causeway.

#### *5.3.10.2 Associated features (Figure 7)*

Gully [140], fills [141], [155]
Gully [25], fill [24], Gully [44], fill [43], Gully [14], fill [13], Gully [12], fill [11], Gully [10], fill [9]
Feature [255], fill [256]
Pit [197], fills [198], [199]
Pit [200], fill [201]

5.3.10.2.1 A linear feature, [140], was recorded running parallel to enclosure ditch [80], but external to it in the section approaching its south-eastern terminus. This feature, interpreted as a gully, was located only *c.* 1.0m from the edge of the enclosure ditch. It had a rounded terminus at either end and measured 12.70m x 1.0m x 0.45m deep, having moderately steep sides, which became steeper towards a concave base. Within the north-western terminus, its fill, [141], comprised greyish brown sand with occasional charcoal flecks.

5.3.10.2.2 A similar deposit, [155], was recorded within the south-eastern terminus. The precise function of this gully is unclear; given its proximity and similarity in alignment to the enclosure ditch, it seems probable that the features were closely associated. There is the possibility that the gully was associated with an earlier phase of activity, however, the preferred interpretation sees it assigned to Phase 3.6.

5.3.10.2.3 A NNE-SSW orientated feature, [25], was recorded within the southern part of the excavation area. It measured 14.0m x 0.76m x 0.26m deep and had moderately steep sides and a concave base with a rounded terminus at either end. Its single fill, [24], comprised orange brown silty sand. A sequence of intercutting, similarly aligned linear features was recorded to the east of gully [25]. The earliest feature, [44], measured 10.40m x 0.50m x 0.08m deep and its fill, [43], comprised orange brown sandy silt. It was truncated by a sinuous linear feature, [14], which was traced for 40.80m running NNE-SSW, and measured 0.28m wide x 0.21m deep. It had irregular sides, a concave base and its fill, [13], comprised orange brown silty sand.

5.3.10.2.4 Feature [14] was truncated at its north-eastern extent by another sinuous linear feature, [12], which measured 8.25m x 0.84m x 0.22m deep and had moderately steep sides and a concave base. This had a rounded terminus to the north and was truncated to the south by a curvi-linear feature, [10]. Feature [10] extended on a NE-SW orientation for a distance of *c.* 20.0m before curving to the north-west for a further 4.80m, apparently respecting the position of the south-eastern terminus of enclosure ditch [80]. Feature [10] had rounded terminals at either end, had an average excavated width of 0.80m and was 0.30m deep. Its single fill, [9], comprised greyish brown silty sand.

5.3.10.2.5 No dating evidence was recovered from any of features [25], [44], [14], [12] or [10]. Given that feature [10] respected the alignment of the terminus of ditch [80], the group of features as a whole has been assigned to Phase 3.6. However, the possibility is acknowledged that some or all of the features may have originated during earlier sub-phases since the ditch terminus (and by design the southern enclosure entrance) was probably in a similar location during previous sub-phases. Based on their similarity of form and fill composition, it is reasonable to suggest that they were closely associated in function, although precisely what that was is uncertain. They could represent fencelines, again possibly associated with stock control at an enclosure entrance. In general, the features ran down a natural gradient towards the south-western corner of the excavation area and drainage is perhaps another plausible explanation of their function.

5.3.10.2.6 A curvilinear feature, [255], was encountered adjacent to the north-eastern limit of the excavation area. This was orientated approximately NE-SW and measured 2.10m, continuing beyond the limit of excavation, x 0.36m x 0.15m deep. It had moderately steep sides and a concave base with a rounded south-western terminus. The feature is interpreted as a fragment of a possible gully, although its exact function is unclear.

5.3.10.2.7 A feature, [197], was partially exposed adjacent to the north-eastern limit of excavation, extending beyond it to the north. It measured 1.0m x 0.50m x 0.30m deep and had moderately steep sides and a concave base. Its primary fill, [198], comprised pinkish brown sandy silt with frequent clay patches. This was overlain by fill [199], comprising brown sandy silt. As only a small portion of the feature was present within the excavation area, it was not possible to ascertain its function.

5.3.10.2.8 Feature [197] was truncated by feature [200], which also extended beyond the limit of excavation to the north. Its visible dimensions were 2.20m x 2.10m x 0.35m deep, with a single curved edge visible in plan. It had steep sides, however the base of the feature was not exposed within the limit of excavation. The feature has been tentatively interpreted as forming part of a large discrete feature, possibly a pit. Although no dating evidence was recovered from the feature, it has been assigned to Phase 3.6 as a stone surface, assigned to Phase 4, had slumped into it.

#### *5.3.10.3 Phase 3.6: Summary discussion*

5.3.10.3.1 Phase 3.6 includes the final phase of alterations to the circuit of the main enclosure, with the main perimeter ditch being recut on a similar alignment to that seen in the previous sub-phase. This activity also saw a recut of the south-western outlying ditch. Further reorganisation of the enclosure entrances, particularly the northern entrance, was also evident. The width of the northern entrance was in the region of 13.0m. At the southern entrance, there was less obvious reorganisation of the entrance, the ditches possibly being recut in approximately the same locations as they were previously. The width of the southern entrance during Phase 3.6 therefore remained in the region of 11.0m.

5.3.10.3.2 A series of linear features apparently led through the southern entrance into the enclosure. Whilst these may represent drainage gullies, a perhaps more likely interpretation is that originated from fencelines and may have been associated with stock control, perhaps to herd animals into the enclosure.

## 5.4 Phase 4: Abandonment of Enclosure and Salt Processing Activity

*Deposits and features assigned to Phase 4 relate to disuse of the Phase 3 enclosure, along with activity in the area that was previously internal to the enclosure. Although in disuse, it is probable that the enclosure ditches would have remained in place, gradually infilling through lack of maintenance. The vast majority of the briquetage assemblage from the site was recovered from deposits and features assigned to Phase 4, mainly from the upper fills of the enclosure ditches. Briquetage is associated with salt processing, an activity which has long been recognised as having great significance in ancient communities. A group of features interpreted as probably being associated with saltmaking have been assigned to Phase 4, along with features located in the base of a substantial feature described hereafter as a 'working hollow'. A substantial stone 'yard' surface has also been assigned to Phase 4.*

### 5.4.1 Phase 4: Abandonment of enclosure (Sections 1-3, Figure 14; Sections 6-8, Figure 15; Section 9, Figure 16)

Fills [131], [130], [87], [86], [79], [82], [252], [122], [123], [124], [153], [152], [334], [335], [336], [129], [134]
Fills [131], [312], [302], [275]
Fills [177], [178], [179], [180], [208]
Fill [50]

5.4.1.1 The upper fill, [50], of Phase 3.6 ditch terminus [49] comprised mid to dark reddish brown silty sand with a relatively high organic content. This has been assigned to Phase 4 as its composition was distinct from fills interpreted as being derived from weathering of features, and is consistent with the accumulation of silty material within an open ditch that is in disuse.

5.4.1.2 A series of deposits forming the upper fills of the Phase 3.6 enclosure ditch [80] have also been assigned to Phase 4, the material again being distinct from earlier fills derived from weathering. At the south-eastern terminus of ditch [80], the primary fill was sealed by a deposit, [131], comprising dark greyish brown sandy silt, up to 1.10m thick. An ephemeral brown stain was exposed in the eastern portion of the deposit, and this has been tentatively interpreted as the 'shadow' of an almost completely degraded timber. Occasional dumps of limpet and periwinkle shell were recorded within the deposit, along with several sherds of Iron Age tradition pottery. A single fragment of burnt animal bone, unidentifiable to species, was recovered from a bulk sample of this deposit, along with a few grains of barley and the remains of wild taxa.

5.4.1.3 Partially overlying deposit [131] was a further deposit, [130], comprising mid brown sandy silt, which was confined to a small area at the tip of the ditch terminus and formed the latest fill of the ditch at this location.

5.4.1.4 In a section excavated across ditch [80], 13.0m to the north-west of the southern terminus, the primary fill was overlain by deposit [87], comprising mid brown sandy silt, up to 0.10m thick, located only against the north-eastern side of the ditch. A small assemblage of Iron Age tradition pottery originating from large, thick walled vessels was recovered from this deposit. A further deposit, [86], was largely confined to the base and the south-western side of the ditch. It partially overlay deposit [87] and comprised mid brown sandy silt, up to 0.35m thick. A small assemblage of Iron Age tradition pottery originating from vessels consistent with those typically used in a domestic setting was recovered from the deposit. A substantial deposit, [79], comprising dark greyish brown sandy silt, filled the majority of the ditch at this location. It was 0.60m thick and contained occasional inclusions of charcoal and burnt clay flecks. A single sherd of Iron Age pottery was recovered from the deposit. The latest deposit, [82], comprising brown sandy silt with occasional fragments of burnt clay, was up to 0.25m thick, lensing out to the north.

5.4.1.5 Approximately 2.0m to the north-west, a small portion of enclosure ditch [80] was excavated to allow investigation of an earlier, Phase 2, feature, [95]. The portion of the ditch excavated measured 3.10m x 0.80m x 0.17m deep. It contained a single deposit, [252], which comprised dark greyish brown sandy silt, interpreted as a continuation of fill [79], as described above. A large assemblage of 81 sherds of briquetage was recovered from this fill, along with a single sherd of Iron Age tradition pottery. The briquetage assemblage represents 72.9% of the entire assemblage recovered during the excavation.

5.4.1.6 Approximately 6.0m further to the north-west in ditch [80], a 0.18m thick fill, [122], comprising brown silty sand with frequent inclusions of fire-cracked stones overlay the Phase 3.6 primary fill. A small assemblage of Iron Age pottery was recovered from deposit [122]. It was partially overlain by fill [129], comprising greyish brown clayey silty sand. This was overlain by a 0.45m thick silty sand fill, [123], from which a small assemblage of Iron Age tradition pottery was recovered, all of the sherds possibly originating from the same vessel. A 0.27m thick deposit, [124], comprising brown silty sand formed the latest fill of the ditch at this location.

5.4.1.7 At the north-westernmost extent of ditch [80], at the point where it turned to form the outlying south-western ditch, deposit [153] sealed the primary fill. This comprised greyish brown silty sand from which a small assemblage of Iron Age tradition pottery was recovered. Deposit [153] was partially overlain by deposit [134], comprising greyish brown clayey sandy silt, which contained a large quantity of limpet shells. This deposit covered an area measuring *c.* 2.0m x 2.0m and was 0.20m thick; it is interpreted as a dump of shell refuse within the ditch. At this location, the upper ditch fill, [152], comprised brown silty sand up to 0.28m thick, from which a small assemblage of Iron Age tradition pottery was recovered.

5.4.1.8 Approximately 6.0m to the south-east, a section was excavated across the outlying south-western ditch, [80]. A deposit, [334], comprising light reddish brown slightly clayey, sandy silt formed the primary fill. This was overlain by fill [335], comprising similar sandy silt, which formed the upper ditch fill. Both of the fills had apparently been subject to leaching, giving them a sterile, homogeneous appearance. Whilst it is possible that one or both of these fills may have originated during Phase 3.6, the extent of leaching made confident phasing of the deposits very difficult. Therefore, both deposits have been assigned to the latest sub-phase of activity in which they could have originated.

5.4.1.9 A section excavated across ditch [80] adjacent to the western limit of excavation revealed a single deposit, [336], comprising light greyish brown sandy silt with moderate inclusions of iron and manganese panning. The homogeneous, sterile nature of the deposit, along with the mineral panning, suggests that it had been subject to leaching. It is possible that deposit [336] could represent one or more ditch fills that have become indistinguishable and which could, therefore, have originated during the preceding phase of activity. No finds were recovered from the deposit.

5.4.1.10 A section was excavated through the Phase 3.6 outlying ditch [276] at its south-westernmost extent, the point at which it turned sharply to the north. Towards the north-eastern end of the excavated portion, the primary fill, [313], comprised greyish brown silty sand which contained moderate amounts of iron and manganese panning and was similar to the aforementioned leached deposit, [336]. Deposit [312], which comprised dark yellowish brown silty sand with frequent iron and manganese panning, overlay the primary fill. This deposit has been interpreted as possibly having slumped from the north-western side of the ditch. To the west, a second primary fill, [302], comprised soft grey sandy clay and clayey sand. It was largely contained within a deeper portion of the ditch or a possible slot. It is uncertain whether this deposit originated during Phase 4 or the preceding phase and it has therefore been assigned to Phase 4. Analysis of a bulk sample of fill [302] produced numerous waterlogged seeds along with well-preserved insect remains, including fragments of several unidentified beetles and a weevil. Fills [302] and [312] were overlain by a 1.40m thick upper fill, [275], which comprised light greyish brown silty sand and sandy silt with frequent iron and manganese panning and occasional clayey lenses. This material appeared heavily leached, although the presence of clayey lenses within it perhaps suggests that it may be, at least in part, derived from natural silting after the ditch had fallen into disuse.

5.4.1.11 At the northern part of the excavation area, a series of deposits were recorded within the terminus of Phase 3.6 enclosure ditch [168], which defined the north-western limit of the northern entrance. A deposit, [177], comprising pinkish brown clayey silty sand overlay earlier fills and was distinct from those deposits, probably representing a more gradual accumulation of material within the ditch, rather than material originating from primary weathering of the feature. Deposit [177] was overlain by two similar deposits, [178] and [179]. A deposit, [180], comprising greyish brown silty clayey sand, partially overlay fill [179] and was in turn overlain by deposit [208], essentially similar in composition. No dating evidence was recovered from any of these fills.

### 5.4.2 Phase 4: Saltmaking Features 1-3 (Figure 8)

#### *5.4.2.1 Saltmaking Feature 1 (Plate 9)*

Pit [74], masonry [73], fills [72], [71]
Pit [90], fills [89], [91]

5.4.2.1.1 A sub-oval feature, [74], was encountered in the central eastern portion of the excavation area, in what would have been the interior of the enclosure during preceding phases of activity. Feature [74] was an extensive but relatively shallow pit measuring 3.56m x 3.10m x 0.18m deep, with gradually sloping sides and a flat base. The lower portion was filled by a deposit, [73], comprising sandstone and limestone slabs and cobbles. These measured, on average, 200mm x 150mm x 50mm, and for the most part appeared to have been sorted and deliberately selected for conformity of size. The stones could be the remains of a stone surface or collapsed structure originally housed within the feature, which was presumably related to its function. Three large stones, measuring up to 550mm x 500mm x 120mm, were closely grouped within the feature and appeared to have been placed level, with a flat side upwards. Overall, the stones covered an area of 3.40m x 2.20m. A deposit, [72], comprising brown sandy silt with orange and black mottling comprised the secondary fill of the pit and appeared to have accumulated around the stones. A third deposit, [71], comprising greyish brown silty sand with occasional charcoal flecks, formed the tertiary fill being exposed only along the northern and western edges of the feature. Deposit [71] produced a fragment of glass bangle (SF 8) of 1$^{st}$ to early 2$^{nd}$ century AD date.

5.4.2.1.2 This feature has been interpreted as being related to salt processing activity. Although it yielded no direct evidence for this, for example briquetage, its general similarity in form to a feature ([224]) to the north that did contain evidence of salt processing has led to this interpretation.

5.4.2.1.3 A small, sub-circular feature, [90], truncated the northern edge of feature [74]. It had moderately steep sides, a flat base and measured 0.42m x 0.38m x 0.20m deep. It has been interpreted as a possible posthole. Its primary fill, [91], which comprised sandstone rubble (average dimensions 100mm x 100mm x 60mm), may represent post packing. No dating evidence was recovered from the feature. Its location suggests that it was associated with feature [74], however, it is also possible that it originated during a later phase of activity.

#### *5.4.2.2 Saltmaking Feature 2 (Plate 10)*

Pit [236], fills [244], [240], [241], [242], [238], [237], masonry [243]

5.4.2.2.1 An extensive feature, [236], was recorded 11.0m to the north of feature [74]. This was sub-oval in plan, measuring 5.80m x 4.0m x 0.40m deep, and had moderately steep sides and a flat base. A deposit, [244], comprising yellowish brown sandy silt, up to 20mm thick, appeared to have accumulated in a series of shallow depressions in the base of the feature. A deposit, [243], comprising sandstone and limestone blocks formed a secondary fill. The stones were all roughly rectangular and had apparently been sorted for size, the majority measuring between 100mm x 100mm x 100mm to 200mm x 200mm x 200mm. Two substantially larger stones were also exposed within the feature. Most of the stones were concentrated in the central portion of the feature, with only a few lying towards its edges.

5.4.2.2.2 A firm brownish grey clay deposit, [242], up to 80mm thick was recorded in the centre of feature [236]., over an area measuring 1.40m x 1.0m. A deposit, [241], comprising yellowish brown sandy silt, possibly derived from weathering, was recorded at northern edge of the feature This was partially overlain by fill [240], which comprised yellowish brown sandy silt with occasional flecks and small fragments of shell and charcoal. A small fragment of glass (SF 29), which cannot be dated, was recovered from the deposit, although this may have been introduced by animal or root action. Deposit [238], comprising dark brown clayey silt with frequent shell fragments and charcoal flecks, was recorded along the eastern edge of the feature. A bulk sample of this deposit yielded cereal grains, including hulled barley and emmer/spelt wheat. Chaff, mostly from spelt wheat but with a few fragments of emmer, was also recovered along with botanical remains representing wild taxa. Four bone fragments were also recovered, including a fish vertebra. A radiocarbon date of cal. BC 380-170 (Beta-208954; 2160 +/-40 BP) was obtained from charred material within the sample. A similar deposit, [237], partially overlay fill [238].

5.4.2.2.3 Feature [236] has also been interpreted as being associated with salt processing. Stony deposit [243] may represent the remains of a collapsed structure or disturbed surface and clay deposit [242] may be the remains of a central pad, bowl or lining, both being related to the putative function of the feature. It is not certain whether the upper fills accumulated after the feature had fallen into disuse, or whether they derived from use. The high shell and charcoal content of these deposits, particularly deposits [237] and [238], perhaps suggests that this material represents refuse from domestic activity rather than representing *in situ* deposits relating to the postulated function of the feature.

#### *5.4.2.3 Saltmaking Feature 3*

Pit [224], fills [223], [292], [222], [221], masonry [228]

5.4.2.3.1 Another extensive but relatively shallow feature, [224], was recorded adjacent to the northern limit of excavation. This was sub-oval in plan, measuring 4.44m x 4.08 x 0.25m deep, and had gradually sloping sides and a concave base. Its primary fill, [223], which comprised black silt and charcoal, was confined to a small area measuring 0.45m x 0.25m and was 40mm thick. A similar deposit, [292], was located to the east and formed a second primary fill which extended across an area measuring 0.60m x 0.74m.

5.4.2.3.2 A third primary fill, [228], within feature [224] comprised stone blocks, which, although irregular in shape, appeared to have been sorted for size with the majority measuring *c.* 250mm x 220mm x 170mm. The stones were clustered in the central and southern portions of the feature and may represent a collapsed structure or disturbed surface.

5.4.2.3.3 Each of the primary fills was overlain by a 0.15m thick deposit, [222], comprising brown sandy silt, which extended across the full extent of the feature. Two fragments of animal bone were recovered from this deposit, along with two fragments of briquetage. The upper fill, [221], comprised dark greyish brown humic silt with occasional charcoal fragments. A small assemblage of Iron Age tradition pottery was recovered, including a sherd from a very large vessel, which showed evidence of being affected by exposure to salt. A second sherd, from a smaller vessel, may also have been subject to exposure to salt.

5.4.2.3.4 The presence of salt-affected pottery and briquetage within feature [224] has been interpreted as an indication that this feature was associated with salt processing. Features [236] and [74], to the south have been similarly interpreted, on the basis of their close similarity in form to feature [224].

### 5.4.3 Discrete features (Figure 8)

Pit [233], fill [234]; fill [230]; pit [231], fill [232]
?Posthole [206], fill [207]; ?posthole [229]

5.4.3.1 A short distance to the east of feature [224], a shallow sub-rectangular feature, [233], was recorded. It measured 1.40m NW-SE x 0.60m x 20mm deep and had gradually sloping sides and a concave base. Its single fill, [234], comprised dark yellowish brown silty sand. The south-eastern end of feature [224] was truncated by a sub-rectangular feature, [231], which had gradually sloping sides and a flat base. This measured 1.50m x 0.54m x 0.10m deep and contained a single sandy fill, [232].

5.4.3.2 The two features described above have been broadly interpreted as small pits, although their precise function is not clear. Given their proximity to the putative saltern feature [224], it is possible that they were associated with salt processing in some way and have, therefore, been assigned to Phase 4.

5.4.3.3 A sub-circular feature, [229], partially truncated the north-western end of feature [224]. It measured 0.50m x 0.42m x 40mm deep and its silty sand fill, [230], produced a single sherd of Iron Age tradition pottery. A similar sub-circular feature, [206], which measured 0.49m x 0.36m x 0.26m deep was encountered a short distance to the south-east of feature [229]. These two features are interpreted as possible postholes, perhaps representing the remains of a simple structure.

### 5.4.4 'Working hollow' and associated features (Figure 8)

*In the north-eastern corner of the excavation area, a substantial depression, most probably of natural origin, extended over an area measuring c. 22m x 20m, extending beyond the northern and eastern limits of excavation. The depression was located internal to the area bounded by the Phase 3 enclosure ditches, close to the northern entrance. Numerous features were recorded in the base of the depression, which has been interpreted as being an indication that the feature was utilised as a 'working hollow'. It would have afforded a degree of shelter at this highly exposed location.*

Pit [263], fill [264]
Gully [314], fill [315]
Gully [192], fills [193], [194]
Layer [301]
Gully [298], fill [300]; gully [338], fills, [299], [339]; gully [268], fill [269]
Pit [185], fill [186]

5.4.4.1 A curvilinear feature, [263], was recorded in the base of the natural depression adjacent to the eastern limit of excavation. It measured 2.50m x 0.50m x 0.20m deep and was orientated approximately north-south. It had steep irregular sides, a largely concave base, flat in places, and a rounded southern terminus. To the north, it had been truncated by feature [268], although it turned to the east, possibly terminating, close to the point of truncation. The feature has been interpreted as a gully, possibly associated with drainage.

5.4.4.2 A curvilinear feature, [314], was recorded to the south, also in the base of the depression. This was orientated roughly north-south, turning slightly towards the south-east at its southern end, and measured 4.90m x 0.58m x 0.19m deep. It had moderately steep sides, a concave base and a rounded terminus at either end. The feature has been interpreted as a gully, possibly associated with drainage.

5.4.4.3 Curvilinear feature [192] was encountered to the north-west of gully [314] and this was orientated roughly NE-SW, turning further to the north at its north-eastern end. It measured 4.90m x 0.70m x 0.16m deep and had moderately steep sides, a concave base and a rounded terminus at either end. The feature has been interpreted as a gully, although again its precise function is unclear. A single sherd of Iron Age tradition pottery was recovered from its fill, [193], recorded at its eastern terminus.

5.4.4.4 A shallow sub-rectangular feature, [185], was recorded in the base of the depression. It measured 2.60m NE-SW and was wider at its north-eastern end (1.30m) than its south-western end (0.75m). The feature was only 0.07m deep and had gradually sloping sides and a flat base, which sloped slightly towards the south-eastern side. The feature has been broadly interpreted as the remains of a pit, although its precise function is uncertain. It may represent the setting for the base a large object, for example a wooden tank. Its single fill, [186], comprised dark bluish grey sandy silt, from which a single sherd of Iron Age tradition pottery was recovered.

5.4.4.5 To the south of feature [185], a 0.15m thick deposit, [301], comprising orange brown sandy silt with frequent sub-rounded and sub-angular cobbles, along with frequent charcoal flecks was recorded over an area measuring 5.80m x 3.40m. This layer was located in the base of the depression, close to its southern limit and was possibly derived from activity taking place in the base of the depression. It may represent a layer of 'trample' accumulated during use of the depression, although it could have been derived from material washed into the base of the depression.

5.4.4.6 Layer [301], and feature [314] were truncated by a curvilinear feature, [298], which measured *c.* 13.22m x up to 1.60m wide x 0.40m deep. The feature ran around the edge of the base of the depression in its southern portion and had moderately steep sides and a concave base. At its westernmost limit, the feature ended in a gradual, rounded terminus, whilst at its easternmost limit it had been truncated. The feature is interpreted as a ditch, possibly to facilitate drainage around the perimeter of the depression. A deposit, [300], comprising brown sandy silt and pea grit, formed the only fill of ditch [298].

5.4.4.7 To the north-east, was a curvilinear feature, [338], assigned context number [268] at its north-eastern extent. This had moderately steep sides, a concave base and measured 5.50m x 1.72m wide x up to 0.73m deep. It had a shallow rounded terminus in the north and was truncated to the south. This feature has been interpreted as a probable continuation of feature [298], the greater depth possibly caused by the effects of water action. Its primary fill, [339], encountered in the southern portion, comprised pinkish brown silty sand, overlain by a sandy silt fill, [299]. To the north, a single silty sandy fill, [269], was recorded, which contained occasional sub-rounded stones, some possibly fire-cracked.

5.4.4.8 A sub-oval feature, [296], truncated ditches [298] and [338]. It had moderately steep sides, a flat base and measured 3.46m x 1.72m x 0.95m deep. The feature has been interpreted as a pit, although its precise function remains uncertain. Its single fill, [297], comprised mottled yellow, pink and orange brown silty sand with frequent small stones and occasional larger cobbles. An unusually thick sherd of Iron Age tradition pottery was recovered for this feature.

### 5.4.5 Stone yard surface (Figure 8; Plate 11)

Cut [189], fills [190], [191], surface [64]

5.4.5.1 An irregularly shaped feature, [189], was recorded adjacent to the central eastern limit of excavation. This measured 7.20m NW-SE x 5.0m NE-SW x 0.26m deep and had moderately steep sides and a largely flat base. Its primary silty sandy fill, [190], may have been a bedding layer for the overlying fill, [191], which comprised stone blocks and cobbles measuring an average of 100mm x 100mm x 100mm. There was relatively little variation in size of the stones, indicating that they had been deliberately sorted. A small assemblage of abraded Iron Age tradition pottery sherds was recovered from amongst the stones, along with two sherds of briquetage. The secondary fill was overlain by another stony deposit, [64], comprising large stone blocks, measuring, on average, 300mm x 300mm x 250mm and each having a flat side. The blocks had been laid closely spaced, with the flat side up to create a level surface, interpreted as a yard or area of hardstanding, covering an area of 7.20m NW-SE x 5.0m NE-SW.

5.4.5.2 There are several parallels for similar stone surfaces on sites dating to the late Iron Age and early Romano-British period in Northumberland. Such structures appear to have functioned as yard surfaces, often associated with hut circles or stone-built dwellings. The function of stony layer [191] is not certain. While it may have been a bedding deposit to facilitate the construction of surface [64], it is conceivable that it represents the remains of an earlier surface, subsequently overlain with surface [64]. The presence of briquetage, along with abraded Iron Age tradition pottery, within deposit [191] has been interpreted as an indication that both that layer and yard surface [64] originated during Phase 4. The possibility must be acknowledged, however, that the stone surface may have its origins during the subsequent phase of activity.

### *5.4.6 Midden (Figure 8; Plate 7)*

Midden [187]

5.4.6.1 A deposit, [187], comprising limpet and periwinkle shells in an orange brown silty matrix was encountered a short distance to the west of feature [49]. This extended over an area measuring 1.74m x 0.90m and was 80mm thick and overlay a very slight depression in the underlying sub-stratum. The deposit has been interpreted as a midden. The majority of the assemblage comprised limpet shells, although approximately one third of the material was periwinkle, and occasional oyster shell and mussel shell were also present. A small number of charred cereal grains, both oat and barley, were also recovered from a bulk sample of the deposit.

5.4.6.2 The midden has been assigned to this phase of activity as its location would have hindered ingress and egress through the southern enclosure entrance (in Phase 3), indicating that the enclosure had gone into disuse by the time of its deposition.

### 5.4.7 Phase 4: Summary Discussion

5.4.7.1 Phase 4 witnessed major changes in both the activity and the spatial organisation of the land at the site. The substantial the enclosure ditches fell into disuse and, unlike in earlier times, were not reinstated. Large quantities of briquetage recovered from the abandonment fills of the enclosure ditches indicated that saltmaking was undertaken during this phase of activity. It is significant that no briquetage was recovered from enclosure ditch fills deposited whilst the enclosure was being maintained, suggesting that saltmaking began during this period. Several features located internal to the area previously bounded by the ditches may have been associated with salt processing, and this activity is also likely to have been undertaken within a substantial 'working hollow' which would have afforded some degree of protection from the elements. The significance of salt to ancient communities has long been recognised by archaeologists and historians, both as a food preservative and for more specialist livestock related activities such as tanning and cheese-making.[14]

5.4.7.2 A midden, largely comprising shellfish, is interpreted as being associated with this phase of activity. The use of shellfish as a food source in prehistoric contexts has, at times, been interpreted in the past as indicative of a subsistence or famine food, indicating a society under stress. However, the use of shellfish, both periwinkle and limpet, in the diet of British communities has a longstanding tradition and have been used as a common food source amongst coastal communities into the recent post-medieval period.

[14] Lane and Morris, 2001, 6.

## 5.5 Phase 5: 1st Century AD Pits, Posts and Abandonment of 'Working Hollow'

*Deposits and features assigned to Phase 5 tentatively suggest a change in activities at the site. The 'working hollow' to the north evidently fell into disuse with deposits accumulating within it, these derived in part from washed-in material. To the south, was an area of pitting, including a series of shallow mostly clay-lined, pits, indicative of a different form of activity to that which characterised Phase 4. Little dating evidence was recovered from these pits, although one feature, this without a clay lining, produced a small assemblage of artefacts broadly of 1st century AD date.*

### 5.5.1 Pits (Figure 9; Plate 12)

Pit [164], lining [165], fill [166]
Pit [289], lining [290], fill [291]; Pit [286], lining [287], fill [288]; Pit [283], lining [284], fill [285]; Pit [265], lining [266], fill [267]
Pit [115], fills [118], [117], [116]; Pit [112], lining [113], fill [114]; Pit [108], fills [109], [110], [111]
Pit [101], fill [102]
Pit [67], fill [68]
Pit [97], fills [119], [96]

5.5.1.1 A sub-circular pit, [164], was recorded adjacent to the eastern limit of excavation. This measured 0.75m in diameter x 0.24m deep and had steep sides and a flat base. A deposit, [165], comprising light pinkish grey clay *c.* 80mm thick formed a clay lining around its sides and base. A further deposit, [166], comprising grey clayey silt with orange and green mottling and occasional charcoal flecks formed the main fill. The pit has been assigned to Phase 5 as it cut the southern edge of truncated Phase 4 saltern feature 2.

5.5.1.2 A cluster of intercutting features was encountered immediately to the west of pit [164]. The earliest comprised a sub-circular pit, [289], measuring 0.64m x 0.52m x 0.13m deep with moderately steep sides and a flat base. This also had a greyish pink clay lining, [290], up to 70mm thick. Above the lining was a single fill, [291], comprising yellowish brown clayey silt with occasional charcoal flecks.

5.5.1.3 Pit [289] was truncated by a clay-lined pit, [286], similar in profile, which measured 0.90m in diameter x 0.16m deep. A lining, [287], comprised orange and brownish grey clay, up to 100mm thick, which was overlain by fill [288], which comprised reddish brown clayey silt with frequent charcoal flecks.

5.5.1.4 Pit [286] was truncated by another clay-lined pit, [283], which measured 0.90m in diameter x 0.16m deep and had steep sides and a concave base. Its brownish grey clay lining, [284], was 80mm thick and deposit [285], which comprised reddish brown clayey silt with frequent charcoal flecks and occasional fragments of unfired clay, infilled the remainder of the feature. Two sherds of Iron Age tradition pottery were recovered from this feature.

5.5.1.5 The latest feature in this group was a sub-circular pit, [265], which had steep sides, a flat base and measured 0.94m x 0.80m x 0.20m deep. The lining, [266], comprised yellow clay with pinkish grey patches, up to 0.11m thick. A deposit, [267], comprising reddish brown clayey silt with frequent charcoal flecks was the material infilling the pit.

5.5.1.6 Another group of pits was recorded immediately to the south-west of the previously described features. A sub-circular pit, [115], measuring 0.92m x 0.68m x 0.40m deep with steep sides and a concave base formed the northernmost of the group. Its primary fill, [118], comprising greyish brown sandy silt with yellow mottling was overlain by deposit [117], comprising yellow silty sand. The upper fill, [116], comprised brown sandy silt with occasional charcoal flecks.

5.5.1.7 A sub-circular pit, [112], was located immediately to the south-west of pit [115]. It measured 0.39m in diameter x 0.25m deep and had steep sides and a concave base. Its primary fill, [113], which comprised pinkish grey clay up to 0.10m thick, could represent the remains of a clay-lining. The upper fill, [114], comprised greyish brown clayey silt with yellow mottling.

5.5.1.8 A sub-circular pit, [108], truncated pits [112] and [115]. This measured 0.96m x 0.92m x 0.36m deep and had near vertical sides and a concave base. Its primary fill, [109], comprising greyish brown sandy silt, was overlain by deposit [110], comprising brown sandy silt. The upper fill, [111], comprised brown sandy silt with occasional charcoal flecks.

5.5.1.9 A short distance to the south was a sub-circular pit, [97], which measured 0.76m x 0.75m x 0.33m deep and had near vertical sides and a flat base. Its primary fill, [119], comprised greyish brown sandy silt up to 0.11m thick. Artefactual material recovered from this deposit included a fragment of opaque white glass bangle (SF 11), a shale finger ring (SF 12), a fragment of an object made from reused pottery (SF 16), a small sherd of samian ware dating from AD 40-100, and an abraded sherd of Iron Age tradition pottery. A bulk sample of this deposit produced hulled barley cereal grains and chaff from barley and wheat, along with fragments of material from wild species. The upper fill, [96], of the pit comprised greyish brown sandy silt.

5.5.1.10 A small sub-circular pit, [101], was encountered *c.* 2.0m to the east of pit [97]. This measured 0.50m x 0.40m x 0.18m deep with had steep sides and a flat base. Its single fill, [102], comprised brown sandy silt with occasional charcoal flecks.

5.5.1.11 To the north-east was a more substantial circular pit, [67]. It measured 1.44m x 1.40m x 0.50m deep and had moderately steep sides and a concave base. There had been some disturbance to the feature caused by burrowing animals. Its single fill, [68], comprised reddish and greyish brown sandy silt with moderate charcoal flecks A small assemblage of late Iron Age tradition pottery was recovered, along with two small sherds of 19$^{th}$ century pottery and a fragment of clay pipe stem. The post-medieval finds recovered from the fill were noted to have been collected in the vicinity of animal disturbance and are considered to have been introduced intrusively.

### 5.5.2 Posthole alignment and associated gully (Figure 9; Section 7, Figure 15)

Posthole [75], fill [76]; Posthole [136], fill [135]; Posthole [139], fills [138], [137]; Posthole [156], fill [157]
Gully [78], fill [77]

5.5.2.1 A group of four sub-circular features, [75], [136], [139] and [156], was recorded in the central portion of the excavation area. They had generally steep sides, with the exception of feature [136], which had more gradually sloping sides, with concave or irregular bases. The size of the features ranged from 0.90m x 0.60m x 0.30m deep (feature [156]) to 0.44m x 0.30m x 0.06m deep (feature [136]). A deposit, [76], comprising brown sandy silt formed the single fill of feature [75]. Similar deposits, [135] and [138], formed the single fill and primary fill of pits [136] and [139], respectively. A further similar deposit, [137], formed the secondary fill of pit [139]. A deposit, [157], comprising greyish brown sand with large stones or cobbles, possibly post-packing, formed the fill of pit [156]. These features, which have been interpreted as postholes, were aligned approximately NW-SE and may represent the remains of a fenceline which would have had posts spaced *c.* 1.10m apart.

5.5.2.2 A NW-SE orientated linear feature, [78], measuring 5.0m x 0.80m x 0.20m deep was recorded a short distance to the north of the putative fenceline described above. This had irregular edges with steep sides, a largely flat base and a rounded terminus at either end. Its single fill, [77], comprised brown silty sand with moderate flecks of burnt clay, ash and charcoal from which three abraded sherds of Iron Age tradition pottery and a single sherd of briquetage were recovered. The feature is interpreted as representing a short length of fenceline or gully, and given its proximity and similarity in alignment to the putative fenceline described above, it is possible that they may have been associated.

### 5.5.3 Abandonment of 'working hollow'

Layer [204]; layer [167]; layer [274]; layer [225]; layer [235]; layer [247]; layer [248]

5.5.3.1 A deposit, [204], was recorded (to the north of evaluation Trench 27) within the large depression in the northernmost part of the site. Up to 0.23m thick and covering an area measuring 6.0m x 4.0m, it comprised mid yellowish brown silty sand with occasional charcoal flecks. A sherd of briquetage and a sherd of Iron Age tradition pottery, which showed evidence of being affected by salt, were recovered. The deposit, which overlay Phase 4 feature [298], was partially overlain by a 0.11m thick layer, [167], comprising mid reddish brown silty sand with occasional charcoal flecks which covered an area measuring 12.20m x 9.0m. An assemblage of Iron Age tradition pottery was recovered, along with two fragments of briquetage. Three of the pottery sherds showed evidence of discolouration through the effects of salt and the briquetage fragments appear to have come from rods, rather than vessels. Rods, which were used to support containers in an oven or over a hearth during the salt production process, are well known from salt production sites in Lincolnshire and their presence is strong evidence for salt processing having been undertaken at the site.

5.5.3.2 To the north-east of layer [167], deposit [225] was recorded, and this comprised dark greyish brown silty sand with occasional fractured stones and charcoal flecks. It was up to 0.30m thick and was recorded over an area measuring 3.0m x 3.0m. A small assemblage of Iron Age tradition pottery was recovered, including four sherds of salt-discoloured pottery. To the north-west, a 0.10m thick layer, [235], comprising mid to dark brown sandy silt, was recorded over an measuring 6.0m x 3.80m, extending beyond the northern limit of excavation.

5.5.3.3 To the south of evaluation Trench 27, a layer, [274], up to 0.52m thick was recorded over an area measuring 17.30m x 4.0m. This comprised mid to dark brown sandy silt, merging to light orange brown in the east. It was overlain by a similar deposit, [248], recorded over an area measuring 19.20m x 5.80m and 0.32m thick. A small assemblage of Iron Age tradition pottery was recovered from layer [248] of which one sherd showed evidence of discolouration by salt exposure. The latest deposit in this area, [247], was up to 0.20m thick and comprised mid to dark brown sandy silt with occasional pebbles, recorded over an area measuring 19.05m x 5.20m. A single sherd of Iron Age tradition pottery was recovered from this deposit.

5.5.3.4 Layers [167], [204],[225], [247], [248], and [274] overlay Phase 4 features cut into base of the substantial depression in the northern part of the site and have been interpreted as general accumulation deposits, probably derived in part from material washed into the depression, along with deposits developing *in situ*. It is probable that this material accumulated after the 'working hollow' had ceased to be a focus of activity. The salt-affected pottery and briquetage, including two rod fragments, that were recovered, are likely to have been derived from salt processing activity undertaken in the vicinity during Phase 4.

### 5.5.4 Miscellaneous features (Figure 9)

Pit [253], fill [254]
Pit [92], fill [93]
Pit [84], fill [85]
Gully [183], fill [184]
Gully [181], fill [182]

5.5.4.1 A sub-oval feature, [253], with steep sides and a flat base was recorded in the eastern central part of the site. It measured 2.05m x 0.84m and 0.13m deep and has been interpreted as a shallow pit.

5.5.4.2 A small semi-circular feature, [92], was encountered to the north-west of feature [253]. It had moderately steep sides, a concave base and measured 0.60m x 0.12m x 0.17m deep, although it had been badly damaged by animal burrowing.

5.5.4.3 Feature [84], located within the vicinity of the cluster of clay-lined pits, was irregular in plan and profile and measured 0.95m x 0.84m x 0.12m deep. Its single fill, [85], comprised brown sandy silt from which a sherd of Iron Age tradition pottery and a sherd of briquetage were recovered. The irregularity of the feature perhaps suggests that it represents, for example, a tree bole or was the result of animal burrowing, rather than being of anthropogenic origin.

5.5.4.4 A curvilinear feature, [183], was recorded close to the eastern limit of excavation, immediately to the north of pit [164]. It was orientated approximately east-west and measured 4.0m x 0.50m x 0.12m deep. It had irregular sides and base and had been disturbed at its eastern end by animal burrows and had probably been truncated by modern ploughing at its western end. A single reddish brown sandy silt deposit, [184], was recorded. The precise function of this feature is uncertain.

5.5.4.5 A linear feature, [181], was encountered a short distance to the north. It was orientated NE-SW and measured 3.30m x 0.34m x 0.08m deep. A shallow, gradually sloping terminus at either end indicates that the feature had been subject to horizontal truncation. It contained a single fill, [182], comprising reddish brown sandy silt. The feature has been interpreted as a short length of gully of uncertain function.

### 5.5.6 Phase 5: Summary discussion

5.5.6.1 Phase 5 saw a change in the nature of activity being undertaken at the site. The vast 'working hollow' to the north had evidently fallen into disuse, as evidenced by a series of accumulation deposits overlying Phase 4 features that represented ongoing activities. These layers produced an assemblage of Iron Age tradition pottery and briquetage, although it is more likely that the salt processing material was derived form Phase 4 activity. Seemingly the focus of activity shifted to the south-east of the 'working hollow', to the area where two salterns were active in Phase 4. An area of relatively intensive pitting forms the bulk of the activity assigned to Phase 5 and the artefactual material recovered from one of these pits included a fragment of samian ware dated to 40-100 AD. Most noteworthy amongst this activity was a cluster of clay-lined pits, many intercutting, all uniformly shallow. The purpose of the clay linings, and indeed the features themselves, was not ascertained, although it is assumed that the lining formed an integral part of the function, and was most likely to waterproof the interior.

## 5.6 Phase 6: Medieval

### 5.6.1 Phase 6.1: Field boundaries (Figure 10)

Ditch [33], fill [34]
Ditch [56], fill [55]
Pit [57], fill [58]
Ditch [39], fills [40], [51]

5.6.1.1 Part of a linear feature, [56], was recorded in the south-eastern corner of the excavation area. It had been heavily truncated, so that its surviving dimensions were 0.85m wide and 0.25m deep. Approximately 1.80m of the length of the feature was traced, orientated approximately NW-SE. It had moderately steep sides and a flat base. The feature is interpreted as the remains of a possible field boundary.

5.6.1.2 A substantial irregular shaped feature, [57], was encountered to the north-west of feature [56]. It measured 4.48m x 1.92m x 0.61m deep and had moderately steep sides and an irregular base. It has been interpreted as a possible tree throw or the remains of an animal burrow. It contained a single deposit, [58], comprising brown sandy silt, which produced a small assemblage of 13$^{th}$ or 14$^{th}$ century pottery.

5.6.1.3 A linear feature, [39], truncated feature [57], running on a NE-SW alignment, and measured 11.92m x 1.0m x 0.19m deep. It had irregular sides, base and termini and this irregularity, combined with its shallow depth, suggests that it had been disturbed in some fashion. Two deposits, [40] and [51], were recorded within excavated portions of the feature, both comprised brown sandy silt and probably represent the same fill. The feature may represent a boundary marker such as a fenceline, or a drainage ditch. The alignment of this feature continued to the east with feature [33], which measured 2.04m x 0.88m x 0.27m deep. This had a rounded terminus at its western end and was truncated to the east. It had moderately steep sides and a flat base, which sloped downwards towards the north-east. Its single fill, [34], comprised mottled orange brown and yellow silty sand.

### 5.6.2 Phase 6.2: Redefinition of field boundary and evidence of ploughing (Figure 11)

Ditch [30], fills [31], [32], [53], [54]
Pit [47], fill [48]
Gully [23], fill [22]; Gully [27], fill [26]; Gully [36], fill [35]
Pit [145], fill [144]

5.6.2.1 A substantial, NW-SE aligned, linear feature, [30], was recorded adjacent to the limit of excavation in the south-eastern corner of the site. It had moderately steep sides, a concave base and was 3.84m wide and 1.26m deep. It was traced for a distance of 23.74m and at its north-western extent appeared to turn to the north-east or, perhaps more likely, terminate. The feature is interpreted as a field boundary ditch, probably representing a recut of Phase 6.1 ditch, [56]. Two sections were excavated through ditch [30], revealing a primary fill, [54], at its south-easternmost extent comprising greyish brown silty sand, up to 0.29m thick. This was overlain by fill [53], comprising pinkish brown sandy silt from which a small assemblage of pottery of 13th/14th century date was recovered. Another primary fill, [32], was recorded in the north-westernmost portion, this comprised orange brown silty sand. It was overlain by fill [31], comprising reddish brown silty sand, which also produced an assemblage of 13th and 14th century pottery, along with a fragment of medieval tile. A single fragment of 19th century clay pipe stem was also recovered from the deposit but was probably introduced intrusively, through animal or root disturbance.

5.6.2.2 Part of a probable semi-circular feature, [47], was encountered *c.* 2.0m to the north-west of the northernmost extent of ditch [30]. This had moderately steep sides and a concave base and measured 2.90m x 1.12m x 0.40m deep, extending beyond the limit of excavation to the east. Its function is uncertain, but it may have been a pit or possibly a tree throw. A single fill, [48], comprised orange brown sandy silt.

5.6.2.3 To the south-west of ditch [30], a NW-SE orientated feature, [27], extended from the southern limit of excavation. It measured 2.34m x 0.42m x 0.26m deep and had gradual sloping sides and a concave base, sloping gradually to a rounded terminus at its north-western end. Its single fill, [26], comprised greyish brown silty sand from which two sherds of medieval pottery, possibly of 13th century date, were recovered.

5.6.2.4 A second linear feature, [23], of similar profile and running on the same alignment to feature [27] was encountered a short distance to the north-west. This measured 5.18m x 0.70m x 0.10m deep. Both features may represent parts of a truncated gully, or alternatively may be plough scores.

5.6.2.5 A short distance to the north-east of [27], a very irregularly-shaped feature, [36], was recorded. It was roughly linear in plan, with considerable irregularities, and had gradual sides and an irregular base. It measured 4.97m x 1.92m wide (maximum unexcavated width) x 0.15m deep, with an average width of *c.* 0.90m. Its single fill, [35], comprised orange brown silty sand. This is interpreted as another possible plough score or drainage gully, its irregularity shape possibly being the result of disturbance by burrowing animals.

5.6.2.6 An irregularly-shaped feature, [145], was encountered in the central portion of the main excavation area, towards the eastern limit of excavation. It had moderately steep sides and a concave base and measured 1.42m x 0.76m x 0.24m deep. The feature appeared to be an irregularly-shaped pit, although its precise function is unclear. A single sherd of abraded pottery possibly dated from the medieval period was recovered from its sandy fill, [144].

### 5.6.3 Phase 6 Summary discussion

5.6.3.1 The features assigned to Phase 6 suggest that a medieval field system was established on what may have been considered marginal land for much of the early medieval period. Utilisation of this marginal land for agriculture or pasture may have been linked to the fortunes of nearby Berwick-upon-Tweed.

## 5.7 Phase 7: Post-medieval

### 5.7.1 Drainage (Figure 12)

Ditch [19], fill [18]
Pit [17], fill [16]
Ditch [45], fill [46]
Ditch [69], fill [70]
Ditch [65], fill [66]
Ditch [3], fills [1], [2]
Pit [8], fills [6], [7]

5.7.1.1 A narrow, NE-SW aligned, linear feature, [19], was encountered close in the south-western corner of the excavation area. This measured 5.08m x 0.40m wide x 0.08m deep, continuing to the south-west, and had gradual sides and a flat base that sloped down to the south-west, following the natural topography. The feature has been interpreted as a shallow drainage ditch or gully. A sub-oval pit, [17], was recorded adjacent to the north-eastern end of feature [19]. This had steep sides and a flat base and measured 1.24m x 0.81m x 0.43m deep. Its single fill, [16], comprised brownish grey sandy silt which was indistinguishable from that of ditch [19]. The precise relationship between the two is uncertain and they may well have been contemporary.

5.7.1.2 A similar parallel feature, [45], was encountered in the central portion of the excavation area. This measured 24.20m x 1.05m wide x 0.20m deep and had moderately steep sides and an irregular base, sloping downwards to the south-west, with rounded terminals at either end. A single sherd of 19$^{th}$ century pottery was recovered from its fill, [46]. Linear feature [69], recorded adjacent to the western limit of excavation, was similar in profile and measured 10.74m x 0.48m x 0.08m deep. To the north-east, another similar feature, [65], measured 8.24m x 0.30m x 0.10m deep. As a group, these features have been interpreted as representing elements of a post-medieval field system; the specific purpose of the features may have been as drainage gullies.

5.7.1.3 Towards the north-western corner of the excavation area, a NE-SW orientated linear feature, [3], extended from the western limit of excavation for a distance of 14.30m. It measured 0.40m wide x 0.17m deep and had steep sides and a flat base. The sides of the feature had been deliberately lined with irregularly-shaped red sandstone blocks, [1], with an average size of 300mm x 200mm x 100mm. Within the lining, a single deposit, [2], was recorded. This comprised soft greyish brown sandy silt, from which an assemblage of 18$^{th}$/19$^{th}$ century pottery was recovered. The feature is interpreted as a stone-lined drain.

5.7.1.4 The north-eastern end of the stone-lined drain was truncated by a sub-rectangular feature, [8], which measured 1.80m NW-SE x 0.60m x 0.63 deep. Its primary fill, [6] comprised sandstone rubble consisting of irregular blocks up to 680mm x 230mm x 150mm, and included a substantial fragment of a rotary quernstone (SF 1), presumably residual in context and deriving from earlier activity at the site. A secondary fill, [7], comprising orange brown silty sand, partially overlay the rubble. The feature is interpreted as a sump, contemporary with stone-lined drain [3].

### 5.7.2 Miscellaneous features (Figure 12)

Pit [98], fills [99], [100]
Feature [321], fill [81]
Pit [20], fill [21]
Gully [28], fill [29]
Pit [38], fill [37]
Gully [42], fill [41]
Pit [59], fill [62]

5.7.2.1 Towards the south-eastern corner of the excavation area, a sub-circular feature, [20], was recorded. It was irregular in profile and plan, measuring 1.10m x 0.80m and was very shallow, at only 40mm deep. No dating evidence was recovered from its fill, [21], and it has therefore been assigned to the latest possible phase of activity. Similarly, a curvilinear feature, [28], which measured 5.05m x 0.40m x 0.10m deep, and lay to the north, has been assigned to this phase of activity. These features have both been interpreted as resulting from animal or root disturbance.

5.7.2.2 A sub-rectangular feature, [38], was recorded to the south-west of feature [28]. It was irregular in profile and measured 2.10m x 1.68m x 0.35m deep. A single fill, [37], comprised grey silty sand, ash and coal and the feature has been interpreted as a fire-pit, probably of post-medieval date.

5.7.2.3 A short, east-west aligned, linear feature, [42], was recorded in the central portion of the excavation area. This had steep sides, a concave base, a rounded terminus at either end and measured 4.06m x 0.28m x 0.07m deep. It is interpreted as a possible plough score or may have been caused by animal or root disturbance.

5.7.2.4 A linear feature, [321], orientated NE-SW was recorded close to the eastern limit of the excavation area. This measured 2.65m x 0.74m x 0.30m deep and had steep sides and a flat base. A small assemblage of 19$^{th}$ century pottery was recovered from its fill, [81]. The feature truncated Phase 4 surface [64] and is interpreted as a 'robber trench', dug at a later date to remove blocks from the stone surface for another purpose.

5.7.2.5 Feature [59] was encountered a short distance to the north of feature [321], adjacent to the limit of excavation. It had gradually sloping sides and a flat base, which continued beyond the limit of excavation to the north, and measured 1.0m x 0.30m x 0.27m deep. This feature also truncated surface [64], and is interpreted as a small pit, the result of the removal of a large stone from the surface, possibly during ploughing or for the purpose of reusing the stone.

5.7.2.6 A small sub-oval pit, [98], was encountered to the north-west of feature [59]. This measured 0.70m x 0.55m x 0.27m deep and had steep sides and a concave base. The primary fill, [99], comprised greyish brown sandy silt, with a concentration of large stones around the edges of the pit. Two small fragments of 19th century pottery were recovered from this fill, however disturbance by animal or root action was noted and it is possible that these were intrusive. The upper fill, [100], comprised brown sandy silt. This feature was located within the area of Phase 5 pitting but has been assigned to this later phase of activity due to the presence of 19th century material within its primary fill. The possibility is acknowledged, however, that the feature may have originated during an earlier phase of activity, probably Phase 5.

### 5.7.3 Sub-soil

Layers [15], [52], [63] and [163]

5.7.3.1 A layer, [52], comprising pinkish brown sandy silt up to 0.29m thick was recorded in the south-eastern corner of the excavation area, over an area measuring approximately 30.0m x 12.0m, extending beyond the limits of excavation to the south-east and north-east. The deposit was excavated by machine during the removal of overburden and is interpreted as a post-medieval or earlier sub-soil.

5.7.3.2 A layer, [63], comprising orange brown sandy silt, 0.41m thick, overlay pit [59] in the central portion of the site. This layer is interpreted as the surviving portion of a sub-soil of post-medieval or earlier origin.

5.7.3.3 Layer [163], comprising loosely compacted sandstone fragments and sub-rounded cobbles in a silty matrix, was recorded towards the northernmost corner of the excavation area. This layer covered an area of 8.0m x 3.80m and was 0.30m thick and is interpreted as the remnants of a more extensive deposit that was removed during machine removal of overburden. Post-medieval pottery, glass and clay tobacco pipe was recovered from the deposit during machine clearance, but was not retained. The layer possibly represents field clearance throughout the post-medieval period, with the large depression at the north of the excavation area being infilled gradually by such activity.

5.7.3.4 In the south-western corner of the site, features [17] and [19] were both overlain by a deposit, [15], comprising brown sandy clayey silt. The deposit extended across an area covering approximately 40.0m x 35.0m and is interpreted as a sub-soil of post-medieval or earlier origin.

### 5.7.4 Phase 7: Summary discussion

5.7.4.1 The features assigned to Phase 7 represent activity broadly of 18th/19th century date and are indicative of an area utilised for agricultural purposes. A series of parallel drainage features suggests that, by the 19th century, systematic attempts at drainage had been undertaken at the site.

## 5.8 Phase 8: Modern

### 5.8.1 Topsoil

Layer [4]

5.8.2 A deposit, [4], comprising dark brown clayey silty sand, formed a layer of topsoil up to 1.0m thick, which extended across the entire excavation area. The deposit was at its thickest in the south-western extension to the excavation area. For the most part, the topsoil had an average thickness of *c* .0.35m, generally becoming thicker in areas where the natural topography began to slope away.

### 5.8.2 Phase 8: Summary discussion

5.8.2.1 There was a relatively thin covering of topsoil across the majority of the excavation area, with little or no sub-soil surviving in many places. Accordingly, it is considered that archaeological levels (of significance) at the site are likely to have been subject to horizontal truncation through post-medieval ploughing. While the precise extent of such truncation is difficult to quantify, the survival of positive features, such as the Phase 4 midden and the Phase 5 stone surface, perhaps suggest that wholesale removal of archaeological deposits of significance has not occurred.

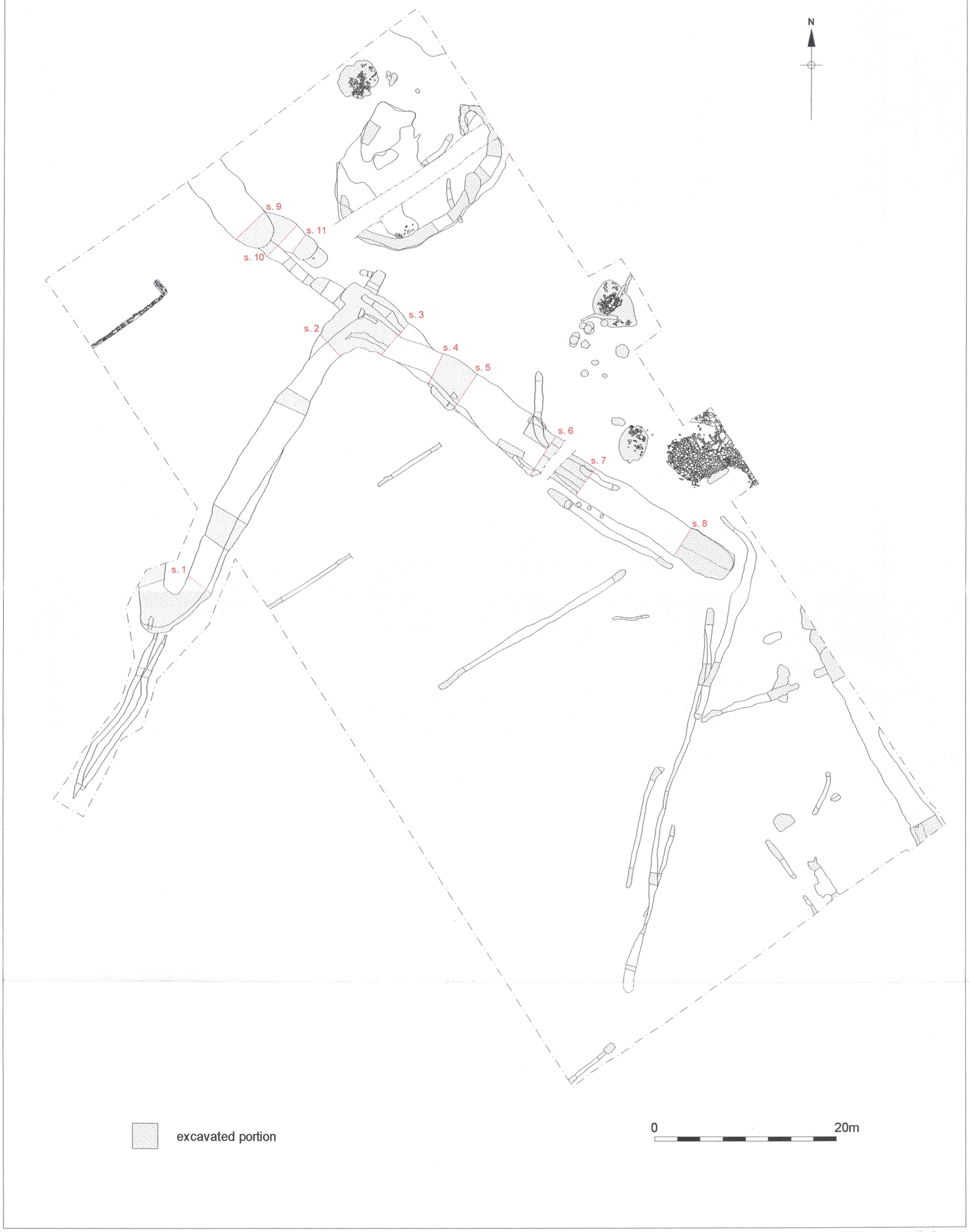



Figure 3. All features, all phases
Scale 1:400

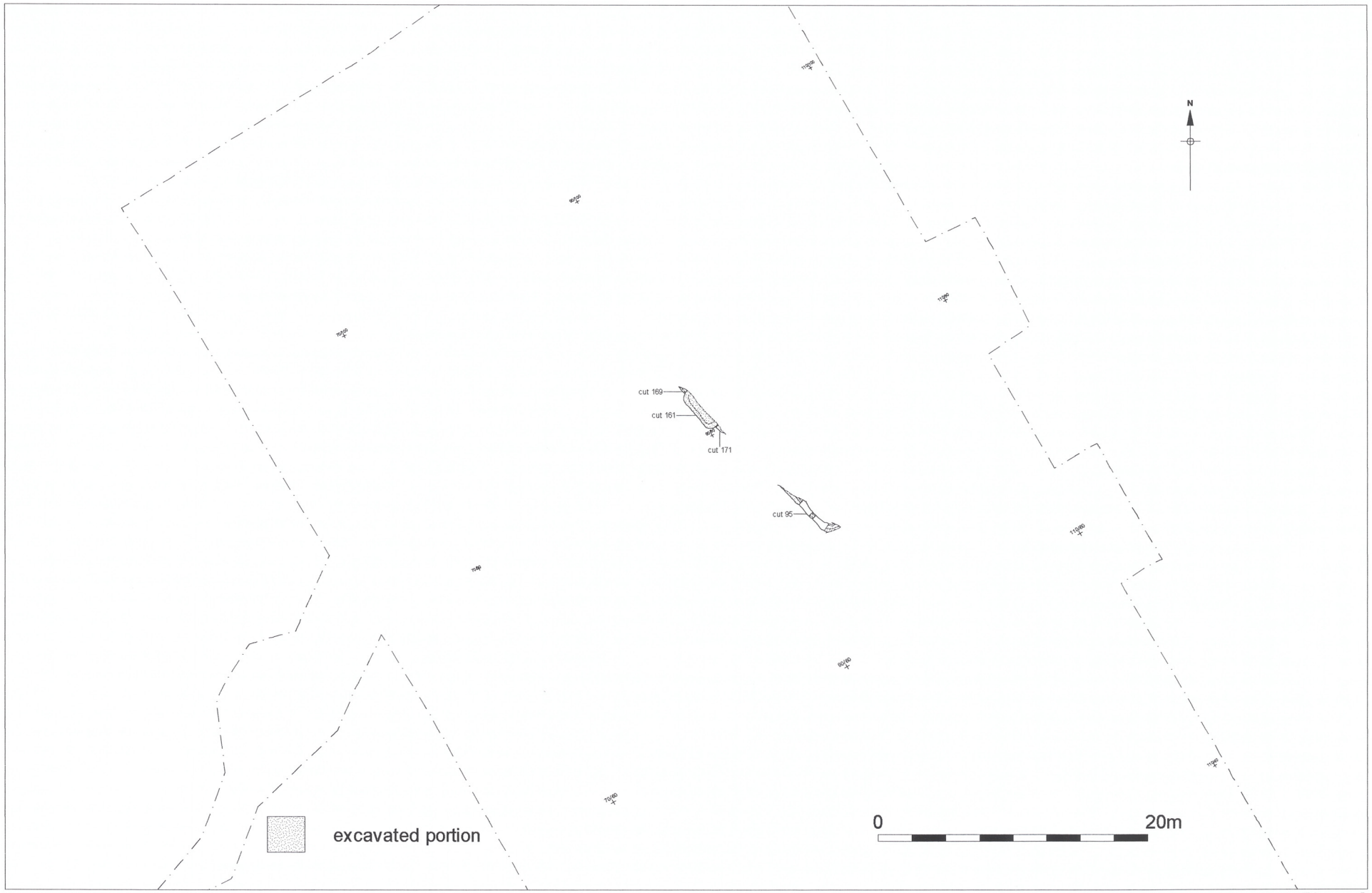



Figure 4. Phase 2
Scale 1:400


Figure 5. Phase 3.1 - 3.4
Scale 1:200

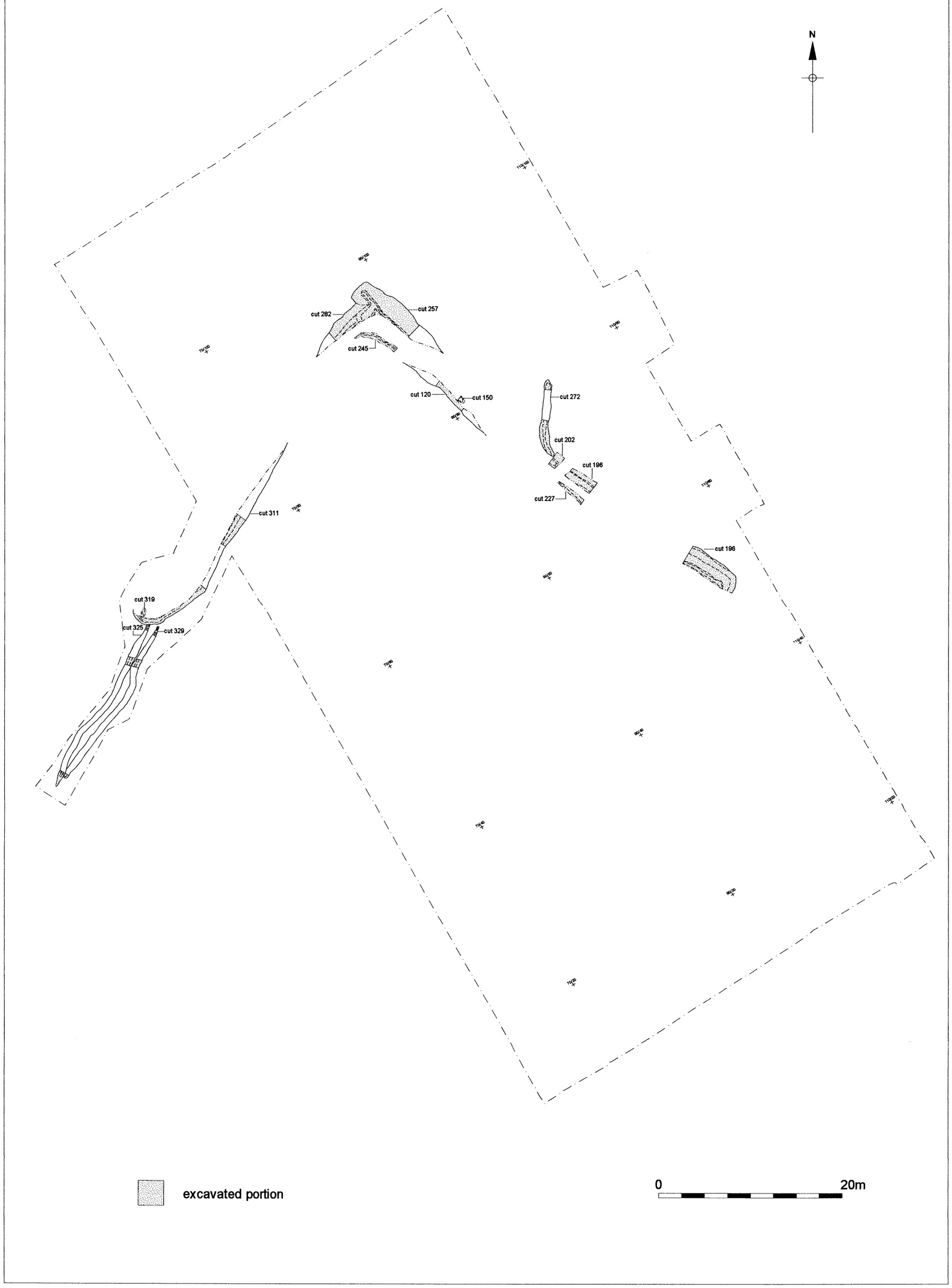



Figure 6. Phase 3.5
Scale 1:400


Figure 7. Phase 3.6
Scale 1:400

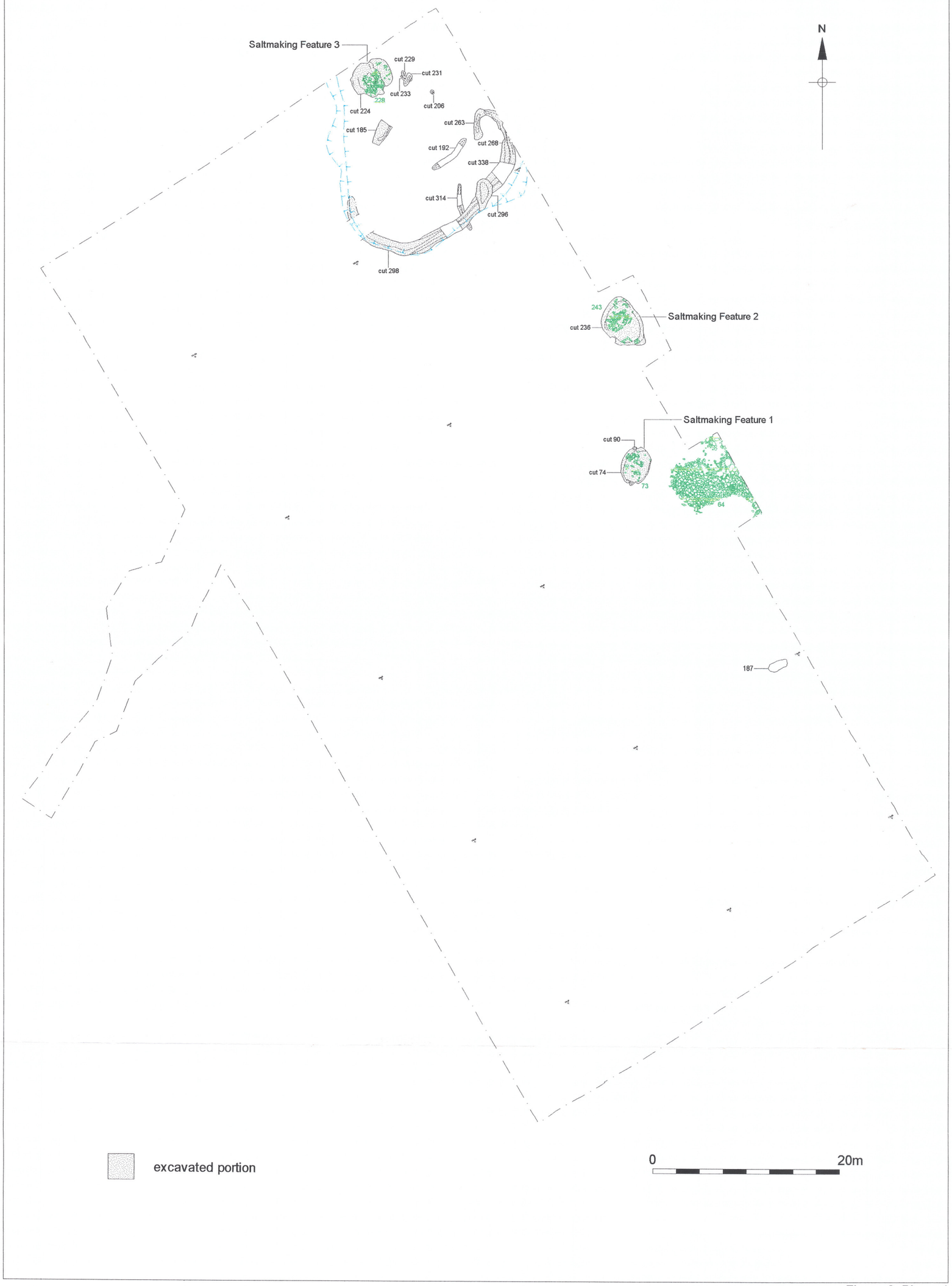



Figure 8. Phase 4
Scale 1:400

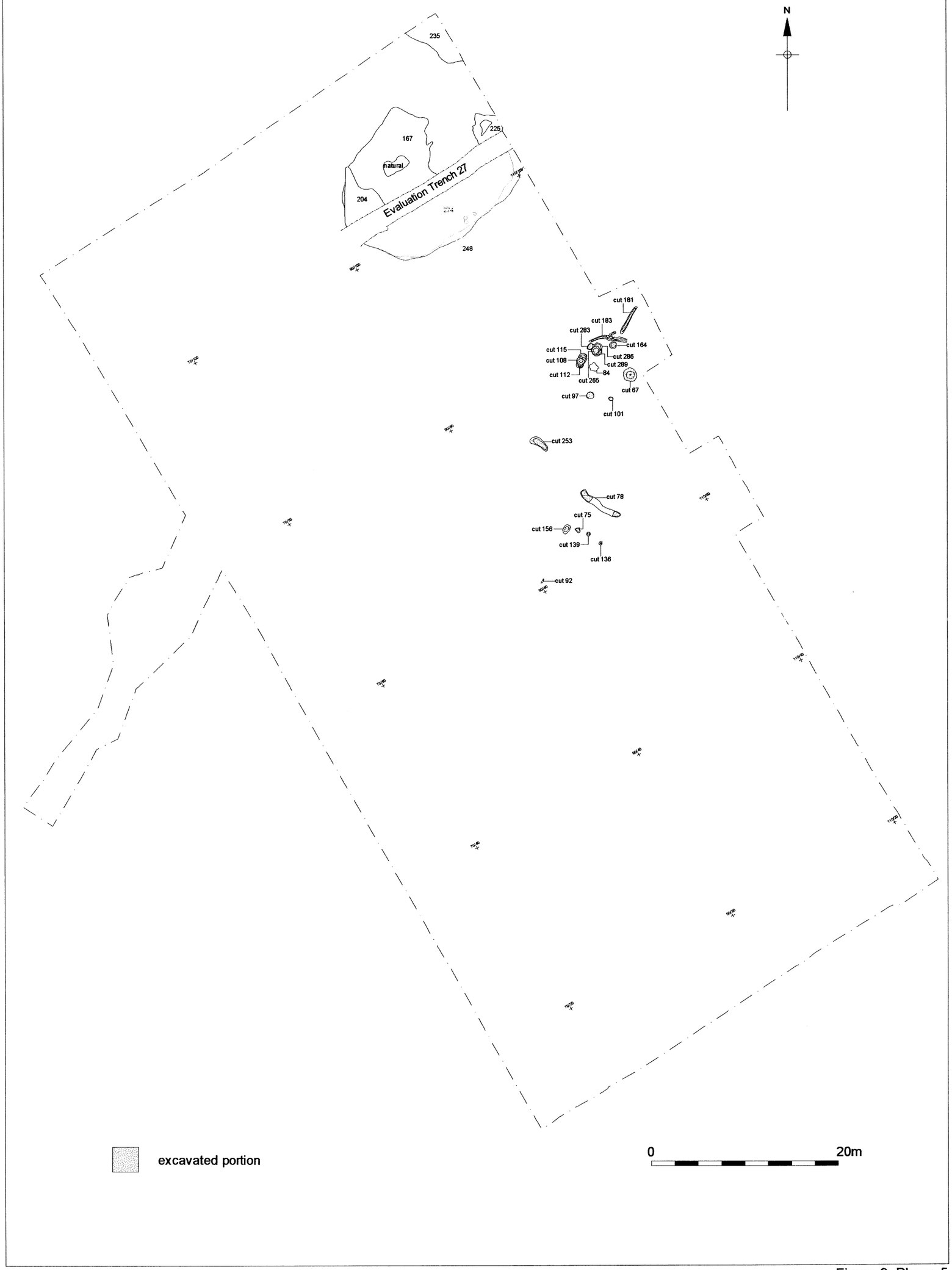



Figure 9. Phase 5
Scale 1:400

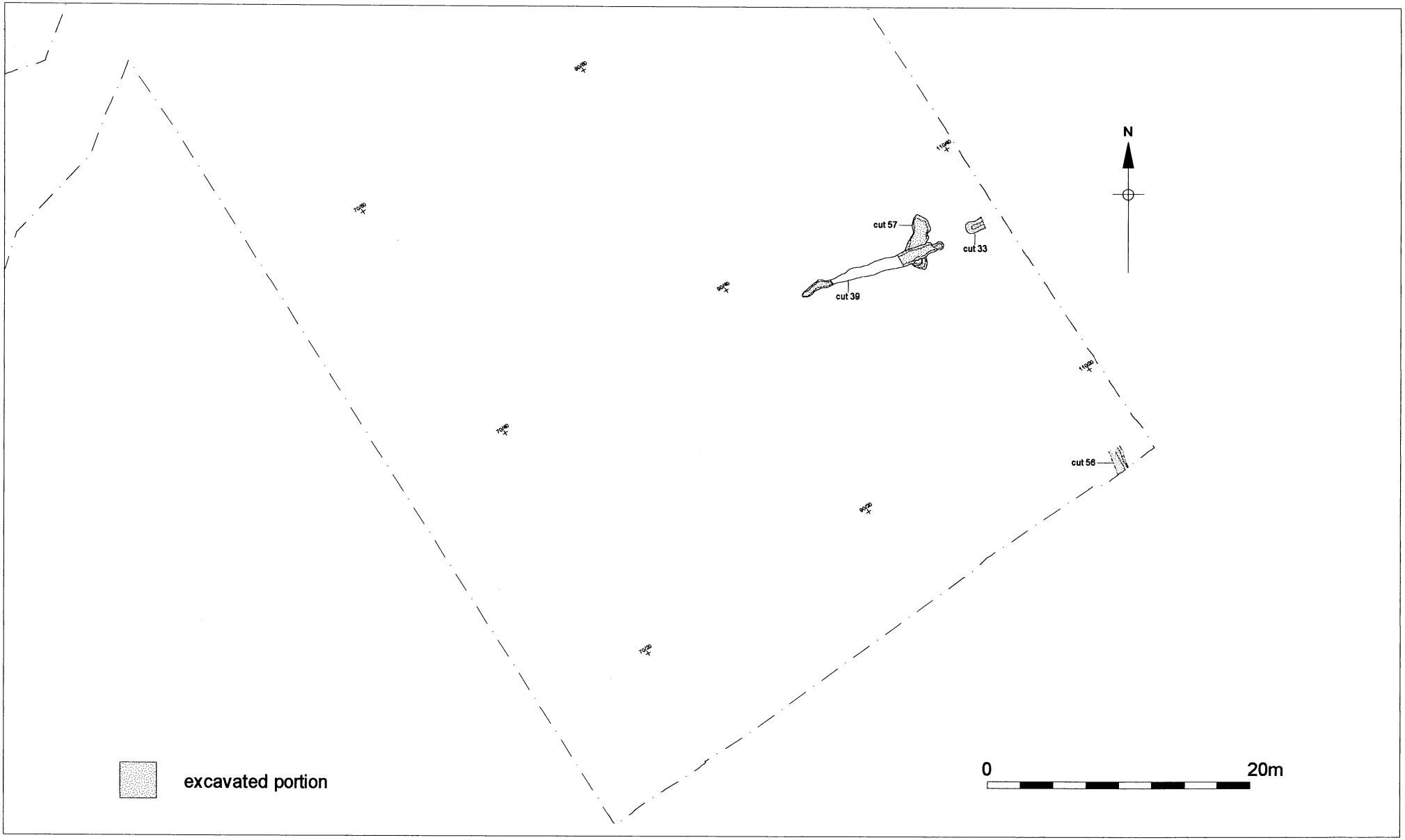



Figure 10. Phase 6.1
Scale 1:400

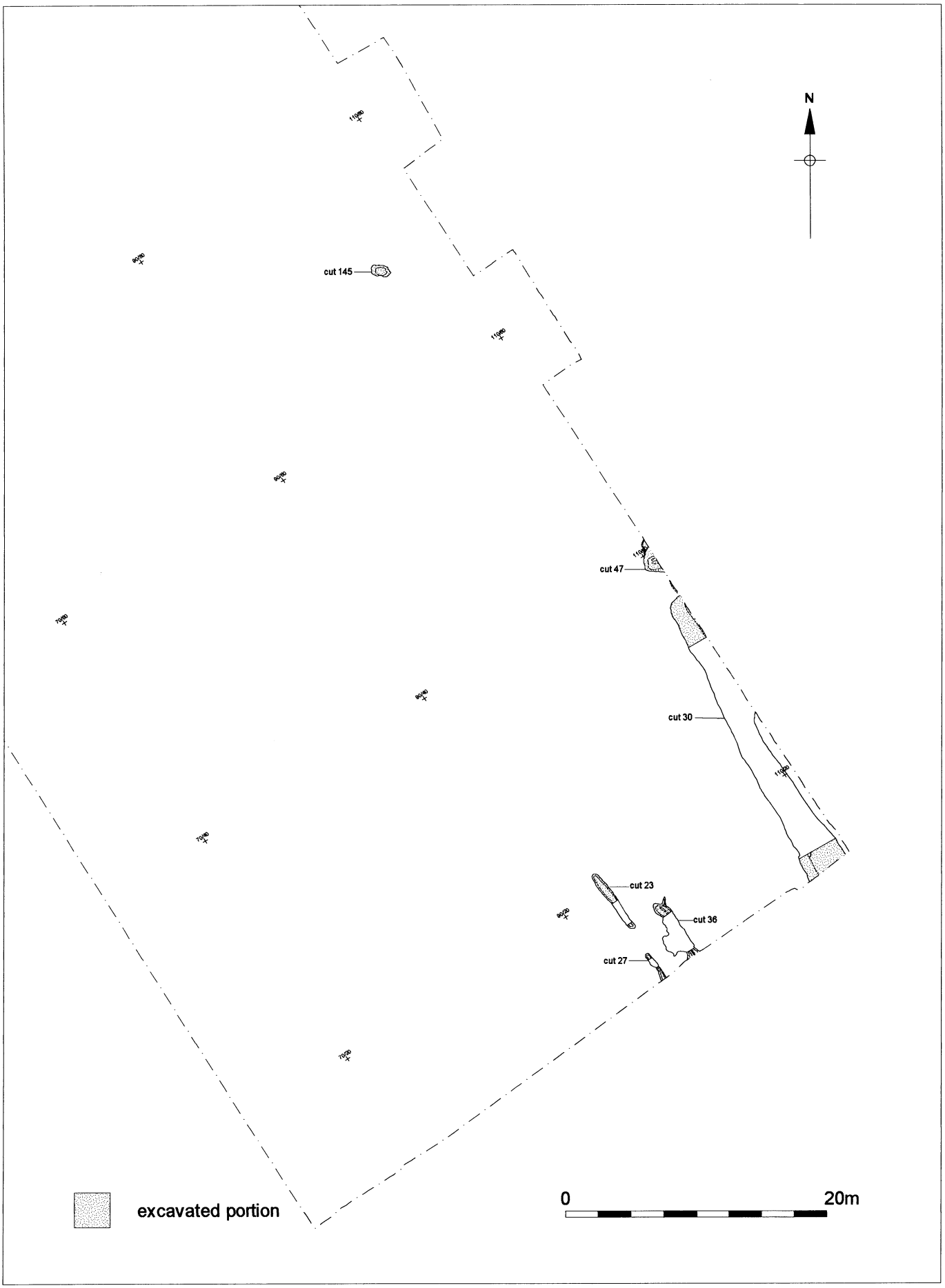



Figure 11. Phase 6.2
Scale 1:400

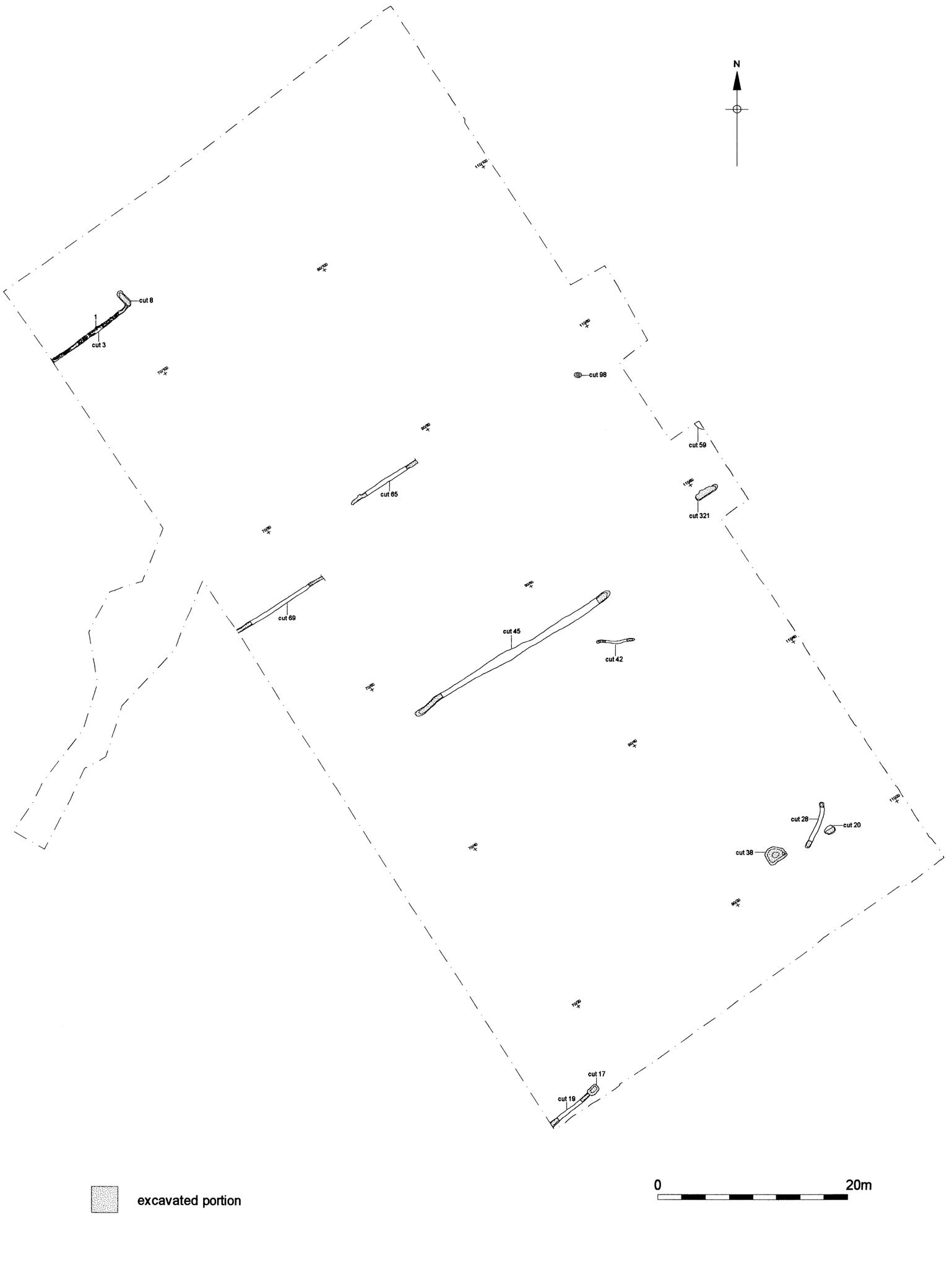
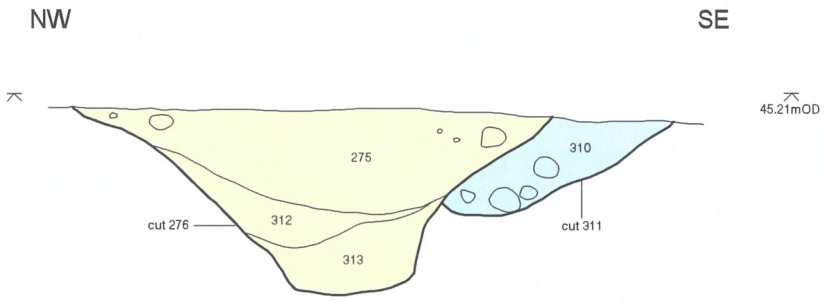
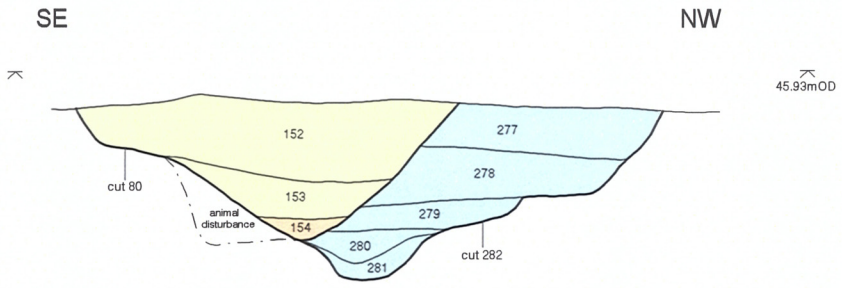



Figure 12. Phase 7
Scale 1:400




Section 1. South-west facing, through outlying ditches.




Section 2. North-east facing, through outlying ditches close to junction with enclosure ditches.

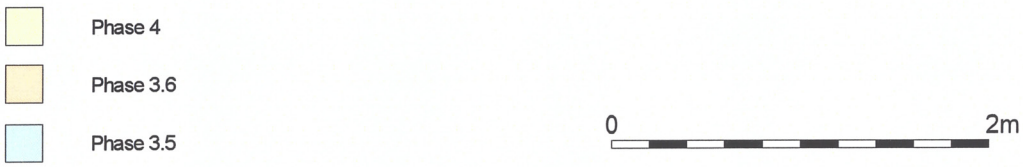
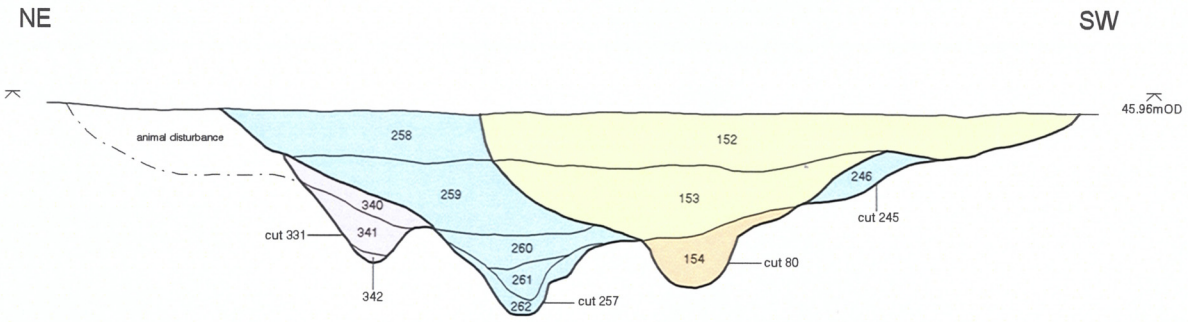
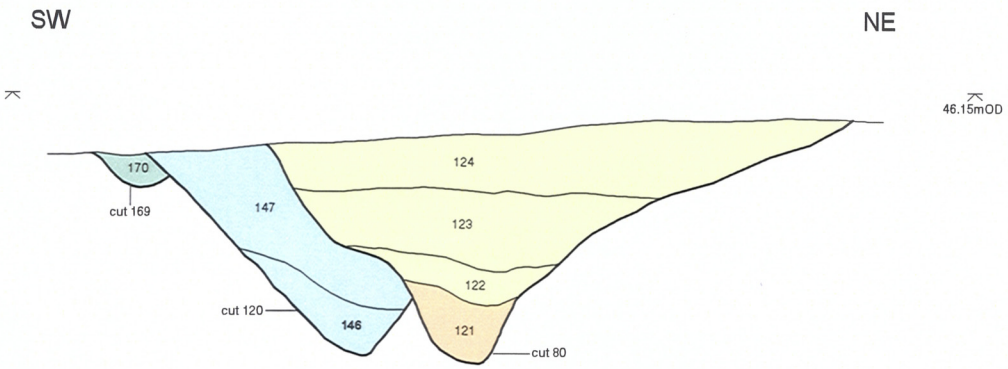


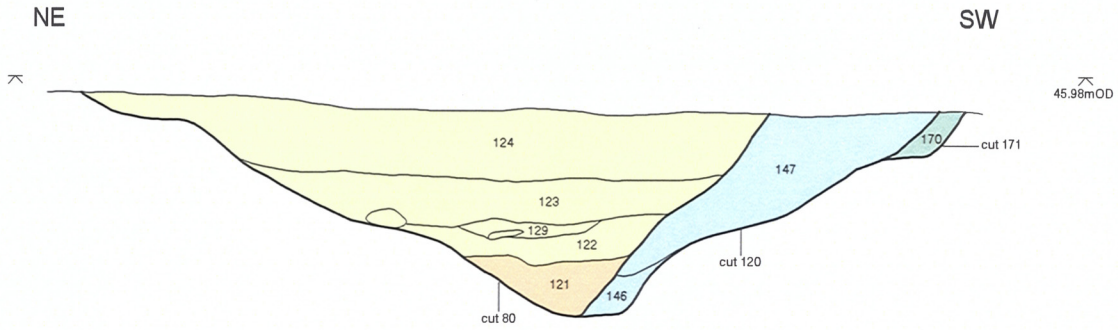

Figure 13. Sections 1 and 2
Scale 1:40




Section 3. North-west facing, through enclosure ditches close to junction with outlying ditches.




Section 4. South-east facing, through enclosure ditches and setting out ditch.




Section 5. North-west facing, through enclosure ditches and setting out ditch.

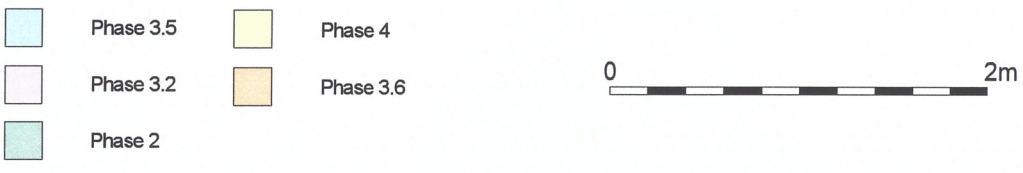
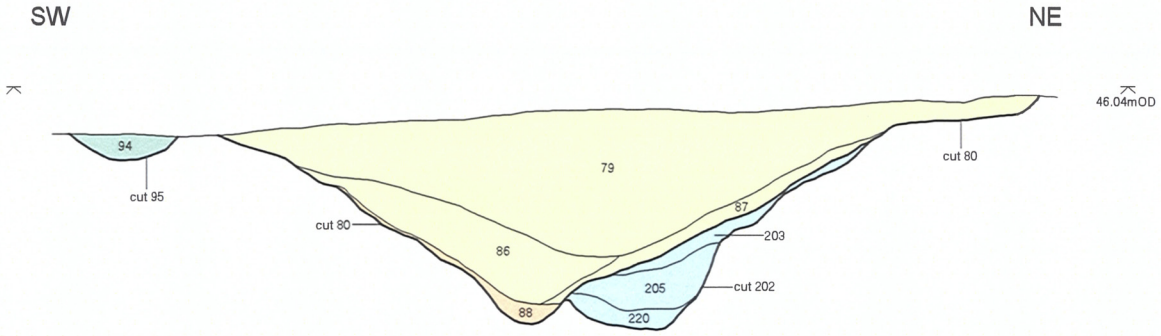
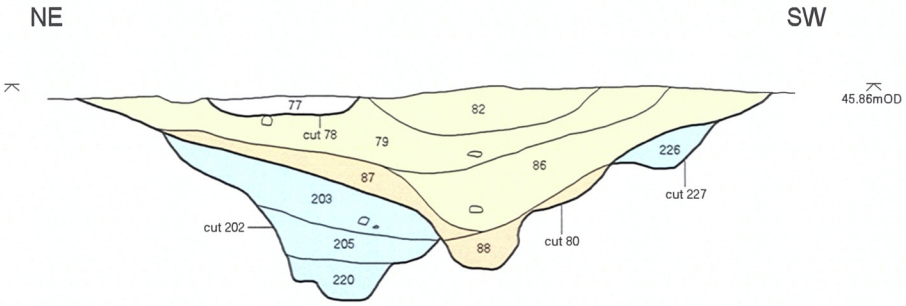


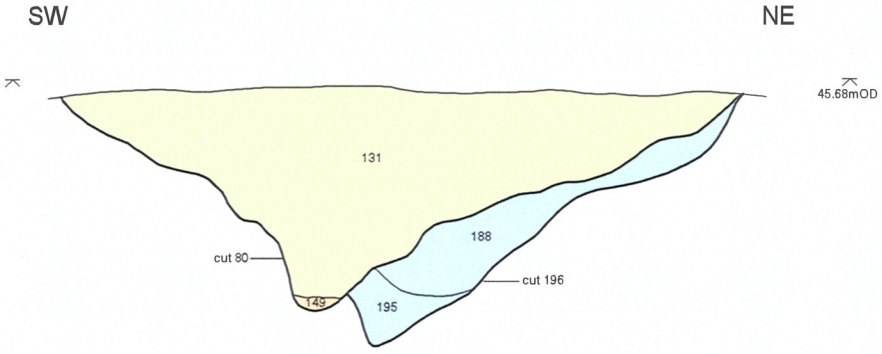

Figure 14. Sections 3, 4 and 5
Scale 1:40




Section 6. South-east facing, through eclosure ditches and setting out ditch.




Section 7. North-west facing, through enclosure ditches.




Section 8. South-east facing, through enclosure ditches close to southern entrance.

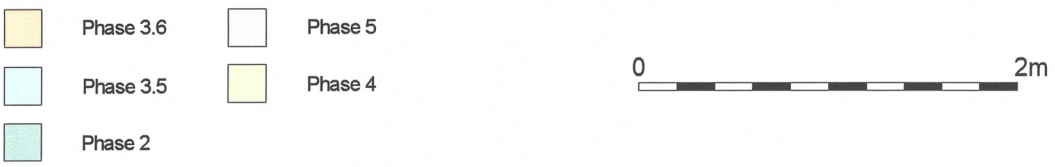
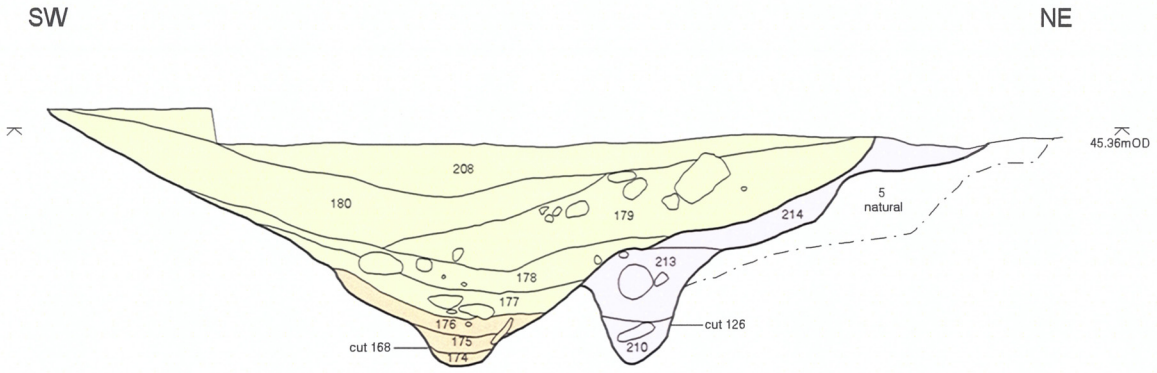
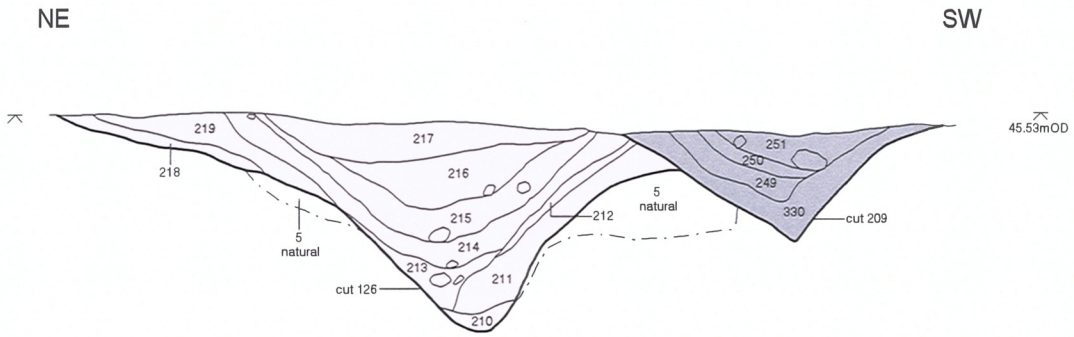


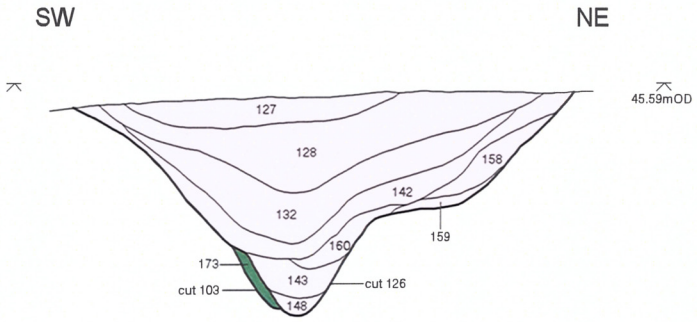

Figure 15. Sections 6, 7 and 8
Scale 1:40




Section 9. South-east facing, through enclosure ditches at north-western side of northern entrance.




Section 10. North-west facing, through enclosure ditches at north-western side of northern entrance.




Section 11. South-east facing, through enclosure ditches at north-western side of northern entrance.


Figure 16. Sections 9, 10 and 11
Scale 1:40

# *PART B: DATA ASSESSMENT*

# 6. STRATIGRAPHIC DATA

## 6.1 Written and Graphic Records

6.1.1 The contents of the paper archive are set out in Table 6a.

| Item | No. | Sheets |
|---|---|---|
| Context Register | 1 | 9 |
| Context Sheets | 339 | 339 |
| Section Register | 1 | 3 |
| Section Drawings | 46 | 62 |
| Plans | 119 | 370 |
| Sample Register | 1 | 3 |
| Sample Sheets | 106 | 106 |
| Small Finds Register | 1 | 35 |

***Table 6a. Quantification of paper records***

## 6.2 Photographic Records

6.2.1 The contents of the photographic archive are set out in Table 6b.

| Item | No. | Sheets |
|---|---|---|
| Colour Slide Register | 5 | 6 |
| Colour Slides | 94 | 6 |
| Monochrome Print Register | 6 | 7 |
| Monochrome Prints | 132 | 20 |
| Monochrome Negatives | 164 | 9 |

***Table 6b. Quantification of photographic record***

## 6.3 Project Archive

6.3.1 The paper and photographic archive is currently housed at the Northern Office of Pre-Construct Archaeology Limited.

6.3.2 The complete project archive, comprising written, drawn, and photographic records (including all material generated electronically during post-excavation) and all 'finds' (see the following sections) will be packaged for long-term storage according to relevant guidelines.[15] The archive will be deposited with the Berwick Borough Museum and Art Gallery, Berwick-upon-Tweed, for permanent curation. The depositional requirements of the receiving body will be met in full.

[15] UKIC, 1990.

# 7. IRON AGE TRADITION POTTERY AND BRIQUETAGE

*By: **Elaine L. Morris***

## 7.1 Introduction

7.1.1 The excavations yielded a total of 153 sherds of pottery, of which 152 (3935 grams) derive from vessels of Iron Age tradition, with one sherd (3 grams) coming from a Roman samian ware vessel. Around 17 rim sherds are identifiable amongst the Iron Age tradition pottery, with *c.* 70 vessels being represented.

7.1.2 In addition, a total of 90 sherds (665 grams) of ceramic containers used to dry and transport salt crystals (briquetage) contemporary with the Iron Age tradition pottery sherds were also identified. The discovery of this industrial material in such a significant quantity compared to the amount of potsherds and so close to the seashore indicates that the evaporation of brine to produce salt took place at this site. This is the earliest evidence discovered to date for salt production in Northumberland.

7.1.3 Three pieces of low-fired clay were separated out from the ceramic collection and are not reported upon further here.

7.1.4 The Iron Age tradition pottery came from 46 separate contexts and the briquetage from seven contexts, the majority of which are well-stratified. Many of the sherds are remarkably robust. Although obviously fragmentary, these sherds are in very good condition for the most part; a few are abraded and this is a reflection of their redeposition during later periods of activity. The sherds have their original surfaces largely intact, with evidence for the original use of these vessels still visible in the form of burnt residues. The mean sherd weight for the pottery is 25.7g which is similar to that from the important site at Pegswood Moor Farm, Morpeth (28.4g) and within the normal range for material of this sort from settlement sites in the region.[16]

7.1.5 This is the largest assemblage of briquetage and one of the largest assemblages of Iron Age tradition pottery recovered from a site in Northumberland. Detailed examination of these ceramics will reveal a great deal about culture and practice at this site during the pre-Roman Iron Age/early Roman Iron Age period and will provide a significant contribution to understanding daily life and salt production in this far North East region of coastal England.

## 7.2 Fabrics

### 7.2.1 Pottery fabrics associated with the vessels of Iron Age tradition

7.2.1.1 Twelve fabric types could be defined amongst the assemblage. All of these fabrics are soft-fired which means that they can be scratched with a metal tool, although the perception is that they are fairly hard-fired. Sherd fractures are either irregular or smooth in texture. Sherd cores are normally unoxidised and appear dark grey in colour but the interior and exterior surfaces are more often oxidised to a reddish orange, yellowish brown/buff or mid-brown.

[16] Willis, 2002.

7.2.1.2 The main difference amongst the fabrics is the character of the inclusions types present, or their absence. Detailed scientific examination of the fabrics is likely to reduce the number of fabrics using more accurate identification of the clasts (rocks) and clay matrix inclusions.

7.2.1.3 The pottery has been classified into the following types:

- **Fabric A**. A fine-textured, iron-rich fabric which is stone-free. The clay matrix contains a sparse (7%) but visually significant amount each of rounded, iron oxides measuring ≤ 2.0 mm across with the majority ≤ 0.5 mm and flecks of mica, as well as a common amount of medium quartz sand grains, ≤ 0.5mm and rare, elongated vesicles, ≤ 3.0 mm. This is a close-knit or dense fabric.

- **Fabric B**. A fine-textured fabric with a rare to sparse amount of angular, igneous rock. The clay matrix contains a sparse but visually significant amount of flecks of mica, as well as a common amount of medium quartz sand grains, ≤ 0.5 mm, and a rare to sparse (1-7%) concentration of angular, very poorly-sorted, white and black, igneous rock which appears to be dolerite, and measures between 0.5-13.0 mm at least.

- **Fabric C**. A difficult fabric to characterise due to the unoxidised firing condition, but which appears to be a form of moderately-sorted gravel. There is an uncertain type of clay matrix which contains a moderate to common (10-30%) concentration of moderately to possibly well-sorted igneous rock (basalt and dolerite are possibilities), flint, and quartz sand which are not angular in shape but rather subangular to subrounded and usually measure up to 3 mm across but there are rare, angular fragments of possible basalt measuring up to 4 mm.

- **Fabric D**. The same clay matrix components of Fabric B and sparse micaceous fine sandstone fragments. The clay matrix contains a sparse but visually significant amount of flecks of mica, as well as a common amount of medium quartz sand grains, ≤ 0.5 mm, and up to 7% concentration of both rounded and angular micaceous fine sandstone rock fragments.

- **Fabric E**. Consists solely of the same clay matrix components as Fabric B. The clay matrix contains a sparse but visually significant amount of flecks of mica, as well as a common amount of medium quartz sand grains, ≤ 0.5 mm (therefore, it appears that both Fabrics B and D are likely to have been tempered with the rock types present, rather than naturally gritted since Fabric E is the same as their clay matrix components).

- **Fabric F**. The same as Fabric B but with a moderate amount of angular rock present. The clay matrix contains a sparse but visually significant amount of flecks of mica, as well as a common amount of medium quartz sand grains, ≤ 0.5 mm, and a moderate amount (10-15%) of angular, white and black, igneous rock (probably dolerite), measuring up to 10 mm long. Further research may demonstrate that this fabric is simply a variation of Fabric B.

- **Fabric G**. The same clay matrix components as Fabric B and a rare amount of well-sorted, quartz and possible dolerite. The clay matrix contains a sparse but visually significant amount of flecks of mica, as well as a common amount of medium quartz sand grains, ≤ 0.5 mm, and a rare amount (1-2%) of very well-sorted, angular quartz grains and possible dolerite rock fragments measuring ≤ 1.0mm.

- **Fabric H**. The same clay matrix components of Fabric A and a rare to sparse amount of probable, large dolerite rock. The clay matrix contains a sparse (7%) but visually significant amount each of rounded, iron oxides measuring ≤ 2.0 mm across with the majority ≤ 0.5 mm and flecks of mica, as well as a common amount of medium quartz sand grains, ≤ 0.5mm, and a rare to sparse (2-5%) amount of angular, white and black, igneous rock which is probably dolerite which measures up to 13.0 mm in length.

- **Fabric I**. Possible grog-tempered fabric. This is a very difficult fabric to characterise in hand specimen, but the clay matrix components of Fabric B are present and there are also angular, clay-like inclusions which contain similar components to Fabric B and are therefore likely to be fragments of a Fabric B vessel which has been broken and pulverised to provide temper for this fabric.

- **Fabric J**. The same clay matrix components as Fabric B along with some linear vesicles. The clay matrix contains a sparse but visually significant amount of flecks of mica, as well as a common amount of medium quartz sand grains, ≤ 0.5 mm, rare larger quartz grains, and a sparse to moderate amount (7-10%) of linear vesicles measuring up to 4 mm long. This pottery fabric is very similar to Briquetage Fabric 1 defined below.

- **Fabric K**. A very sandy clay matrix containing a sparse mixture of very large to large angular clasts of possible shale, dolerite and quartzose fine sandstone. The components in the clay matrix look like disaggregated quartzose fine sandstone.

- **Fabric L**. The same clay matrix components as Fabric B and a moderate amount of possible dolerite inclusions are only large in size. The clay matrix contains a sparse but visually significant amount of flecks of mica, as well as a common amount of medium quartz sand grains, ≤ 0.5 mm, and moderate amount (10%) of angular, unusually-sorted, white and black, igneous rock which appears to be dolerite, and measures between 8.0-14.0 mm only.

### 7.2.2 Briquetage fabric

7.2.2.1 All of these fabrics are fairly softly-fired and the sherds are either completely oxidised throughout or have an unoxidised core and interior surface. The fractures are either surprisingly smooth or irregular. Linear voids or vesicles consistent with the combustion of chaff temper occur in all of them, and in some cases the actual fragments of the organic matter are still visible where unoxidised.

7.2.2.2 The briquetage has been classified into the following types:

- **Fabric 1**. The same clay matrix components as Iron Age pottery Fabric B and some linear vesicles. The clay matrix contains a sparse but visually significant amount of flecks of mica, as well as a common amount of medium quartz sand grains, ≤ 0.5 mm, and a sparse amount (3-7%) of linear vesicles measuring up to 4 mm long. This fabric is similar to the fabric of briquetage from other sites in the region of later Iron Age date such as Pegswood Moor Farm, Morpeth.[17]
- **Fabric 2**. The same clay matrix components as Iron Age pottery Fabric A and a large amount of linear vesicles. The clay matrix contains a sparse (7%) but visually significant amount each of rounded, iron oxides measuring ≤ 2.0 mm across with the majority ≤ 0.5 mm and flecks of mica, as well as a common amount of medium quartz sand grains, ≤ 0.5mm, and a very common amount (30%) of linear vesicles.
- **Fabric 3**. The same clay matrix components as Iron Age pottery Fabric B and a considerable amount of linear vesicles. The clay matrix contains a sparse but visually significant amount of flecks of mica, as well as a common amount of medium quartz sand grains, ≤ 0.5 mm, and a common to very common amount (20-30%) of linear vesicles.

### 7.2.3 Discussion of the pottery and briquetage fabrics

7.2.3.1 A large number of fabric types have been defined for the vessels identified in this assemblage. It is highly likely that all of the pots were made within the region, using a variety of available resources. It will be extremely important to determine whether all of the resources were available within the immediate or local area which may be defined as within a 7-10 km radius around the site (in this case only to the north, west and south of the site), or whether some of them can only be made from resources found outside the local area but still within the region. It is extremely interesting that the makers of the pots of Iron Age tradition chose to either temper their fabrics or to leave the selected clays without added temper – two distinctively different choices. It is quite clear that they were able to control the firing of their un-tempered vessels in bonfires to such a careful degree that they did not always need tempering agents to efficiently absorb the sudden temperature changes experienced in most bonfires which can so easily crack pots.

7.2.3.2 The likelihood of about 10-12 different fabrics, or variations of fabrics, amongst a possible collection of 70 vessels is extremely intriguing as is the presence of 70 different vessels amongst only 153 sherds. It may well be that there is a long duration of activity located at this site, and these fabric types represent different generations of potters over several generations and the variability observed is a simple evolution of changes normally expected amongst 100-200 years of potting. However, if detailed research determines that some of the tempers or possibly one of the clay matrices is not available immediately within the local area of the site, then it may well prove that some of these vessels were brought to the site.

[17] Willis, *op. cit.*

7.2.3.3 What is most unusual amongst the pottery fabrics is that there are 'un-tempered' examples, Fabrics A and E. This is clearly not the normal pattern typical of the area between the Tyne and the Tweed, where all of the fabrics of Iron Age tradition are tempered, usually with dolerite or similar crushed, fine-grained igneous rock, as at Pegswood Moor Farm and at Burradon, a short distance to the north-east of Newcastle. There is clearly a change afoot at the time of the activities at North Road. If, as has been proposed elsewhere,[18] the stone from the topographically upstanding dykes of dolerite located across the region were selected for symbolic as well as practical reasons, crushed and added to the pots, then there are likely to have been equally strong practical and symbolic reasons for this no longer taking place. This change appears to be accompanied by the change in using not only organic-temper for briquetage containers and at least one pot vessel, but also the use of grog-tempering as a technique of pot fabric production. All of these ideas require further investigation.

7.2.3.4 The use of organic temper is a long-standing tradition amongst saltmakers in eastern, southern and western Britain as well as on the Continent; however it is clearly not a normal Northumberland potting tradition. Therefore, someone must have either taught the local potters that using chaff was a suitable method to temper briquetage containers for drying salt crystals (perhaps a North Sea trader or a marriage partner from the south or from Belgium) or that a saltmaker came to this location and showed the local people how carry out this procedure. However, once again what is so unusual is that there are apparently three different fabric types amongst the range of briquetage. As with the pottery fabrics, this requires further scientific investigation to demonstrate that they are definitely different fabrics and where the sources of the clays for these wares originated. It is likely to be significant that the clay matrices for the pottery fabrics are actually similar to the clays of the briquetage; this is most likely to indicate that the clay matrix of pot Fabric E, used to make tempered pot Fabrics B, D, L, and J, is the same source as that for organic-tempered briquetage Fabrics 1 and 3, while the clay matrix of pot Fabric A, used to make tempered pot Fabric H, was also used to make organic-tempered briquetage Fabric 2.

## 7.3 Pottery Manufacturing Technique

7.3.1 One of the most interesting things about the pottery assemblage is the very obvious methods of manufacture visible and what this may tell us about the potters themselves. The pottery is handmade, and the method used was primarily coil-building. This method has an inherent weakness which is that the pots break along the lines of construction, revealed by the presence of oblique fractures which create a lip of clay at the break – along the breakage plane. This is a common phenomenon amongst handmade pots; however, there is something special amongst the North Road vessels – several of them display a 'mortice-and-tenon' or 'tongue-and-groove' effect at the break, rather than the oblique fracture. This is extremely rare within the Iron Age tradition of England, and suggests that there are pots from different potters present in the collection since methods such as these are very specific to their makers - almost like signatures. This observation deserves further investigation into the publications of later prehistoric pottery traditions from southern Scotland to determine if this is a more common method of manufacture in that region.

[18] Willis, *op. cit.*

## 7.4 Typological and Quantitative Information

7.4.1 A preliminary database spreadsheet follows (Table 7a) which provides a brief summary of the most obvious characteristics of the pottery and briquetage assemblage by context of recovery as a distinctive/unique pottery record for this assemblage (PRN, pottery record number). This includes an assigned fabric type (pottery Fabric A-K or briquetage Fabric 1-3), the number and weight in grams of sherds by fabric, an idea of the vessel part and form (R, rim; B, base; P, plain body sherd), the range of wall thickness of the sherds in the record (Table 7a), surface treatment (only BU/2 utilised for burnished on the exterior), and evidence of use (SO, soot on exterior surface; RS, burnt residue on the interior surface; NaCl, an abbreviation for sodium chloride affected sherds). In the 'Comments' section, there is additional information about the nature of the firing conditions experience by the recorded sherds (OX, oxidised; UN, unoxidised; IR, irregularly-fired; 1, throughout; 2, exterior; 3, interior; 4, core).

***Key for Table7a: vessel wall thickness codes***

| | |
|---|---|
| 1 | = less than 5 mm |
| 2 | = 5 - < 7 mm |
| 3 | = 7 - < 9 mm |
| 4 | = 9 - < 11 mm |
| 5 | = 11 - < 13 mm |
| 6 | = 13 - < 15 mm |
| 7 | = 15 - < 17 mm |
| 8 | = 17 - < 19 mm |
| 9 | = 19 - < 21 mm |
| 10 | = 21 - < 23 mm |
| 11 | = 23 - < 25 mm |
| 12 | = 25 - < 27 mm |
| 13 | = 27 - < 29 mm |

## 7.5 Vessel Forms

7.5.1 There is actually only one form of vessel amongst the handmade pottery of Iron Age tradition in this assemblage; it is the ovoid, neckless, shoulderless jar which is a simple, closed form with convex profile often referred to as a 'barrel'. However, there are five different rim variations (R1-R5) amongst the 17 rims present and these are defined below. In addition, there is one base type amongst the pots, a simple flat form for the ovoid jars (B1), with the centre of bases represented as B99 where separated from the wall angle. The only form of 'decoration' is a small, applied, pinched knob which is most likely to be a lifting appendage. In addition, there are single types of handmade *briquetage* rim (R10) and base (B2).

## 7.6 Pottery Forms

- R1: beaded rim on an ovoid or convex-profile jar
- R2: rounded, almost hooked rim on an ovoid or convex-profile jar
- R3: rounded or slightly rounded to slightly bevelled rim on an ovoid or convex-profile jar
- R4: fully sharp, internally bevelled rim on an ovoid or convex-profile jar
- R5: pointed rim on an ovoid or convex-profile jar

- B1: flat base
- B99: central zone of flat base no longer attached to vessel wall
- P: plain body sherd
- K: applied knob on vessel wall

## 7.7 Briquetage Forms

- R10: simple upright rim
- B2: pinched, flared, flat base

| PRN | CONTEXT | FEATURE TYPE | FEATURE NO. | FABRIC TYPE | CT | WT | FORM | TH CODE | ST | USE | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1001 | US | - | - | A | 4 | 87 | P | 6; 7 | - | - | OX2, 3; UN4; = PRN 1002; two join; coiling |
| 1002 | US | - | - | A | 14 | 52 | P | X | - | - | = PRN 1001; flakes |
| 1003 | US | - | - | A | 1 | 13 | P | 5; 6 | - | SO | UN2, 4; IR3 so not likely to equal 1001/2 |
| 1004 | 4 | LAYER | - | A | 1 | 39 | R1 | 6 | - | - | P-Medieval ploughsoil; <5%, 10 cm diam; IR2,3; UN4 |
| 1005 | 4 | LAYER | - | B | 1 | 33 | B99 | X | - | - | P-Medieval ploughsoil; = PRN 1001/2; 22cm thick |
| 1006 | 4 | LAYER | - | B | 1 | 27 | P | 7 | - | - | P-Medieval ploughsoil; UR2; UN4, 3 |
| 1007 | 4 | LAYER | - | C | 1 | 29 | P | 6 | - | RS | P-Medieval ploughsoil; OX2; UN4, 3 |
| 1008 | 31 | DITCH | 30 | B | 1 | 73 | P | 7 | - | - | upper fill of boundary ditch 30; M&T; OX2, UN4, IR3 |
| 1009 | 46 | DITCH/GULLY | 45 | A | 1 | 6 | P | 7 | - | - | OX2, UN4, 3 (?=1005); at/near base |
| 1010 | 46 | DITCH/GULLY | 45 | D | 1 | 13 | P | X | - | - | very soft and abraded; OX2, 3; UN4 |
| 1011 | 68 | PIT | 67 | B | 1 | 17 | P | 5; 6 | - | - | IR2, 3; UN4 - sandwich style firing |
| 1012 | 68 | PIT | 67 | F | 1 | 52 | P | 7 | - | - | OX2, 3; UN4 |
| 1013 | 68 | PIT | 67 | B | 3 | 19 | P | 6 | - | - | OX2, UN4, 3; two are tiny frags; rare large dolerite rock |
| 1014 | 77 | GULLY | 78 | E | 3 | 2 | P | X | - | - | OX2, UN4; very abraded |
| 1015 | 77 | GULLY | 78 | BRIQ 1 | 1 | 1 | P | X | - | - | OX2, 3; very abraded and tiny |
| 1016 | 79 | DITCH | 80 | G | 1 | 5 | P | 4 | - | - | OX2, 3; UN4 (buff coloured fabric) |
| 1017 | 85 | TREE BOLE | 84 | D | 1 | 2 | P | X | - | - | OX4; very abraded and small sherd |
| 1018 | 85 | TREE BOLE | 84 | BRIQ 2 | 1 | 27 | B2 | 4 | - | - | OX2; UN4; IR3; good fingering impressions |
| 1019 | 27.1/4 | LAYER | - | B | 1 | 32 | R2 | 7 | - | SO | P-Medieval ploughsoil; 5% of 26cm; IR2, UN4, OX3 |
| 1020 | 33.8/123 | DITCH | 80 | E | 3 | 39 | P | 6 | - | - | excellent coiling; same vessel; OX2, 3; UN4 |
| 1021 | 27.4/132 | DITCH | 126 | B | 4 | 24 | P | 6; 7 | - | SO; RS | (?=PRN1022); same pot; IR2; UN4, 3 |
| 1022 | 27.10/225 | LAYER | - | B | 2 | 18 | P | 6 | - | - | accumulation layer; (?=PRN1021); IR2, UN4, 3 |
| 1023 | 34.8/248 | LAYER | - | E | 1 | 44 | R3 | 7; 8 | - | SO | accumulation layer; fresh breaks; IR2, UN4, OX3 |
| 1024 | 34.9/274 | LAYER | - | E | 1 | 73 | P | 6 | - | ?SO | accumulation layer; IR2, UN4, 3 |
| 1025 | 86 | DITCH | 80 | A | 4 | 88 | R3 | 6 | - | - | M & T; 2 big/2 frags; same pot; IR2, UN4, OX3; 5% of 16cm |
| 1026 | 86 | DITCH | 80 | B | 5 | 91 | P | 8 | - | SO | one very big/4 frags; same pot; IR2, UN4, 3 |
| 1027 | 86 | DITCH | 80 | C | 3 | 50 | P | 8 | - | - | OX2, UN4, IR3; same vessel as base in 129 |
| 1028 | 87 | DITCH | 80 | B | 1 | 27 | R4 | 9 | - | - | UN2, 4; IR3; BIG POT >28cm diam but <3% present |
| 1029 | 87 | DITCH | 80 | H | 1 | 12 | R4 | <10 | - | - | <4cm long sherd, but TH thick; <5%; OX2, UN4, IR3 |
| 1030 | 87 | DITCH | 80 | B | 6 | 16 | P | X | - | - | fragments from possible same vessel |
| 1031 | 119 | PIT | 97 | SAM | 1 | 3 | ?P | 2 | - | - | soft, abraded diagnostic samian; flecks of l'stone in fab |
| 1032 | 119 | PIT | 97 | B | 1 | 1 | P | X | - | - | abraded; flake/fragment |
| 1033 | 121 | DITCH | 80 | C | 1 | 64 | K & P | 6; 7 | - | SO; RS | primary fill; good coiling; ***KNOB**; UN1; *cookpot* |
| 1034 | 122 | DITCH | 80 | J | 1 | 3 | P | 8 | - | SO | secondary fill; UN1; cookpot; fresh break |
| 1035 | 122 | DITCH | 80 | E | 2 | 18 | P | 8 | - | - | secondary fill; outstanding M & T; IR2, UN4, 3; 1 frag. |
| 1036 | 128 | DITCH | 126 | B | 1 | 23 | R3 | 6 | - | SO | <5% present; HUGE POT; UN1 |
| 1037 | 129 | DITCH | 80 | D | 1 | 24 | B1 | 8 | - | - | = PRN 1027?isotopic firing; OX2, UN4, 3; <5% |
| 1038 | 131 | DITCH | 80 | E | 1 | 82 | P | 8 | - | - | secondary fill; IR2, UN4, OX3 |
| 1039 | 131 | DITCH | 80 | B/E | 1 | 5 | R3 | 3 | - | SO | secondary fill; UN1; cookpot; fresh break |

***Table 7a: pottery and briquetage assessment data***

| PRN | CONTEXT | FEATURE TYPE | FEATURE NO. | FABRIC TYPE | CT | WT | FORM | TH CODE | ST | USE | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1040 | 131 | DITCH | 80 | K | 1 | 93 | P | 8 | - | - | secondary fill; IR2, UN4, 3; ?=1051; rough & layered |
| 1041 | 131 | DITCH | 80 | D | 1 | 56 | P | 6 | ?BU/2 | ? | secondary fill; UN2, 4; OX3; good coiling; degraded |
| 1042 | 132 | DITCH | 126 | B | 1 | 63 | R3 | 6 | - | - | IR2, UN4, 3; good coil break at 45 degree angle; <5% of rim |
| 1043 | 143 | DITCH | 126 | ?B | 1 | 9 | P | 9 | - | - | = PRN 1044; *PINK* firing - OX2, 3L UN4 |
| 1044 | 148 | DITCH | 126 | ?B | 1 | 14 | P | X | - | - | = PRN 1043; has firing affected the dolerite? *PINK* |
| 1045 | 152 | DITCH | 80 | A | 1 | 7 | ?B99 | X | - | - | ? = PRN 1052 in 167 & PRN 1046; OX2, 3; UN4 |
| 1046 | 152 | DITCH | 80 | A | 1 | 32 | P | 9 | - | - | ? = PRN 1052 in 167 & PRN 1045; buff fabric |
| 1047 | 152 | DITCH | 80 | B | 1 | 4 | P | X | - | - | fragment; OX2, UN 4 |
| 1048 | 153 | DITCH | 80 | C/D | 1 | 47 | R3 | 6; 7 | - | SO | UN1; 5% of 28 cm rim diameter |
| 1049 | 153 | DITCH | 80 | B | 1 | 6 | P | X | - | - | OX2, UN4; fragment and abraded also |
| 1050 | 153 | DITCH | 80 | J | 1 | 2 | P | X | - | - | UN4; fragment; abraded |
| 1051 | 154 | DITCH | 80 | K | 1 | 12 | B99 | X | - | - | primary fill; ?=PRN1040; rough/layered; IR2, UN4, 3 |
| 1052 | 167 | LAYER | - | A | 3 | 123 | P | 8; 9 | - | - | ?accumulation layer; ?=PRN 1045/6; OX2, UN4, IR3 |
| 1053 | 167 | LAYER | - | E | 1 | 54 | P | 12; 13 | - | - | ?accumulation layer; = PRN 1074 in 221; OX2, 3; UN4 |
| 1054 | 167 | LAYER | - | I | 1 | 21 | P | 10 | - | NaCl | ?accumulation layer; *PINK*; OX2, 3; UN4; = PRN 1080 |
| 1055 | 167 | LAYER | - | C | 2 | 112 | P | 7 | - | SO | ?accumulation layer; join; UN2, 4; IR3; coil built |
| 1056 | 167 | LAYER | - | E | 1 | 55 | R5 | 4 | BU/2 | SO | ?accumulation layer; UN2, 4; IR3; coil-built |
| 1057 | 167 | LAYER | - | ?B | 1 | 8 | P | 6 | - | NaCl | ?accumulation layer; *PINK-seriously affected: OX1;=1058 |
| 1058 | 167 | LAYER | - | ?B | 1 | 14 | P | 7 | - | NaCl | ?accumulation layer; *PINK-slightly affected; = 1057; OX2; |
| 1059 | 167 | LAYER | - | B | 10 | 250 | P | 8; 9 | - | - | ?accumulation layer; ? = PRNs1057-8; IR2, UN4, 3 |
| 1060 | 167 | LAYER | - | E | 1 | 11 | R3 | 6 | - | - | ?accumulation layer; fresh break |
| 1061 | 167 | LAYER | - | BRIQ 3 | 2 | 23 | ?B2 | X | - | - | ?accumulation layer; ???BRIQ. RODS?? IR2, 3; UN4 |
| 1062 | 186 | PIT | 185 | G | 1 | 14 | P | 7 | - | - | fresh break; IR2, UN4, 3 |
| 1063 | 191 | LAYER | - | E | 1 | 30 | P | 6; 8 | - | - | layer of sorted stones; abraded; M & T; UN2, 4; OX3; |
| 1064 | 191 | LAYER | - | E | 1 | 12 | P | 7 | - | - | layer of sorted stones; abraded; IR2; UN4, 3 |
| 1065 | 191 | LAYER | - | E | 1 | 6 | P | 6 | - | - | layer of sorted stones; very abraded; OX2, 3; UN4 |
| 1066 | 191 | LAYER | - | BRIQ 2 | 2 | 8 | P | X | - | - | layer of sorted stones; frags.; OX2, UN4; Fe, Q & org |
| 1067 | 191 | LAYER | - | A | 1 | 39 | P | 5 | - | - | layer of sorted stones; abraded; UN2, 4; OX3 |
| 1068 | 193 | GULLY | 192 | B | 1 | 21 | ?B1 | X | - | - | odd piece - ?base or burnt clay; OX2, UN4 |
| 1069 | 204 | LAYER | - | E | 1 | 18 | P | 9 | - | NaCl | accumulation; *PINK*; OX2, 3; UN4; very sharp firing |
| 1070 | 204 | LAYER | - | BRIQ 3 | 1 | 1 | P | 3 | - | - | accumulation; sandy briquetage fabric; OX1 |
| 1071 | 210 | DITCH | 126 | H | 1 | 96 | P | 8 | - | - | primary fill;UN1; magnificently huge dolerite, sparse |
| 1072 | 214 | DITCH | 126 | L | 1 | 124 | P | 9 | - | - | extremely coarse & rough manufacture; OX2, 3; UN4 |
| 1073 | 214 | DITCH | 126 | C | 3 | 59 | R3 | 6 | - | SO | 7% of 32cm; IR2, UN4, 3; sherds do not join |
| 1074 | 221 | PIT | 224 | E | 1 | 251 | P | 11; 12 | - | NaCl | upper fill; *pink*; = PRN 1053; HUGE jar; OX2, 3; UN4 |
| 1075 | 221 | PIT | 224 | C | 1 | 277 | P | 8 | - | (WH/2) | upper fill; possible salt use; IR2, UN4, 3; coil-built |
| 1076 | 221 | PIT | 224 | C | 2 | 63 | R4 | 5 | - | SO | upper fill; join; coil; 8% of 22cm; IR2, UN4, 3; sharp bevel |
| 1077 | 222 | PIT | 224 | BRIQ 2 | 2 | 8 | P | 4; 6 | - | WH/2 | coil-join; OX2; IR4, 3; near base? |
| 1078 | 225 | LAYER | - | B | 4 | 281 | R3 | 7 | - | NaCl | PERFORATION; M & T; *pink*; 9% of 26 cm; OX2,3; UN4 |

***Table 7a: pottery and briquetage assessment data***

| PRN | CONTEXT | FEATURE TYPE | FEATURE NO. | FABRIC TYPE | CT | WT | FORM | TH CODE | ST | USE | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1079 | 225 | LAYER | - | E | 3 | 4 | P | X | - | - | fragments of ?burnt clay?; OX2, 4 |
| 1080 | 225 | LAYER | - | I | 1 | 30 | P | 9 | - | - | = PRN 1054 in layer 167; *PINK*; OX2, 3; UN4 |
| 1081 | 230 | PIT | 229 | G | 1 | 13 | P | 7 | - | - | OX2, UN4, 3 |
| 1082 | 247 | LAYER | - | B | 1 | 114 | P | 7 | - | SO | accumulation; fresh break; excellent coiling; IR2, 3; UN4 |
| 1083 | 248 | LAYER | - | B | 1 | 52 | R3 | 8 | - | NaCl | accumulation; *PINK*; OX2, 3; UN4; M & T; 5% of 26 cm |
| 1084 | 248 | LAYER | - | ?D | 1 | 38 | P | 9 | - | (NaCl) | accumulation; slight pink tinge; OX2, 3; UN4 |
| 1085 | 248 | LAYER | - | E | 1 | 27 | P | 8 | - | - | accumulation; fresh break; OX2, UN4, IR3 |
| 1086 | 248 | LAYER | - | E | 2 | 10 | P | 7 | - | - | accumulation; same pot; OX2, UN4, IR3 (buff-coloured) |
| 1087 | 252 | DITCH | 80 | E | 1 | 3 | P | X | - | - | flake; UN2, 4 |
| 1088 | 252 | DITCH | 80 | BRIQ1 | 1 | 5 | R10 | 4 | - | - | OX1; RIM of BRIQUETAGE |
| 1089 | 252 | DITCH | 80 | BRIQ1 | 19 | 76 | B2; P | 2; 4 | - | - | OX1; flared/pinched base; same ves. as above? |
| 1090 | 252 | DITCH | 80 | BRIQ1 | 12 | 68 | B2; P | 2; 3 | - | - | OX2, 4; IR3; ?same vessel as above? |
| 1091 | 252 | DITCH | 80 | BRIQ1 | 6 | 40 | B2; P | 3; 4 | - | - | IR2, UN4, 3; ?same vessel as above? |
| 1092 | 252 | DITCH | 80 | BRIQ1 | 43 | 408 | B2; P | 2; 4 | - | - | OX2, UN4, 3; ?same vessel as above? |
| 1093 | 260 | DITCH | 257 | I | 3 | 15 | P | X | - | NaCl | enclosure; *PINK* OX2, 3; UN4; = PRN 1054, 1080 |
| 1094 | 261 | DITCH | 257 | E | 1 | 12 | P | 7 | ?BU/2 | - | enclosure; M & T; OX2, UN4, IR3 (buff) ?fabric B actually? |
| 1095 | 274 | LAYER | - | E | 1 | 4 | P | X | - | - | accumulation; UN4; fragment |
| 1096 | 285 | PIT | 283 | ?B | 2 | 40 | P | 7 | - | SO | ?fresh break; no really big dolerite rock however -?E |
| 1097 | 297 | PIT | 296 | B | 1 | 45 | P | 13 | - | - | OX2, 3; UN4; **28 mm thick**; remarkable! |
| 1098 | 303 | DITCH | 306 | E | 1 | 38 | P | 4; 5 | - | - | upper fill; IR2, OX4, 3; ?post-deposition firing; detritus grit |
| 1099 | 304 | DITCH | 306 | B | 1 | 3 | P | X | - | - | UN4; fragment |

***Table 7a: pottery and briquetage assessment data***

## 7.8 Discussion of the Pottery and Briquetage Forms

7.8.1 The general, ovoid vessel jar form and associated rim types in the North Road assemblage are typical of pottery assemblages from sites of Iron Age date in the region between the Tees and the Firth of Forth. This vessel form is very common within the Northumberland region where there is evidently little variety in forms as revealed at Burradon, Tyne and Wear.[19] In the Pegswood Moor Farm assemblage, there is only one bowl amongst the 35 vessels identified at assessment stage.[20] Jars are the most common vessel form to the south of the area in the Tees valley but bowl forms do occur in some assemblages, as at Thorpe Thewles, near Stockton-on-Tees.[21] Parallels for all of the simple rim variations can be found from several sites in the region. However, the attached knob appears at present to be unique to the North Road assemblage.

7.8.2 Examples of the simple, upright briquetage rim and the pinched, flared base can be found at many saltern sites in the Fenland region of Lincolnshire.[22]

## 7.9 Vessel Sizes and Functions

7.9.1 Amongst the 17 pottery rims, it is possible to determine the approximate diameters of eight of the original vessels. Two are in the small vessel range from 10-16 cm, five in the medium-sized range, 22-28 cm and one is 32 cm. Two other vessels, represented by less than 5% of their rims, are also from very big vessels. Normally the more common vessels in assemblages of Iron Age tradition are small in size (less than 22 cm), with some in the medium category and rare larger examples. Here at North Road the proportions are different with the majority being of medium or large size; this is likely to be due to the presence of a specialised activity on the site, namely saltmaking. This interpretation is based on the observation that at least six of the vessels in the assemblage display evidence of having been used to transport saltwater due to the presence of extremely unusual 'salt colours' of pink and lavender observed on these vessels, when normally they should have been within the red to orange range of colours when oxidised. A correlation of details about clay matrix, temper, colours, wall thickness and vessel size needs to be tabulated to demonstrate whether saltwater was used to make the pots, thus creating this effect as part of manufacture, or whether the pots had been used as brine or salt crystal transporters up the sea cliffs to the site.

7.9.2 Four of the vessels with reconstructed diameters had been used as cooking vessels due to the presence of soot deposits on their exterior surfaces. In addition, there are at least another 14 vessels which had been used as cookpots, including the pot with the applied knob. Undoubtedly, the saltmakers and others were living at the site in order to make salt for at least a few days, if not longer, during each saltmaking season.

[19] Jobey, 1970.
[20] Willis, *op.cit.*
[21] Swain, 1987.
[22] Lane and Morris, 2001.

## 7.10 Briquetage

7.10.1 There are probably two classes of briquetage present in the North Road collection: supports and containers. The containers are most unusual since they are narrow, steep-sided rectangles with flat bases and simple vertical rims. The sherd breaks suggest that either the vessels were constructed using the slab-building method or were actually cylinders which were sliced in half and patched at the ends. Closer examination of the containers is required to determine which method was used and the significance of the narrowness of the container boxes which is not known in Britain. This construction method may well prove to be inspired through contact with salt production methods from the Continent.

7.10.2 Two pieces of briquetage may be rod-like supports, which were used to secure the containers over the hearth or within the saltworking oven. The pieces are very fragmentary, but the firing effect, visible on the broken edges of both pieces, suggests that they once were rounded bars, or rods. Rods are present at some saltworking sites in the Fenland region.

7.10.3 The discovery of a saltmaking site outside Berwick-upon-Tweed makes this one of the most important Iron Age sites in Northern Britain, and the most northerly site to have yielded briquetage fragments to date. It has been predicted for the past 10 years that saltmaking sites should be found along the North East coast due to the presence of occasional fragments from containers found on sites inland, as at Burradon, Tyne and Wear and in the Tees Valley.[23] Salt was a vital commodity during the prehistoric and later periods, and played a role in practical needs as well as within the social world due to its extraordinary property of preservation.

## 7.11 Chronology and Radiocarbon Dating

7.11.1 Nearly all of the pottery assemblage is typical of the later prehistoric period in this area, but there is a single sherd in rather poor condition, of early Roman samian in a fabric which indicates it derives from a source in Southern Gaul (see Section 7. 15, below). Because of this sherd and the presence of other objects of Roman date, it is extremely important that the pottery itself is more precisely dated by absolute methods. This can be conducted by sampling the burnt residues on the interior and the soot on the exterior of the pots and submitting them for radiocarbon dating to find out directly when these vessels were used, and from this infer the dates of salt production. An AMS date has been obtained from carbonised residues from one sherd as part of the assessment phase of work, and this produced a date of cal. BC 500-460 or cal. BC 430-380.

[23] Willis, pers. comm.

## 7.12 Pottery and Briquetage: Summary

7.12.1 This is a modest-sized collection of later prehistoric pottery derived from *c.* 70 different vessels, a single fragment of samian ware and an extremely significant collection of sherds from briquetage containers and possible supports resulting from salt production. Most of this ceramic material was recovered from stratified contexts, probably representing several seasons of salt production based on the fragmentation of the pottery vessels; many vessels are represented by only a single sherd. Detailed comparison and study with other groups of Iron Age tradition pottery from the North East will be able to show how significant this assemblage is.

## 7.13 Pottery and Briquetage: Recommendations

7.13.1 Detailed binocular microscope examination and selection of samples for petrological thin sectioning is required to confirm characterisation of the clay matrices amongst the pottery and briquetage fabrics, identify the rock types present and confirm or refute the macroscopic characterisation presented in this assessment report to reveal where this pottery was coming from and how many potters/families may have been present at the site during the different phases of activity. A minimum of 15 thin sections is required, and a maximum of 30 would be welcomed.

7.13.2 Further work should examine the differences in the sizes of the vessels and establish their significance in terms of regional trends through association with any evidence of their use.

7.13.3 All of the 17 rims of pottery and the knob should be illustrated because there are so few sites of this date with sizeable groups of ceramic material. The rim, separate base and one profile of complete base cross-section should be illustrated to provide clear evidence of the significance of this as a salt production site. These drawings should be checked by the ceramics specialist at the pencil stage.

7.13.4 The variation in fabrics and rim types throughout the phased deposits needs to be established to determine if there is a chronological variation in their use at the site.

7.13.5 It will be necessary to explore the nature of deposition, or taphonomy of the collection, through mean sherd weight data and comparison to similar information from other sites in the region to see if the suggested variation resulting in single sherds representing individual vessels rather than many sherds conjoining within a feature or between features, as noted elsewhere, is significant.

7.13.6 The vessel wall thicknesses of the pots are in extreme contrast with those from elsewhere, such as Thorpe Thewles, near Stockton-on-Tees, and with the wall thicknesses of the briquetage containers. This phenomenon of 'massiveness' requires comparative examination to other native pottery in Britain as it is clearly an identity marker for the Berwick area and may well represent an extremely significant style zone which has not been promoted by archaeologists previously.

7.13.7 The briquetage vessels and supports require detailed examination and comparison with other assemblages in Britain and the Continent to establish exactly which procedures and methods were being used at the site in association with the excavated features. Close-up photography of the fingering on the container sherds may reveal details about the saltmakers.

7.13.8 Many of the sherds are suitable for lipid residue analysis and it is recommended that the best examples representative of the type series (once created) are selected to find out about the assemblage as a whole, and in particular to make sure that all ceramic phases are also represented - this will provide functional analysis within a chronological framework

## 7.14 Catalogue of Pottery and Briquetage for Illustration in Key Groups by Feature

***Ditch [80]***

1. Ovoid jar with simple rim; R3, Fabric A, mortice & tenon manufacture, 5% of 16 cm rim diameter present; context 86, Pottery Record Number 1025.
2. Ovoid jar with bevelled rim; R4, Fabric B, diameter greater than 28 cm but <3% present; context 87, PRN 1028.
3. Ovoid jar with bevelled rim; R4, Fabric H, <5% of rim present; context 87, PRN 1029.
4. Cooking pot with applied, pinched knob on wall side; Fabric C, soot on exterior, burnt residue on interior; context 121, PRN 1033.
5. Ovoid jar with simple rim; R3; Fabric B/E, soot on exterior; context 131, PRN 1040.
6. Ovoid jar with simple rim; R3, Fabric C/D, soot on exterior; context 153, PRN 1048.
7. Briquetage rim; R10, briquetage Fabric 1; context 252, PRN 1087.
8. Briquetage vessel cross-section of base zone; B2, briquetage Fabric 1; context 252, PRN 1089.

***Ditch [126]***

9. Ovoid jar with simple rim; R3, Fabric B, <5% of very large diameter rim present; context 128, PRN 1036.
10. Ovoid jar with simple rim; R3, Fabric B; <5% of rim diameter present; context 132, PRN 1042.
11. Ovoid jar with simple rim; R3, Fabric C, soot on exterior; 7% of 32 cm diameter rim; context 214, PRN1073.

***Accumulation Layer [167]***

12. Ovoid jar with pointed rim; R5, Fabric E, soot on exterior; PRN 1056.
13. Ovoid jar with simple rim; R3, Fabric E; PRN 1060.
14. Briquetage support rods; briquetage Fabric 3; PRN 1061

***Pit [224]***

15. Ovoid jar with bevelled rim; R4, fabric C, 8% of 22 cm diameter rim; context 221, PRN 1076.

***Accumulation Layer [225]***

16. Ovoid jar with simple rim; R3, Fabric B, mortice & tenon manufacture, 9% of 26 cm diameter rim, pink salt-staining to fabric; PRN 1078.

***Accumulation Layer [248]***

17. Ovoid jar with simple rim; R3, Fabric E, soot on exterior; context 248, PRN1025.

18. Ovoid jar with simple rim; R3, Fabric B, pink salt-staining to fabric; PRN 1083.

***Post-Medieval Ploughsoil***

19. Ovoid jar with beaded rim; R1, Fabric A, approximately 10 cm diameter but <5% present; context 4, PRN 1004.

20. Ovoid jar with rounded, hooked rim; R2, Fabric B, soot on exterior; context 4, PRN 1019.

***Tree Bole [84]***

21. Flared base from *briquetage* container with evidence of finger-pinching; B2, *briquetage* Fabric 2; context 85, PRN 1018.

## 7.15 Samian Sherd (Comment by Steve Willis)

7.15.1 A single sherd of samian ware was recovered from Phase 5 context [119]. This has been identified as a body sherd from a South Gaulish vessel from La Graufesenque, deriving from the floor of a Drag. 18 platter, 2g, c. AD 40-100. The sherd is somewhat weathered and abraded.

7.15.2 A small number of indigenous (native) sites on the Northumberland coastal plain have yielded examples of samian ware dating to the later 1st century AD.

7.15.3 No further work is necessary on this artefact.

# 8. MEDIEVAL AND POST-MEDIEVAL ARTEFACTS

*By: **Jenny Vaughan***

## 8.1 Pottery

### 8.1.1 Quantity, Date and Provenance

8.1.1.1 A total of 50 fragments of pottery weighing 275g were recovered from 15 contexts with a further three (93g) unstratified. About half the fragments were of medieval type, broadly 13th to 14th century, while the rest were mid 18th century or later. It was interesting that none of the contexts was actually mixed as far as the pottery was concerned, though one, context [31], did produce a small fragment of clay pipe stem (see below).

### 8.1.2 Range and variety

8.1.2.1 Full details of the range and variety of material are contained within Table 8a. Apart from three fragments (see below) there is no reason to suppose that the medieval pottery is other than of local/regional manufacture. There were examples of both iron rich (grey or red firing) and light firing (buff, pink or white) types but no particular, or dominant, group was identifiable. Five fragments were various medieval reduced green glazed types and included an unstratified ribbed rod handle (though this might have been the same vessel as a fragment in context [58]) and a piece of moulded decoration (also unstratified) in quite a fine fabric. There was a strap handle in a coarse pinkish buff fabric and another in a mainly oxidised sandy fabric, probably related to the reduced greenwares. Apart from a very small gritty buff rim sherd and an abraded base, both from context [48], there were no other form sherds present.

8.1.2.2 Of the three sherds of non-local medieval pottery, most interesting was part of the rim with the beginning of the spout of a Saintonge polychrome jug (context [48]). This French import dates to the latter half of the 13th or beginning of the 14th century. French wares are uncommon but by no means unknown in the North East. This particular type is very distinctive with, in this case, manganese brown and green decoration so even small fragments are easily identifiable. Less easily identifiable was a fragment of fine whiteware with applied strip decoration in context [58]. This sherd was rather abraded but appeared to have also had a layer of red slip. It might also be a French import. A tiny fragment in context [40] was tentatively identified as Scarborough type ware.

8.1.2.3 Post medieval types present were later brown and black glazed redware, refined earthenwares including fragments of creamware and pearlware (which could be later 18th century), and transfer printed sherds, and two small fragments of china/porcelain.

### 8.1.3 Methodology

8.1.3.1 The assemblage was sorted into types by context and recorded by count and weight in an Access table using mainly descriptive fabric names. Form sherds (*i.e.* rims, bases, handles) are noted and comments made on the vessels present. The catalogue (Table 8a) gives an indication of date for each record.

### 8.1.4 Condition

8.1.4.1 Fragments were on the whole small and some were quite abraded.

### 8.1.5 Recommendations

8.1.5.1 Several assemblages from Berwick and one from Lindisfarne have now been published, each written up by a different pottery researcher. Both variations in terminology, presentation and a certain amount of inconsistent cross-referencing have resulted in a situation where there is still no easily usable type series or clear picture of how the ceramic traditions develop in Berwick. These circumstances, and also given the size and condition of this assemblage, render attempting to relate the medieval component to the published material both difficult and of little value.

8.1.5.2 No further interpretation or analysis is recommended.

## 8.2 Clay Pipe

8.2.1 Six fragments of unmarked clay pipe stems were recovered. Two of these had bores of 6/64" and could possibly be early 18$^{th}$ (or even late 17$^{th}$) century. The others had bores of 5 and 6/64" and are most likely to be 19$^{th}$ century.

## 8.3 Ceramic Building Material

8.3.1 There were two small red flakes, possibly of roof tile and a large fragment from context [31] which appeared to be part of a floor tile with a small patch of glaze on the edge.

8.3.2 The clay pipe and CBM are included in the context catalogue, Table 8a.

| Context | Type | Count | Weight (g) | Date | Comments |
|---|---|---|---|---|---|
| | | | | | |
| + | **Pottery** | **3** | | | |
| | pink sandy | 1 | 7 | med | Traces yellow gl, reduced int. |
| | rg | 1 | 9 | 13th/14th c. | Bit of applied dec ?bottom of beard |
| | sandy rg | 1 | 77 | 13th/14th c. | Rod handle with ribs. Ggl on upper surface. ?same ves as fragment in [58] |
| | | | | | |
| **2** | **Pottery** | 11 | | | |
| | creamw | 3 | 11 | 18th c. - > | Scalloped plate rim with moulded dec. |
| | black gl red | 2 | 14 | 18th c. - > | Everted rim – jar |
| | pearlw? | 2 | 12 | 18th c. - > | Flat frag from a base |
| | ref ww | 2 | 3 | 19th c. | Flake from handle |
| | china | 2 | 3 | 19th c. | Small bit of rim with red line |
| | | | | | |
| | **Clay Pipe** | | | | |
| | stem | 2 | 3 | 18th c. - > | Bores: 1 @ 4/64, 1 @ 6/64 |
| | | | | | |
| **7** | **Pottery** | 4 | | | |
| | brown gl red | 1 | 5 | 18th c. - > | Everted bowl rim |
| | creamw | 1 | 1 | 18th c. - > | Flake – now 3 bits |
| | black gl red | 1 | 7 | 18th c. - > | |
| | ref ww | 1 | 1 | 19th c.? | Small bit blue dec |
| | | | | | |
| | **Clay Pipe** | | | | |
| | stem | 1 | 2 | 19th c. | Bore 4/64 |
| | | | | | |
| **26** | **Pottery** | 2 | | | |
| | early rg | 1 | 5 | 13th c. | Abraded with traces green gl. |
| | med | 1 | 0 | med | Tiny fragment |
| | | | | | |
| **31** | **Pottery** | 3 | | | |
| | ggl gr | 1 | 2 | 13th c. - > | Off white/pale buff with pitted light green gl. |
| | ox sandy ggl | 1 | 27 | 14th c.? | Strap handle with greenish brown gl upper surface and incised lines. |
| | rg | 1 | 1 | 14th c. - > | |
| | | | | | |
| | **Clay Pipe** | 1 | | | |
| | stem | 1 | 2 | 19th c. | Bore 5/64 |
| | | | | | |
| | **CBM** | 1 | | | |
| | floor tile? | 1 | 111 | med | Ox upper and side reduced core and under surface. Small patch of gl on side. |
| | | | | | |
| **40** | **Pottery** | 1 | | | |
| | Scarb? | 1 | 1 | 13th/14th c. | Small light red frag with green gl. Possibly Scarborough type ware |
| | | | | | |
| **46** | **Pottery** | 1 | | | |
| | ref ww | 1 | 3 | 19th c. | With blue dec. |
| | | | | | |
| **48** | **Pottery** | 9 | | | |
| | Saint poly | 1 | 6 | L.13th-E.14th c. | Rim with beginning of spout, manganese brown lines outlining light green painted area |
| | buff gr | 2 | 33 | 13th/14th c. | Strap handle and very small rim fragment in pinkish buff fabric, handle has grey core. With splashes of gl upper surface |
| | grey sandy | 2 | 25 | med | Base fragment. Mid grey slightly sandy fabric with paler ext margin, buff towards bottom. Sooted ext. Warn almost water washed appearance. |
| | iron rich | 4 | 26 | 14th c. | Thin walled dark grey quite fine sandy fabric with thin oxidised margin and sooted surface. Greenish brown gl int. All join |
| | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| **53** | **Pottery** | 6 | | | |
| | sandy iron rich | 1 | 15 | med | Mid grey with oxidised ext margin/surface |
| | pink ggl | 1 | 5 | 13th/14th c. | Bright pink, partial grey core with rough green gl, worn. |
| | orange | 1 | 3 | ? | Worn |
| | pink mic | 3 | 16 | 13th/14th c. | Micaceous pale pinkish buff with darker pink ext surface, traces of sooting. |
| | | | | | |
| **58** | **Pottery** | 2 | | | |
| | sandy rg | 1 | 7 | 14th c.? | Thin white ext margin and copper mottled ggl. |
| | fine whitew | 1 | 5 | 13/14th c. | Off white with pink ext surface with traces of thin red slip running under an applied strip with traces yellow gl. Very worn. May be a continental import with yellow stripes against darker orange or red background |
| | | | | | |
| **68** | **Pottery** | 2 | | | |
| | ref ww | 2 | 3 | 19th c. | Small blue transf printed frags. |
| | | | | | |
| | **Clay Pipe** | 1 | | | |
| | stem | 1 | 2 | 19th c. | Bore 5/64 |
| | | | | | |
| **72** | **CBM** | 1 | | | |
| | flake | 1 | 2 | ? | ?tile |
| | | | | | |
| **81** | **Pottery** | 3 | | | |
| | red slip | 1 | 5 | 18th c. - > | Int white slip, plain gl ext. |
| | red ww | 2 | 2 | 19th c. | One frag is burnt |
| | | | | | |
| **85** | **Pottery** | 2 | | | |
| | ref ww | 2 | 3 | 19th c. | One had transf print design in black |
| | | | | | |
| **99** | **Pottery** | 2 | | | |
| | pink | 2 | 4 | med | With yellow gl, joining frags. |
| | | | | | |
| **144** | **Pottery** | 1 | | | |
| | med? | 1 | 11 | ? | Abraded red-brown frag – reduced core |
| | | | | | |
| **152** | **Clay Pipe** | 1 | | | |
| | stem | 1 | 3 | 18th c.? | Bore 6/64 |
| | | | | | |
| **154** | **Pottery** | 1 | | | |
| | creamw | 1 | 10 | 18th c. - > | Chipped base ring |
| | | | | | |
| **198** | **CBM** | 1 | | | |
| | flake | 1 | 6 | ? | ?tile |

***Table 8a: Medieval and Post-medieval ceramic, clay pipe and CBM catalogue***

*Abbreviations used in the catalogue:*
rg – reduced greenware
gl, ggl – glazed, green glazed
....w – ware, as in creamware, pearlware
ref ww - refined white glazed whiteware
gr - gritty
Scarb – Scarborough type ware
Ox – oxidised
Ext – external
Int – internal

# 9. SMALL FINDS

*By: **Philippa Walton***

## 9.1 Introduction

9.1.1 A total of 15 objects, or multiple fragments thereof, were retrieved from the excavation and recorded under 13 Small Find (SF) numbers. The assessment has involved basic identification of the object materials and type and a consideration of those warranting further research at the analysis stage. The assessment has identified three objects that require further research.

9.1.2 The abbreviations used in the tables below are as follows: NFW = No Further Work,

FW = Further Work, I = Illustration.

## 9.2 Glass Objects

9.2.1 The assemblage comprises two bangle fragments, SF 8 and SF 11 (Plate 16). Both date to the 1st or early 2nd century AD. SF 11 is a Type 2 Kilbride-Jones bangle with a blue and white twisted cable decoration at the apex. SF 8 is a more simple monochrome example.

| SF | Context | Description | Date | FW? |
|---|---|---|---|---|
| 8 | 71 | Cream D sectioned bangle frag | 1st – early 2nd c. AD | NFW |
| 11 | 119 | Type 2 Kilbride-Jones bangle frag [bue-white twisted cable] | 1st - early 2nd c. AD | NFW |
| 29 | 240 | Unidentified glass object | Undated | NFW |

## 9.3 Copper Alloy

9.3.1 The assemblage comprises two copper alloy objects. SF 6 consists of four fragments of a medieval annular brooch. The pin and part of the plate of the brooch with moulded decoration survives. SF 22 is a tinned button cover with bevelled edges and dates to the 17th or 18th centuries.

| SF | Context | Description | Date | FW? |
|---|---|---|---|---|
| 6 | 50 | Penannular brooch | Medieval | NFW |
| 22 | 248 | Tinned button cover | Post-medieval | NFW |

## 9.4 Stone Objects

9.4.1 SF 27, from context [217], may represent a fragment of a Roman quernstone, although further work is necessary to establish exact form and date.

9.4.2 A flat circular spindle whorl, SF 10, made from micaeous sandstone was recovered from context [86], with a further doughnut shaped whorl, SF 9, being recovered from the same context (Plate 15). Unfortunately, spindle whorls are very difficult to date with any certainty, hence a date range from the Late Iron Age to the early post medieval period.

9.4.3 The other objects including a slate ring, SF 12 (Plate 16), a sphere, SF 14 (Plate 17), and a possible smoother, SF 26, are undiagnostic.

9.4.4 The function of the small stone ball (SF 14) is not clear and further research would be necessary in an attempt to provide parallels to aid in the interpretation of this object.

| SF | Context | Identification | Date | FW? |
|---|---|---|---|---|
| 9 | 86 | Spindle whorl | LIA – early post-medieval | NFW |
| 10 | 86 | Spindle whorl | LIA – early post-medieval | NFW |
| 12 | 119 | Slate ring | Undiagnostic | NFW |
| 14 | 251 | Ball – unknown function | Undiagnostic | NFW |
| 26 | 87 | Smoother? | Undiagnostic | NFW |
| 27 | 217 | Quernstone frag | Roman? | FW |

## 9.5 Clay Objects

9.5.1 SF 17, a fragment of baked clay, was too small to reach any definite conclusions as to its function.

| SF | Context | Identification | Date | FW? |
|---|---|---|---|---|
| 17 | 127 | Baked clay fragment | Undiagnostic | NFW |

## 9.6 Iron Objects

9.6.1 All three iron objects recovered from the excavations are undatable.

| SF | Context | Identification | Date | FW? |
|---|---|---|---|---|
| 4 | 48 | Nail | Undiagnostic | NFW |
| 5 | 48 | Object | Undiagnostic | NFW |
| 7 | 79 | Iron strip | Undiagnostic | NFW |

## 9.7 Ceramic Object (Comment by Elaine Morris)

9.7.1 SF 15, a very softly-fired ceramic object, is considered to have a function potentially related to saltmaking. It may have been an apprentice saltmakers piece although the object may have had a different function, such as a child's toy. Further work on the object is required to establish the potential use and function.

## 9.8 Recommendations

9.8.1 The objects recovered from the North Road excavation represent human activity in the area spanning the early Roman to the post-medieval period. The Roman material is sparse and fragmentary suggesting that either activity was minimal or concentrated in an area bordering on that of the excavation.

9.8.2 Further research is recommended on three of the objects, the stone ball, the ceramic object and the possible quernstone, in attempt to elucidate their function.

9.8.3 A selection of the small finds should also be illustrated for inclusion in any future publication.

# 10. STONE ARTEFACTS

*By: **Kathryn Johnson***

## 10.1 Introduction

10.1.1 An assemblage of ten large stone objects were recovered from the investigations at the site.

10.1.2 A catalogue of these items is included below, along with recommendations for further work.

## 10.2 Description

### 10.2.1 SF 1, [6]

10.2.1.1 SF 1 is an almost complete lower stone from a rotary quern. The stone is square to rectangular in shape, with one corner broken. The outer surface does not appear to be dressed/worked and the central socket does not extend fully through the stone. The grinding surface is roughly circular, with the outer portion not worn by the upper stone. The grinding surface is raised around the central socket.

Dimensions – 380mm x 350mm x 110mm
Central hole/socket – 40mm diameter
Weight – 19.4kg

### 10.2.2 SF 2, unstratified

10.2.2.1 SF 2 comprises two fragments of the upper stone from a rotary quern and amounts to approximately half the stone. The outer surface of the stone has been shaped around the edge of the grinding surface, while the remainder is heavily pitted, probably a natural feature. The grinding surface domes up slightly towards the central hopper. The remains of a handle socket survive on the side of the stone, although the grinding surface has worn down and damaged the socket.

Dimensions (fragments adjoined) – 340mm x 180mm x 70mm
Central hole/hopper – 35mm – 83mm diameter
Weight – 5kg

### 10.2.3 SF13, [79] (Plates 13 and 14)

10.2.3.1 SF 13 is a complete upper stone from a rotary quern. It is approximately circular in plan and has an even and slightly rounded outer surface, which shows some small tool marks. The grinding surface domes upwards towards the central hopper and has four grooves radiating from the central hopper at right angles to each other. The handle socket remains intact on the side of the stone.

Dimensions – 420mm diameter x 110mm thick
Diameter of hopper on upper surface – 100mm

Diameter of hopper on grinding surface – 40mm
Handle socket – 35mm diameter, >40mm deep
Weight – 32.2kg

### 10.2.4 SF 18, [143]

10.2.4.1 SF 18 is possibly a fragment of a saddle quern or fragment from the lower stone of a rotary quern. The fragment has one smoothed surface, while the rest of the surfaces seem unworked. It is unclear which edges have been broken and the object may have weathered significantly since being damaged.

Dimensions – 160mm x 135mm x 79-90mm
Weight – 1.99kg

### 10.2.5 SF 19, [46]

10.2.5.1 SF 19 is an almost complete lower stone from a rotary quern, sub-circular in shape. The outer surface of the stone around the grinding surface is roughly worked, while the base does not appear to have been worked. The central socket does not extend through the whole stone. The worn grinding surface is flat and roughly circular and does not cover the full surface of the stone, suggesting the upper stone would have been smaller in size.

Dimensions – 350mm x 320mm x 100mm
Central hole/socket – 220mm diameter
Weight – 16.2kg

### 10.2.6 SF 20, [64]

10.2.6.1 SF 20 may be a small saddle quern or grinding cup. It comprises a fragment of unshaped stone containing a distinct worn depression on one surface. The depression is oval-shaped and has a depth of up to 15mm.

Dimensions – 80mm x 112mm x 65mm
Depression – 100mm x 65mm x 15mm
Weight – 1.6kg

### 10.2.7 SF 21, [243]

10.2.7.1 SF 21 is a fragment of a small saddle quern. The fragment has one rounded edge and one straight, broken edge. The upper surface contains a worn depression while the lower surface does not appear to have been worked.

Dimensions – 125mm x 100mm x 25-60mm
Weight – 0.87kg

### 10.2.8 SF 23, [228]

10.2.8.1 SF 23 is a fragment of upper stone from a rotary quern. The fragment comprises part of the outer, upper surface and side of the stone and a part of the grinding surface survives. The outer surface of the stone appears unworked. The handle socket for the stone is present on the side of the fragment.

Dimensions – 255mm x 165mm x 55-60mm
Width of grinding surface intact – 30mm
Handle socket – 25mm diameter
Weight – 3.8kg

### 10.2.9 SF 24, [228]

10.2.9.1 SF 24 is a fragment of an upper stone from a rotary quern. The fragment has part of the outer surface, grinding surface and central hopper intact. A section of the handle socket is present on the side of the fragment, but the area surrounding this has been damaged. The outer surface of the stone does not appear to have been worked.

Dimensions – 240mm x 160mm x 73mm
Weight – 2.8kg

### 10.2.10 SF 25, [301]

10.2.10.1 SF 25 is a fragment of worked stone. The stone has a slightly squared shape and has a central depression/socket. This could represent a small grinding cup or a socket for a door or post.

Dimensions – 160mm x 110mm x 80-105mm
Central depression – 55-60mm diameter, 25mm deep
Weight – 3.8kg

## 10.3 Recommendations

10.3.1 It is recommended that petrological analysis be carried out on the stone objects in order to identify the rock type and likely provenance.

10.3.2 Further analysis and research is also necessary to identify the function of SFs 18 and 20.

# 11. LITHICS

*By: **Barry John Bishop***

## 11.1 Introduction

11.1.1 Four struck flints were recovered from the excavations at North Road Other struck flints were recovered during the earlier evaluation phase of work, which have been reported on separately.[24] This report describes the material from the excavation, comments on its significance and recommends any further work required. All metrical descriptions follow Saville (1980).

## 11.2 The Assemblage

### 11.2.1 Unstratified

- Medial flake fragment of opaque dark grey flint in slightly chipped condition. Proximal and distal ends missing. Three parallel dorsal flake scars. >15mm X 12mm X 2mm. 0.5g.

### 11.2.2 Unstratified SF 34

- Tabular multiplatform core of semi-opaque mid-grey flint in slightly chipped condition. Three striking platforms, two opposed on one face and the other transverse across the opposite face. Thin, hard, weathered cortex present in small quantities on both faces. Flakes produced are small and narrow with some evidence of minimal attempts at platform trimming. 36mm X 30mm X 14mm. 17g.

### 11.2.3 Unstratified SF 35

- Flake fragment of semi-opaque mid-grey flint in slightly chipped condition. Proximal end missing, feathered distal termination and three unidirectional dorsal flake scars. >24mm X 19mm X 6mm. 3g.

### 11.2.4 Context [335] (upper fill of enclosure ditch [80])

- Retouched flake fragment of semi-opaque mid-grey flint in slightly chipped condition. Proximal and distal ends missing, three unidirectional dorsal flake scars. Right lateral margin has slightly invasive bifacial scalar retouch. Left lateral margin has evidence of damage, possibly through use but may have been caused naturally. >30mm X 27mm X 5mm. 5g.

[24] PCA, 2005.

## 11.3 Discussion

11.3.1 The raw material used appeared to consist of small weathered nodules, probably originating from glacial deposits, common in the vicinity. The assemblage is small and no chronologically diagnostic pieces were present. The core was extensively, but not systematically, reduced and may have produced blades or narrow flakes. The retouched fragment probably represents a scale-flaked knife.

11.3.2 Only a broad Neolithic or Bronze Age date can be suggested for the material and, although its technological characteristics may suggest a date earlier rather than later in this sequence, such an interpretation should be regarded as tentative. Other lithic material, recovered during the evaluation, was considered most likely to be of later Bronze Age date,[25] which indicates the possibilities either that the site was intermittently visited by transient groups over a long period, or that all the lithic material in fact dates to this later period.

11.3.3 Due to the size of the assemblage, very little can be said concerning the nature of the activities represented by the material; it would appear that limited core reduction and tool use may have been undertaken.

## 11.4 Recommendations

11.4.1 Due to its size and lack of chronologically diagnostic artefacts, this report is all that is required of the material for the purposes of the archive. Nevertheless, it has the ability to contribute to the further appreciation of prehistoric activity in the area, and it is therefore recommended that a short description and discussion of the assemblages from both stages of archaeological investigation, including illustrations of the cores and retouched flakes, should be included in any published account of the fieldwork. The publication should also take due regard of the contextual associations of the lithic material in order to determine its relationship to the later prehistoric structural evidence recorded at the site.

[25]PCA, 2005.

# 12. IRON SLAG AND OTHER HIGH TEMPERATURE DEBRIS

*By: **Lynne Keys***

## 12.1 Introduction

12.1.1 A tiny assemblage of material initially identified as slag (103g) was recovered by hand during excavation. For this report it was examined by eye and categorised on the basis of morphology. Quantification details are given in the table below.

## 12.2 Description

| Context | Identification | Weight (g) | Comment |
|---|---|---|---|
| 72 | burnt coal | 1 | |
| 114 | undiagnostic | 22 | almost petrified |
| 123 | burnt wood | 5 | |
| 123 | cinder | 1 | |
| 152 | undiagnostic | 26 | petrified |
| 299 | cinder | 14 | |
| u/s | undiagnostic | 34 | |
| | | | |
| **total** | | **103** | |

## 12.3 Discussion

12.3.1 The iron slag could not be identified as having been produced by smelting or smithing and all had been broken up during deposition or redeposition and then weathered and abraded.

12.3.2 Not all the assemblage was iron slag: some fragments were cinder, a very porous, highly vitrified material formed at the interface between the alkali fuel ashes and siliceous material of a hearth lining. It was not possible to ascertain the specific activity or industrial process which produced this material.

## 12.4 Recommendations

12.4.1 The assemblage requires no further work other than a mention in any publication.

# 13. BIOLOGICAL REMAINS

*By: **Örni Akeret, Juliet Mant, John Carrott, Bethan Upex and Deborah Jaques***

## 13.1 Introduction

13.1.1 Twenty-four bulk sediment samples ('GBA'/'BS' *sensu* Dobney *et al.* 1992) and a single box of hand-collected bone were submitted to Palaeoecology Research Service Limited (PRS) for an assessment of their bioarchaeological potential.

13.1.2 Mostly very low concentrations of (probable) ancient charred plant remains (often restricted to fine charcoal) were present in the processed sub-samples, but some deposits gave slightly larger quantities. Identifiable food plant remains were mostly of cereal grains (sometimes with chaff), but there were also some hazelnut fragments from context [167] and charred remains of wild taxa in several deposits. Ditch fill [302] gave small assemblages of plant and invertebrate remains preserved by anoxic waterlogging, a very rare occurrence in deposits of this period from the north of England.

13.1.3 A substantial, variably preserved, assemblage of marine shell, composed largely of limpets and common periwinkle, was recovered from the sub-sample from context [187], with similar but smaller assemblages from contexts [188] and [131]. The origins of these remains are unclear, although waste from human food or fishing bait (or perhaps both) seem the most likely.

13.1.4 Very few identifiable fragments of bone were recovered from the site and these were of no interpretative value.

13.1.5 Further investigation of seven of the deposits is recommended, including the processing of the remaining sediment and radiocarbon dating of selected charred plant remains if required. Furthermore, all of the sediment samples not seen for this assessment should be examined, with a view to identifying others with concentrations of shell and charred plant remains and, in particular, any other Iron Age deposits with waterlogged preservation.

## 13.2 Methods

### 13.2.1 Sediment samples

13.2.1.1 The sediment samples were inspected in the laboratory and their lithologies recorded using a standard *pro forma.* Sub-samples of each were processed, broadly following the procedures of Kenward *et al.* (1980), for the recovery of plant and invertebrate macrofossils. The initial approach to sub-sampling was to be the processing of one tub (*i.e.* up to 11 litres) of sediment from each of the selected deposits. However, on inspection, 14 of the deposits appeared very unpromising and it was decided that, for these, 2kg sub-samples would be taken and augmented by the addition of the rest of the sediment from the tub should biological remains be present. In the event, the original 2kg sub-samples were increased in size for two deposits (contexts [119] and [249]).

13.2.1.2 Plant remains (and the general nature of the residues and washovers) were recorded briefly by 'scanning', identifiable plant taxa and other components being listed on paper. Notes on the quantity and quality of preservation were made for each fraction. Nomenclature for plant species follows Stace (1997).

13.2.1.3 The residues were dried prior to examination for larger plant macrofossils and other biological and artefactual remains as they were primarily inorganic or contained organic remains (*e.g.* charred plant remains, shell) which would not be damaged by drying, and are most readily examined dry.

13.2.1.4 Two sub-samples of organic remains were submitted to Beta Analytic Inc. (Miami, Florida) for radiocarbon dating via Accelerator Mass Spectrometry (AMS). The first of these consisted of four grains of emmer/spelt wheat (*Triticum dicoccum* Schrank/*T. spelta* L.) recovered from Phase 4 context [238] (Sample 68). The second was charred residue adhering to the surface of a pottery sherd recovered from Phase 3.2 context [214]. The results of this analysis are detailed in Section 14.

### 13.2.2 Vertebrate remains

13.2.2.1 For the vertebrate remains, subjective records were made of the state of preservation, colour of the fragments, and the appearance of broken surfaces ('angularity'). Other information, such as fragment size, dog gnawing, burning, butchery and fresh breaks, was noted, where applicable.

13.2.2.2 Fragments were identified to species or species group using the PRS modern comparative reference collection. The fragments that could not be identified to species were described as 'unidentified'. Within this fraction, fragments were grouped into categories as: large mammal (assumed to be cattle, horse or large cervid), and medium-sized mammal (assumed to be caprovid, pig or small cervid). These remains are represented by 'unidentified' in Table 13c.

## 13.3 Results

### 13.3.1 Sediment samples

13.3.1.1 Twenty-four samples, primarily from deposits of Iron Age date and mainly representing cut features, such as ditches, pits and gullies, were assessed. All bar one of the samples produced varying (though never large) quantities of charcoal (almost exclusively small and unidentifiable fragments) and most included some coal/cinder, whilst modern rootlets were present in seven. Twelve of the samples also produced uncharred plant remains (other than rootlets) but, with the exception of the material from context [302], these were almost certainly modern contaminants. Most of the charred plant remains were cereal grains or chaff but concentrations of these remains were extremely low and only a few deposits produced more than just single grains.

13.3.1.2 The following text details the remains from those samples which produced the largest assemblages of plant macrofossils (all preserved by charring unless stated otherwise) and shell. The results are presented in context number order, with archaeological information, provided by the excavator, given in square brackets. A brief summary of the processing method and an estimate of the remaining volume of unprocessed sediment follows (in round brackets) after the sample numbers.

13.3.1.3 Abbreviated details for the deposits reported below, together with summary information for the other samples, are presented in Tables 13a and 13b.

**Context [119]** [lower fill of pit [97]; Romano-British; Phase 5)

Sample 17/T (7.5 kg/5.8 litres sieved to 300 microns with washover; approximately 4 litres of unprocessed sediment remain).
Just moist, light brown to mid grey-brown, unconsolidated to crumbly, slightly silty sand, with modern rootlets.
The washover (~11 ml) produced approximately a dozen cereal grains, all of those that were identifiable being hulled barley (*Hordeum distichon* L./*H. vulgare* L.). Very little chaff was present but included rachis segments of barley and glume bases of emmer/einkorn wheat (*Triticum dicoccum/T. monococcum* L.). Achenes of knotweed (*Persicaria*) and caryopses of wild grasses (Poaceae) also occurred in small numbers.
The residue (1.92 kg) was mostly stones (to 38 mm), with sand (coarse) and traces of coal (<1 g; to 3 mm) and charcoal (<1 g; to 9 mm).

**Context [131]** [secondary fill of ditch [80];Iron Age; Phase 4]

Sample 25/T (12 kg/9 litres sieved to 300 microns with washover; approximately 30 litres of unprocessed sediment remain).
Moist, mid to dark grey-brown, crumbly to unconsolidated (working soft), slightly sandy, clay, silt, with marine shells (very soft; mainly periwinkles and limpets) and stones (2 to 20 mm).
The washover (~20 ml) produced a few barley grains, together with remains of a few wild taxa including sedge (*Carex*), rush (*Juncus*), knotweed, ribwort plantain (*Plantago lanceolata* L.) and wild grasses – notably annual meadow-grass (*Poa annua* L.). Some uncharred plant remains of probable modern origin were also present, as were ~12 *Cecilioides acicula* (Müller) which are burrowing land snails and almost certainly intrusive to the deposit.
The residue (2.18 kg) was mostly coarse sand and some stones (to 54 mm), with coal (<1 g; to 8 mm), cinders (2 g; to 9 mm), charcoal (<1 g; to 8 mm), glass (<1 g; to 14 mm), magnetic material (26 g; to 14 mm), a single fragment of burnt bone (medium-sized mammal shaft; <1 g) and a small assemblage of marine shell. The last consisted of roughly equal quantities of periwinkle (*Littorina littorea* (L.)) and limpet (*Patella* sp(?p)), with a total weight of 84 g. The preservation of the shell was not as good as in the two other deposits which gave reasonable quantities of remains (contexts 187 and 188, see below); individual shells were often very soft and there were very many small mm-flakes (most apparently of limpet).

**Context [148]** [primary fill of enclosure ditch [125]; Iron Age; Phase 3.2 ]

Sample 40/T (12.5 kg/9 litres sieved to 300 microns with washover; approximately 30 litres of unprocessed sediment remain).
Moist, mid brown to mid grey-brown, stiff to crumbly (working soft), sandy, clay silt, with traces of charcoal or ?other fine charred material.

The following plant remains were identified from the washover (~15 ml); one grain of barley, one rachis segment of barley and one cereal grain that could not be identified more precisely.
The residue (2.5 kg) was mostly stones (to 78 mm) and sand (both coarse and fine), with cinders (<1 g; to 12 mm), charcoal (<1 g; to 10 mm), mineral concretions (10 g; to 26 mm) and burnt shale (12 g; to 48 mm).

**Context [167]** [layer; Romano-British; Phase 5]

Sample 56/T (10 kg/9 litres sieved to 300 microns with washover; approximately 30 litres of unprocessed sediment remain).
Dry, mid to dark grey-brown, unconsolidated to crumbly, silty fine sand / fine sandy silt, with traces of charcoal and modern rootlets.
The washover (~60 ml) contained a few grains and rachis segments of hulled barley. Other remains included moss stems (Bryophyta), hazel (*Corylus avellana* L.) nut shells, achenes of knotweed and caryopses of wild grasses. There were also a number of uncharred plant fragments that were considered to be of modern origin.
The residue (0.90 kg) consisted mostly of sand (fine and coarse) and some stones (to 29 mm), with coal (1 g; to 12 mm), charcoal (<1 g; to 11 mm) and magnetic material (6 g; to 8 mm).

**Context [187]** [shell midden in natural hollow; Iron Age; Phase 4]

Sample 53/T (8.5 kg/7 litres sieved to 300 microns with washover; approximately 50 litres of unprocessed sediment remain).
Dry, light to mid grey-brown, unconsolidated, silty fine sand/fine sandy silt, with stones (6 to 60 mm) and abundant marine shell (including limpet and periwinkle), but often very soft and friable.
A small number of charred cereal grains (both oat (*Avena*) and barley), coal/cinder and modern uncharred plant remains (*Galium aparine*) were identified in the washover (25 ml). There were also very many tiny ?marine shell fragments (1 to 2 mm) none of which were identifiable.
The residue (2.20 kg) was mostly stones (to 75 mm) and sand (coarse and fine), with coal (4 g; to 17 mm), cinders (2 g; to 13 mm) and fine fragments of shell within the sand. The residue also contained a significant quantity of marine shell (845 g). There were some rather fragmentary remains, but also some very well preserved shells – particularly those of periwinkle, which accounted for approximately one third of the assemblage. The remainder of the shell was, almost exclusively, of limpets (significantly more heavily fragmented), though there were also occasional fragments of very poorly preserved oyster (*Ostrea edulis* L.) and mussel (*Mytilus edulis* L.), and a single apex fragment of ?flat winkle (cf. *Littorina obtusata* (L.)). Surface erosion of the limpets made a species level identification difficult in many cases, but both common limpet (*Patella vulgata* L.) and China limpet (*Patella ulyssiponensis* Gmelin) were represented amongst the better preserved remains.

**Context [188]** [upper fill of ditch [196]; Iron Age; Phase 3.5]

Sample 54/T (11 kg/8 litres sieved to 300 microns with washover; approximately 30 litres of unprocessed sediment remain)
Just moist, mid brown, crumbly to unconsolidated, clay sandy silt, with marine shell (again, mainly periwinkle and limpet and often rather soft) present.
The washover (~15 ml) was mostly of small fragments of unidentified charcoal, but there were also trace amounts of tiny (1 to 2 mm) ?marine shell flakes.

The residue (3.94 kg) was mostly stones and sand (fine and coarse), with some marine shellfish and 20 fragments of bone (1 g). Most of the bone represented a fragmented medium-sized mammal shaft, but there was also a rib fragment and eight tiny unidentified pieces. The shell assemblage consisted of a fairly small amount of limpet (all those identified being common limpet) and periwinkle (total weight 130g). The preservation and composition of this assemblage was very similar to that from context [187] (above), but with the taxa present in roughly equal proportions and no other species present.

**Context [238]** [fill of [236] (?dump of domestic rubbish; Iron Age; Phase 4]

Sample 68/T (11.5 kg/8 litres sieved to 300 microns with washover; approximately 10 litres of unprocessed sediment remain)
Just moist, mid to dark grey-brown, crumbly to unconsolidated, sandy silt to silty/fine sand, with stones (20 to 60 mm) present and rather soft fragile marine shell.
The washover (~60 ml) contained approximately two dozen cereal grains, including hulled barley and emmer/spelt wheat (*Triticum dicoccum/T. spelta*) present in roughly equal proportions. Most of the chaff was identified as spelt wheat, but there were also some fragments of emmer. In addition to the cereals, there were a few seeds of fat-hen (*Chenopodium album* L.), of rush and of blinks (*Montia fontana* L. ssp. *chondrosperma* Fenzl Walters) and some achenes of sheep's sorrel (*Rumex acetosella* L.). Some uncharred plant remains were also noted but these were likely to be modern contaminants.
The residue (2.49 kg) was mostly coarse sand and some stones (to 64 mm), with a little charcoal (<1 g) and four fragments of bone (<1 g), including a fish vertebra and three fragments of calcined bone and tooth.

**Context [249]** [fill of ditch [209]; Iron Age; Phase 3.3]

Sample 105/T (10 kg/6.7 litres sieved to 300 microns with washover; approximately 7 litres of unprocessed sediment remain)
Just moist, light brown to mid grey-brown, unconsolidated to crumbly, slightly clay, sandy silt with lumps of clay (to 20 mm).
Four grains of hulled barley and a single barley rachis fragment were identified from this sample, together with some modern rootlets.
The residue (0.96 kg) was mostly stones (to 68 mm), with some burnt bark (7 g; to 22 mm), a little charcoal (<1 g; to 4 mm) and nine fragments of burnt bone (<1 g).

**Context [302]** [fill of ditch [276]; Iron Age; Phase 4]

Sample 89/T (14 kg/7 litres sieved to 300 microns with washover; approximately 20 litres of unprocessed sediment remain)
Moist, light to mid grey-brown, stiff and firm to crumbly (working soft), silty sandy clay, with ?charcoal flecks.
Waterlogged seeds of rush (*Juncus*) were numerous in the washover (~27 ml) and there were some waterlogged seeds of fat-hen (*Chenopodium album*), together with fragments of coal/cinder and charcoal. There were also a few rather well preserved (by waterlogging) insect remains including several unidentified beetle elytra and a weevil (Curculionidae) pronotum.
The residue (0.55 kg) was mostly of sand (fine and coarse) and stones (to 12 mm).

### 13.3.2 Hand-collected vertebrate remains

13.3.2.1 A small assemblage of vertebrate remains, amounting to 167 fragments, was recovered from 15 deposits, of Iron Age to Roman date (Table 3). The largest concentration of bones (88 fragments) was from context [131], a fill of enclosure ditch [80]. Only a single bone was measurable and there was one mandible with teeth *in situ.*

13.3.2.2 In general, the vertebrate remains were rather poorly preserved, with eroded surfaces and rounded edges, however, bones from contexts [131], [134] and [188] were of slightly better preservation. Fresh breakage damage was noted throughout and several fragments showed evidence of butchery.

13.3.2.3 Only three of the 15 deposits (contexts [131], [134] and [188]) produced fragments that could be identified. These included the remains of cattle, caprovid, pig and horse. The unidentified fraction from these deposits was primarily of large mammal shaft, rib and vertebra fragments, although a few medium-sized mammal fragments were also present. Much of the assemblage probably represented butchery refuse.

13.3.2.4 Material from the other 12 deposits was restricted to small (less than 15mm in maximum dimension) unidentified fragments, with all the bones from six contexts being burnt. Remains from three deposits (contexts [86], [167] and [240]) were large mammal tooth fragments that had split into layers.

## 13.4 Discussion and Statement of Potential

13.4.1 Ancient plant remains from the sediment samples were generally scarce. Some of the samples produced no seeds or fruits and others only very few, although small quantities of charcoal were found in most. Where slightly larger charred assemblages were present (Iron Age contexts [131], [187], [238] and [249] and the Romano-British pit fill, context [119] and layer [167]) they were mostly of cereal grains (sometimes with chaff) and weeds. The former, and the charred hazelnut fragments from context [167], probably deriving from human food crops and waste. Given that the concentration of remains was low even in context [238], from which the largest body of material was recovered (approximately two dozen cereal grains and some seeds or fruits of wild taxa from 11.5 litres of sediment), very large volumes of sediment would need to be processed to retrieve assemblages of sufficient size for interpretation.

13.4.2 Most of the plant remains recovered from the samples had been preserved by charring. Uncharred remains were mostly modern contaminants, the exception being the material from context [302], a deposit where waterlogging had clearly occurred. Typically, waterlogged deposits produce a wide variety of species, but here only two were identified. The potential for palaeoenvironmental reconstruction from the plant remains is, therefore, low. However, there were also some well-preserved insect remains from this context and, given that Iron Age deposits with biological remains preserved by waterlogging are rarely encountered in Northern England and that an additional 20 litres of unprocessed sediment remains, further study of context [302] is clearly warranted.

13.4.3 Useful assemblages of marine shellfish were recovered from three deposits; context [187], this yielding a particularly large assemblage, context [188] and, to a lesser extent, context [131]. Context [187] was interpreted as an Iron Age shell midden in a natural hollow, whereas the two other two contexts were Iron Age ditch fills. Each of these was dominated by remains of limpet and periwinkle, and hence very similar in composition to an assemblage recovered during the evaluation (context [28.6]). As previously noted in the evaluation report[26] for the shell assemblage from context [28.6], the source (or sources) of these remains is unclear, but two likely possibilities (or perhaps a combination of these) suggest themselves. Prehistoric and later assemblages primarily of limpet (in particular) and periwinkle have often been interpreted as human food waste from 'famine' or subsistence foods, but those of similar composition of much later date (medieval onwards, say) are thought more likely to represent waste from the preparation of fishing bait. However, there are comparatively recent records from the British Isles (from the late 17th century to early modern times) of the regular collection of limpets as a staple food stuff of coastal communities, and elsewhere in the world they are still eaten regularly, and sometimes considered a delicacy, *e.g.* in Hawaii. [27] Periwinkles, though perhaps not so popular a food as once they were, have always been regarded as edible.

13.4.4 A small assemblage of vertebrate remains was recovered from this site, mostly from prehistoric deposits. Many of the remains were either small or had poor surface preservation rendering them unidentifiable. The preceding evaluation produced just five fragments of hand-collected bone.[28] It would appear that vertebrate remains generally do not survive well in this area and the material that has been recovered is of little interpretative value.

## 13.5 Recommendations

13.5.1 The quantities of charred plant remains recovered from the assessment samples were very small, but, given the early date of many of the deposits, it would be worthwhile to fully record the larger assemblages (*e.g.* that from context [238]) for the data archive. To this end, all of the remaining sediment from contexts [119], [131], [167], [187], [238] and [249] should be processed to recover as large a quantity of charred plant remains as possible. Such material could also provide suitable material for AMS dating of the deposits to be attempted, though it should be noted that, as the radiocarbon calibration curve is rather 'flat' at this period, the date range returned may be quite broad.

13.5.2 Iron Age deposits with waterlogged preservation are rarely encountered in the north of England and all of the remaining sediment from context [302] should be processed for the recovery of plant and invertebrate macrofossils. The resultant assemblages should be recorded in detail.

[26] Akeret *et al.*, 2005.
[27] Wickham-Jones, 2003.
[28] Akeret, *op. cit.*

13.5.3 It is recommended that all of the remaining sediment from contexts [131], [187] and [188] be processed to recover additional shell remains (contexts [131] and [187] also providing additional charred plant remains, see above). The resultant shell assemblages (together with that from context [28.6] from the evaluation) should be fully recorded, including quantification of all identifiable remains, to provide data for comparison with those from other site in the British Isles.

13.5.4 All of the sediment samples not seen for this assessment should be examined, with a view to identifying others with concentrations of shell and charred plant remains and, in particular, any other Iron Age deposits with waterlogged preservation. It should be noted that the presence of waterlogged remains within context [302] was not apparent on initial inspection so that the review should included the processing of small (say, 2kg) sub-samples from all of the deposits not as yet assessed. Should any of the deposits prove to contain ancient biological remains in valuable quantities then all of the remaining sediment should be processed and the resultant assemblages included in the analyses.

## 13.6 Retention and Disposal

13.6.1 All of the remaining sediment samples and hand-collected remains should be retained for the present, together with the biological remains recovered from the processed sub-samples.

## 13.7 Archive

13.7.1 All material is currently stored by Palaeoecology Research Services (Unit 8, Dabble Duck Industrial Estate, Shildon, County Durham), along with paper and electronic records pertaining to the work described here.

| CN | Phase | Context type | Sample | Wt/Vol (kg/l) | Sediment description |
|---|---|---|---|---|---|
| 119 | 5 | lower fill of pit 97 | 17 | 7.5/5.8 | Just moist, light brown to mid grey-brown, unconsolidated to crumbly, slightly silty sand, with modern rootlets. |
| 122 | 4 | secondary fill of ditch 80 | 19 | 2/1.3 | Just moist, mid brown, crumbly to unconsolidated, slightly clay silty sand., with stones (20 to >60mm) present. |
| 125 | 3.1 | fill of enclosure ditch terminus 103 (?clay lining) | 45 | 11/8.5 | Just moist, light to mid brown to light to mid grey-brown, crumbly to unconsolidated, slightly clay, sandy silt to silty fine sand, with traces of charcoal and modern rootlets. |
| 131 | 4 | secondary fill of ditch 80 | 25 | 12/9 | Moist, mid to dark grey-brown, crumbly to unconsolidated (working soft), slightly sandy, clay, silt, with marine shells (very soft; mainly periwinkles and limpets) and stones (2 to 20 mm). |
| 148 | 3.2 | primary fill of enclosure ditch 125 | 40 | 12.5/9 | Moist, mid brown to mid grey-brown, stiff to crumbly (working soft), sandy, clay silt, with traces of charcoal or ?other fine charred material. |
| 155 | 3.6 | fill of ditch 140 | 46 | 10.5/8 | Just moist, mid brown to mid grey-brown, crumbly to unconsolidated, slightly clay, sandy silt to silty fine sand, with stones (6 to 60 mm), traces of ?charcoal and modern rootlets. |
| 167 | 5 | layer | 56 | 10/9 | Dry, mid to dark grey-brown, unconsolidated to crumbly, silty fine sand / fine sandy silt, with traces of charcoal and modern rootlets. |
| 170 | 2 | fill of gully 169 | 49 | 2/1 | Dry, mid brown, unconsolidated to crumbly, slightly stony, slightly clay, silty sand, with stones (2 to 60 mm). |
| 180 | 4 | fill of enclosure ditch 168 at terminus | 102 | 2/2 | Just moist, light brown to light to mid grey-brown, crumbly to unconsolidated, silty sand. No obvious inclusions. |
| 187 | 4 | shell midden in natural hollow | 53 | 8.5/7 | Dry, light to mid grey-brown, unconsolidated, silty fine sand/fine sandy silt, with stones (6 to 60 mm) and abundant marine shell (including limpet and winkle) but very soft and friable. |
| 188 | 3.5 | upper fill of ditch 196 | 54 | 11/8 | Just moist, mid brown, crumbly to unconsolidated, clay sandy, silt, with marine shells (again, mainly periwinkles and limpets and often rather soft) present |
| 190 | 4 | fill of 189 | 57 | 2/0.8 | Just moist, light to mid brown, unconsolidated to crumbly, slightly clay, silty sand, with stones (6 to 60 mm) present. |
| 238 | 4 | fill of ?pit 236 (?dump of domestic refuse) | 68 | 11.5/8 | Just moist, mid to dark grey-brown, crumbly to unconsolidated, sandy silt to silty/fine sand, with stones (20 to 60 mm) present and rather soft fragile marine shell. |
| 249 | 3.3 | fill of ditch 209 | 105 | 10/6.7 | Just moist, light brown to mid grey-brown, unconsolidated to crumbly, slightly clay, sandy silt with lumps of clay (to 20mm). |
| 266 | 5 | clay lining of pit 265 | 77 | 2/1.8 | Just moist, light grey-brown to mid to dark grey-brown with shades of brown and grey-brown between, stiff to crumbly (working plastic), slightly sandy, slightly silty clay, with modern rootlets. |
| 267 | 5 | fill of clay lined pit 265 | 76 | 2/2.8 | Just moist, mid to dark grey-brown, silty sand, with stones (20 to 60mm) and modern rootlets. |
| 285 | 5 | fill of clay lined pit 283 | 81 | 11/8 | Just moist, mid brown to mid to dark grey-brown, crumbly to unconsolidated, ?slightly clay, silty fine sand, with ?charcoal or other fine charred material. |
| 301 | 4 | layer occupying natural hollow | 90 | 2/1.2 | Just moist, mid brown to mid grey-brown, crumbly to unconsolidated, slightly clay, silty sand, with stones (2 to 6mm and 20 to 60mm). |
| 302 | 4 | fill of ditch 276 | 89 | 14/7 | Moist, light to mid grey-brown, stiff and firm to crumbly (working soft), silty, sandy clay, with ?charcoal flecks. |
| 305 | 3.4 | basal fill of ditch 306 | 98 | 2/1.8 | Just moist, light brown to light to mid grey-brown, crumbly to unconsolidated, slightly clay (more so in places) silty sand. |
| 308 | 3.4 | basal fill of linear 309 | 100 | 2/2.2 | Just moist, light brown to light to mid grey-brown, crumbly to unconsolidated, silty fine sand, with modern rootlets. |
| 339 | 4 | lower fill of gully 338 | 88 | 2/1.2 | Just moist, light grey-brown to mid orange-grey-brown, unconsolidated, ?slightly clay, silty sand, with stones (>60mm) present. |

| CN | Phase | Context type | Sample | Wt/Vol (kg/l) | Sediment description |
|---|---|---|---|---|---|
| 341 | 3.2 | fill of ditch 331 | 95 | 2/1.1 | Just moist, light to mid orange-brown to light to mid grey-brown, crumbly to unconsolidated, slightly clay, slightly silty sand, with modern rootlets. |
| 345 | 3.4 | primary fill of enclosure ditch and terminus | 92 | 2/0.8 | Just moist, light brown to light to mid grey-brown, unconsolidated to crumbly, slightly clay silty sand. |

***Table 13a. Context information and sediment descriptions for processed 'GBA'/'BS' sub-samples.***

*Key: CN = Context number; wt/vol (kg/l) = weight in kg/volume in litres of processed sediment;*

| CN | Sample | Vol of w/o (ml) | Dry wt (kg) | Washover notes | Residue/Notes |
|---|---|---|---|---|---|
| **119** | 17 | ~11 | 1.92 | Charred remains included cereal grains (all identifiable specimens being hulled barley (*Hordeum distichon* L./*H. vulgare* L.)), a little chaff including rachis segments of barley and glume bases of emmer/einkorn wheat (*Triticum dicoccum/monococcum*), remains of knotweed (*Persicaria*) and wild grasses (Poaceae). Charcoal and cinder/coal and some uncharred modern remains (*Atriplex*, *Polygonum aviculare* L.) also present. | Mostly stones (to 38 mm), with sand (coarse) and traces of coal (<1 g; to 3 mm) and charcoal (<1 g; to 9 mm). |
| 122 | 19 | ~1 | 0.29 | One charred caryopsis of a wild grass, together with a little charcoal, coal/cinders, modern rootlets and some uncharred remains (*Chenopodium album* L., *Atriplex*). | Mostly stones (to 28 mm), with charcoal (< 1 g; to 2 mm) and coal |
| 125 | 45 | ~20 | 1.10 | One charred grain of hulled barley, with some modern uncharred plant remains (*Galium aparine* L.; *Fallopia convolvulus* (L.) Á. Löve.), modern rootlets, charcoal and coal fragments. | Mostly coarse and fine sand and some stones (to 59 mm), with a little coal (<1 g) and charcoal (<1 g). Two fragments of bone (<1 g), both from a small mammal tibia, were recovered. |
| **131** | 25 | ~20 | 2.18 | A few charred barley grains and some charred remains of wild taxa including sedge (*Carex*), rush (*Juncus*), knotweed, ribwort plantain (*Plantago lanceolata* L.) and wild grasses. Modern uncharred remains included *Atriplex*, *Chenopodium album* and *Galium aparine*). Approximately 12 *Cecilioides acicula* snails were present in the washover. | Mostly coarse sand and some stones (to 54 mm), with coal (<1 g; to 8 mm), cinders (2 g; to 9 mm), charcoal (<1 g; to 8 mm), glass (<1 g; to 14 mm), magnetic material (26 g; to 14 mm) and a single fragment of burnt bone (medium-sized mammal shaft; <1 g). The residue also contained a small assemblage of marine shell (84 g), composed of roughly equal parts limpet and periwinkle. |
| **148** | 40 | ~15 | 2.22 | Charred remains included one grain of barley, one rachis segment of barley and one unidentified cereal grain , with small fragments of charcoal and coal/cinder. | Mostly stones (to 78 mm) and sand (both coarse and fine), with cinders (<1 g; to 12 mm), charcoal (<1 g; to 10 mm), mineral concretions (10 g; to 26 mm) and burnt shale (12 g; to 48 mm). |
| 155 | 46 | ~13 | 4.9 | The washover comprised mainly of uncharred modern plant remains (*Atriplex*, *Galium aparine, Fallopia convolvulus*, *Stellaria media* (L.) Vill., *Polygonum aviculare*) with some charcoal, coal/cinder and modern rootlets. | The residue consisted mostly of stones (to 48 mm) and coarse sand, with burnt shale (12 g; to 48 mm), charcoal (<1 g) and ?slag (1 fragment 7 mm). |
| **167** | 56 | ~60 | 0.90 | Charred remains included a few grains and rachis segments of hulled barley, moss stems (Bryophyta), hazelnut shells (*Corylus avellana* L.), achenes of knotweed, caryopses of wild grasses and a little charcoal. Modern uncharred remains included *Atriplex*, and *Galium aparine.* | Mostly sand (fine and coarse) and some stones (to 29 mm), with coal (1 g; to 12 mm), charcoal (<1 g; to 11 mm) and magnetic material (6 g; to 8 mm). |
| 170 | 49 | ~3 | 0.71 | The washover consisted mainly of uncharred modern plant remains (*Atriplex*, *Galium aparine, Chenopodium album*) with some charcoal, coal/cinder and modern rootlets. | Mostly coarse sand and some stones (to 24 mm), with coal (<1 g; to 5 mm) and charcoal (<1 g; to 11 mm). |
| 180 | 102 | ~1 | 0.12 | Fragments of charcoal and coal/cinder. | Mostly sand (coarse) and some stones (to 38 mm), with a little charcoal (<1 g; to 6 mm). |

| CN | Sample | Vol of w/o (ml) | Dry wt (kg) | Washover notes | Residue/Notes |
|---|---|---|---|---|---|
| **187** | 53 | ~23 | 2.20 | A small number of charred cereal grains (both oat (*Avena*) and barley), coal/cinder and modern uncharred plant remains (*Galium aparine*) were identified. There were also very many fine flakes (to 1 or 2 mm) of shell. | Mostly stones (to 75 mm) and sand (coarse and fine), with coal (4 g; to 17 mm) and cinders (2 g; to 13 mm). Fine fragments of shell were noted within the sand and there was a quite large assemblage (845 g) of more substantial marine shellfish (principally limpet and periwinkle). |
| **188** | 54 | ~13 | 3.94 | Fragments of charcoal. | Mostly stones and sand (fine and coarse), with 20 fragments of bone (1 g). Most of the bone represented a fragmented medium-sized mammal shaft, there was also a rib fragment and eight tiny unidentified pieces. There was a fairly small assemblage (130 g) of marine shellfish (principally limpet and periwinkle). |
| 190 | 57 | ~3 | 0.46 | A single charred cereal grain, some coal, cinder, a little charcoal and some modern rootlets. | Mostly stones (to 34 mm) and sand, with ?burnt shale (2 g; to 14 mm), cinders (<1 g; to 4 mm) and charcoal (1 g; to 5 mm). |
| **238** | 68 | ~50 | 2.49 | The washover gave approximately two dozen cereal grains, including hulled barley and emmer/spelt wheat (*Triticum dicoccum Schrank/T. spelta* L.). In addition to the cereals, there were a few seeds of fat-hen (*Chenopodium album* L.), rush and blinks (*Montia fontana* L. ssp. *chondrosperma* (Fenzl) Walters) and some achenes of sheep's sorrel (*Rumex acetosella* L.). Some uncharred plant remains were also noted but these were most likely modern contaminants. | Mostly coarse sand and some stones (to 64 mm), with a little charcoal (<1 g) and four fragments of bone (<1 g), including a fish vertebra and three fragments of calcined bone and tooth. There were also a few fragments of periwinkle shell (~2 g), perhaps representing only a single individual. |
| **249** | 105 | ~175 | 0.96 | Four grains of hulled barley and a single barley rachis fragment were identified from this sample, together with some modern rootlets. | Mostly stones (to 68 mm), with some burnt bark (7 g; to 22 mm), a little charcoal (<1 g; to 4 mm) and nine fragments of burnt bone (<1 g). |
| 266 | 77 | ~1 | 0.027 | Charcoal, coal/cinder and some modern rootlets. | Mostly coarse sand and stones (to 8 mm), with a little charcoal (<1 g; to 6 mm). |
| 267 | 76 | ~5 | 0.29 | Charred remains included two grains of hulled barley and an achene of dock (*Rumex*), with fragments of charcoal and coal/cinder. | Mostly sand and stones, with a trace of charcoal (<1 g; to 2 mm). |
| 285 | 81 | ~22 | 1.210 | Charcoal, coal/cinder and some modern rootlets. | Mostly sand (fine and coarse) and some stones (to 34 mm), with brick/tile (4 g; to 26 mm), charcoal (2 g; to 17 mm) and magnetic material (2 g; to 11 mm). |
| 301 | 90 | ~4 | 0.24 | Coal/cinder and a little charcoal. | Mostly stones (to 31 mm), with a little sand, cinders (<1 g; to 5 mm) and charcoal (<1 g; to 4 mm). |
| **302** | 89 | ~27 | 0.55 | Waterlogged seeds of rush (*Juncus*) were numerous, together with some waterlogged seeds of fat-hen (*Chenopodium album*), with fragments of coal/cinder and charcoal. There were also some well preserved (by waterlogging) insect remains, including a weevil (Curculionidae) pronotum. | Mostly sand (fine and coarse) and stones (to 12 mm). |
| 305 | 98 | ~1 | 0.065 | One charred grain of hulled barley, together with fragments of charcoal, coal/cinder and modern rootlets. | Mostly stones (to 19 mm) and sand (coarse and fine), with charcoal (1 g; to 5 mm). |

| CN | Sample | Vol of w/o (ml) | Dry wt (kg) | Washover notes | Residue/Notes |
|---|---|---|---|---|---|
| 308 | 100 | ~1 | 0.167 | Charcoal and some modern uncharred remains (*Galium aparine*, *Atriplex*). | Mostly coarse sand, some stones and a trace of charcoal (<1 g). |
| 339 | 88 | ~1 | 0.138 | Fragments of charcoal and coal/cinder. | Mostly coarse sand and stones (to 26 mm). |
| 341 | 95 | ~3 | 0.059 | Fragments of charcoal and modern waterlogged plant remains (*Galium aparine*). | Mostly coarse sand and stones (to 34 mm). |
| 345 | 92 | ~3 | 0.227 | A single charred achene of knotweed (*Persicaria*), charcoal, coal/cinder and modern rootlets. | Mostly sand (coarse and fine), with stones (to 22 mm), charcoal (3 g; to 10 mm) and ?burnt shale (1 g; to 11 mm). |

***Table 13b. Washover and residue details for processed 'GBA'/'BS' sub-samples***

*Key: CN = Context number; Vol of w/o (ml) = approximate volume of washover (millilitres); Dry wt (kg) = dry weight of the residue in kg; Context numbers in bold indicate deposits discussed in more detail in the text.*

| Species | | Prehistoric | IA/Early Roman | Med/Post-med | Total |
|---|---|---|---|---|---|
| *Equus* f. domestic | horse | 1 | - | - | **1** |
| *Sus* f. domestic | pig | 5 | - | - | **5** |
| *Bos* f. domestic | cattle | 4 | 3 | - | **7** |
| Caprovid | sheep/goat | 3 | - | - | **3** |
| | | | | | |
| Unidentified | | 108 | 38 | 5 | **151** |
| | | | | | |
| **Total** | | **121** | **41** | **5** | **167** |

***Table 13c. Hand-collected vertebrate remains.***

*Key: IA = Iron Age; med/post-med = medieval/post-medieval.*

# 14. RADIOCARBON DATING

*By: **Darden Hood***

## 14.1 Introduction

14.1.1 Two samples were submitted for radiocarbon dating at Beta Analytic Radiocarbon Dating Laboratory, Florida. The samples were dated used the Accelerator Mass Spectrometry Technique (AMS).

## 14.2 Method

14.2.1 AMS Sample 1 was taken from a carbonised residue adhering to a pottery sherd recovered from deposit [214], the fill of Phase 3.2 enclosure ditch [126]. AMS Sample 2 was obtained from charred plant material recovered from a bulk sample taken from deposit [238], fill of pit [236], a Phase 4 feature provisionally interpreted as being associated with saltmaking.

## 14.3 Results

14.3.1 The results are detailed in Table 14a below.

| **Sample Data** | **Measured Radiocarbon Age** | **13C/12C Ratio** | **Conventional Radiocarbon Age (*)** |
|---|---|---|---|
| **AMS SAMPLE 1**<br>Beta-208953<br>Sample: NRB05214POT<br>Analysis: AMS-Standard delivery<br>Material/Pretreatment: (food residue): acid washes | 2370+/- 40BP | -26.0 $_{0/00}$ | 2350+/- 40BP |
| **2 Sigma Calibration: cal. BC 500-460 (cal. BP 2450-2410) AND cal. BC 430-380 (cal. BP 2380-2330)** | | | |
| **AMS SAMPLE 2**<br>Beta-208954<br>Ample: NRB05C238S68<br>Analysis: AMS-Standard delivery<br>Material/Pretreatment: (charred material):acid/alkali/acid | 2160 +/- 40BP | -22.0 $_{0/00}$ | 2210+/- 40BP |
| **2 Sigma Calibration: cal. BC 380-170 (cal. BP 2330-2120)** | | | |

# PART C: CONCLUSIONS AND RESEARCH AGENDA

# 15. CONCLUSIONS

## 15.1 Phase 1: Natural

15.1.1 The earlier archaeological evaluation had demonstrated that the underlying natural sub-stratum varied considerably across the development site, from predominantly sandy material to the east, to clay and gravel rich deposits on the sloping higher ground to the west. Archaeological activity of significance at the site was focussed on a sandy 'plateau' occupying the north-eastern corner of the site, this being a localised area of free-draining land.

15.1.2 Across the excavation area, the natural sub-stratum was predominantly sandy in composition. Its compaction varied from firm to loose but the material was largely free-draining, becoming slightly less so as the ground fell away towards the southern limit of excavation and the clay content increased. On the areas of looser sand, archaeological features had been highly susceptible to edge erosion, presumably the result of rainwater flow. The northernmost part of the excavation area was notable for a substantial depression, which became a focus for prehistoric human activity, probably as a result of the natural shelter afforded by the feature.

## 15.2 Phase 2: Linear Features

15.2.1 Several fragments of shallow, linear features were recorded in the central portion of the excavation, largely truncated by enclosure ditches assigned to Phase 3. The extent of truncation prevented any definitive interpretation of these features. It is possible that they were perhaps the remains of marking-out gullies/trenches, marking the perimeter of the enclosure and probably its entrances, ahead of actual excavation of the enclosure ditch. However, the preferred interpretation for these features is that they represent a phase of activity that predates the enclosure.

## 15.3 Phase 3: Iron Age Enclosure

15.3.1 Substantial ditches delimiting part of the south-western side of a univallate enclosure represent this broad phase of activity. The enclosure ditches were maintained or redefined during at least six sub-phases (Phases 3.1-3.6). It is uncertain to what extent redefinition of the enclosure boundary can be taken as an indicator of longevity of the enclosure perimeter. As discussed above, the natural sub-stratum in this area was highly susceptible to erosion and it is likely, therefore, that rapid silting would have required recutting on a regular basis to maintain the ditches. The extent to which the ditches had apparently been allowed to silt-up before being recut perhaps suggests that the enclosure was not a permanent habitation site. It may have been used annually, for example, to exploit seasonal resources, or perhaps on an intermittent, episodic basis.

15.3.2 Cropmark evidence indicates that the enclosure confined an area *c.* 1.2 hectares in size, with the majority lying to the north and east of the development site, only *c.* 10% actually lying within the excavation area. Aerial photographic evidence also suggests that, to the north of the excavation area, the enclosure was partially bivallate in form, although the external ditch did not continue as far south as the development site. The excavated portion was of a univallate enclosure, in which two entrances, northern and southern, were identified, in the south-western side, with an outlying but closely related south-western ditch.

15.3.3 The ditches delimiting the perimeter of the enclosure were substantial, measuring up to 5.0m wide and 1.40m deep, with generally steep-sided U- or V-shaped profiles. There was some evidence that a steep-sided, segmented slot ran along the base of the ditch during at least one, possibly two sub-phases, but it is not known whether these resulted from subsequent clearing out of the ditch bottom or from the original excavation of the ditch. Clay-rich fills from two sub-phases of the north-western side of the northern entrance are of particular interest. It is possible that these deposits represent a clay lining of the ditches, perhaps in an attempt to prevent erosion and thereby reduce the rate of silting.

15.3.4 Finds recovered from the enclosure ditches, and presumably relating to the occupation of the enclosure, included pottery, bone and an assemblage of shells, mainly from limpet and periwinkle. A radiocarbon date obtained from food residue adhered to one pottery sherd produced a date of cal. BC 500-460 and cal. BC 430-380, placing the enclosure firmly within the Iron Age. In the absence of a tight regional chronology for Iron Age tradition pottery and without further radiocarbon dates, the precise longevity of the enclosure is uncertain.

15.3.5 It is perhaps reasonable to conclude, given their dimensions, that the ditches forming the perimeter of the enclosure had a defensive function. Defensive enclosures provisionally dated to the later prehistoric period have been identified from aerial photographs across many parts of Northumberland and south-east Scotland. However, the North Road enclosure would have been overlooked from the higher ground to the west and is generally sited at a location that would not have been easy to defend. It must be assumed that the advantages of this cliff-top location, with its slightly raised - in relative terms - elevation and free-draining sub-stratum, far outweighed the defensive disadvantages.

15.3.6 The two entrances were spaced *c.* 55m apart. Alterations and recutting of the northern entrance provided much of the stratigraphic evidence for the redefinition of the enclosure ditches, such alterations being undertaken on at least six occasions. The two latest recuts of the ditch had truncated much of the evidence for the earlier sub-phases. However, a general picture has emerged of the northern entrance gradually increasing in width over time, from at least 3.60m wide during its earliest phase to *c.* 13.0m during its final phase. The southern entrance had a minimum width of 11.0m during these phases and may have remained relatively consistent throughout.

15.3.7 The south-western outlying ditch adjoined the northern entrance during the final two sub-phases of the alterations. The outlying ditch extended from the southern side of the northern entrance roughly at right angles, before turning sharply to the north after a distance of more than 40m. The fills of the outlying ditch were sterile, producing no cultural material, in contrast to the fills of the main enclosure ditches. It is likely that this relates to the proximity to habitation areas, and suggests being that the outlying ditch did not delineate an area of habitation.

15.3.8 The full extent and form – and hence function - of the outlying ditch are uncertain as the feature was not fully exposed. However, it has been interpreted either as part of an annexe to the main enclosure, perhaps for corralling livestock, or possibly as an aid to driving livestock into the enclosure via the northern entrance. Such an explanation may also account for the widening of the northern entrance, which had perhaps not been originally designed for the passage of animals, but may have been redesigned with such a purpose in mind.

15.3.9 A putative drainage ditch located on the internal side of the enclosure ditch probably discharged into the enclosure ditch. Its location is of particular interest as it extended across the area where an internal bank would have been located. The position of this ditch probably indicates, therefore, either that the enclosure did not have an internal bank or, if there were such a feature, it was not continuous in this area. The sandy composition of the natural sub-stratum - which would have formed the upcast bank – would have meant that any bank associated with the ditch would have eroded quickly. Maintenance of such a feature, whether internal or external to the ditch, may not have been considered worthwhile if the enclosure was used on a seasonal, rather than a continuous basis. However, it is probably unlikely that upcast material would have been transported any great distance.

## 15.3 Phase 4: Abandonment of the Enclosure Ditches and Salt Processing

15.3.1 Phase 4 saw the abandonment of the enclosure ditches, although at least some of the previously enclosed area evidently remained in use. It is assumed that, despite a lack of maintenance, the enclosure ditches remained visible in earthwork form, gradually silting-up. Iron Age tradition pottery and a significant assemblage of ceramic material known as briquetage were recovered from the uppermost fills of the enclosure ditches. Saltmaking sites are recognised in the archaeological record by the presence of briquetage, the word being of French origin and in use from the 18th century to describe deposits of burnt clay and ashes in the Seille Valley.[29] The term briquetage is now commonly taken to mean not only the ceramic equipment (troughs, supports, clips *etc.*) but also the fragmented debris of hearths/ovens used in the processing of sea salt.

15.3.2 The presence of a relatively large briquetage assemblage, including two rod fragments, along with a number of sherds of pottery that were apparently affected by exposure to salt, provides strong evidence that salt processing was being undertaken at the site. It is noteworthy that no briquetage was recovered from fills that accumulated whilst the enclosure ditches were being maintained, and this has been interpreted as a good indication that salt processing did not take place at North Road prior to Phase 4.

[29] Lane and Morris, 2001, 8.

15.3.3 In the north-eastern portion of the excavation area, a series of features were located in the base of a large depression in the natural sub-stratum, this lying *c.* 3-4m inside the northern enclosure entrance. The depression has been interpreted as having been utilised as a 'working hollow', its general form providing shelter from the elements. A curvilinear ditch, possibly for drainage, ran around the edge of the depression. Whilst there was no stratigraphic evidence relating the 'working hollow' to the enclosure ditches, it would appear unlikely that the feature could have been in use contemporaneously with the northern enclosure entrance, given the steep sides of the feature, as created by the aforementioned ditch. The preferred interpretation is that the 'working hollow' was utilised after the northern enclosure entrance - and by inference the enclosure as a whole - fell into disuse.

15.3.4 Several shallow features were recorded within the 'working hollow', indicating that some unspecified activity (or activities) was undertaken within its confines. The functions of the features are uncertain, although quantities of briquetage and salt-affected pottery in layers (which were assigned to Phase 5) overlying these features may have derived from activity associated with them, suggesting that they were related to salt processing.

15.3.5 Three shallow, stone-filled pits lay within the area formerly defined by the enclosure ditches. Each contained stones that had apparently been selected for their size and shape. In each case the stones did not form an obvious structure, although they could represent either collapsed structures or disturbed surfaces. Iron Age tradition pottery, one sherd of which was affected by exposure to salt, and fragments of briquetage were recovered from one of the features. Given the likelihood that salt processing was undertaken at the site during the period and that the function of the features is not immediately obvious, the preferred interpretation is that these features were associated with saltmaking.

15.3.6 A substantial stone surface located close to one of the putative saltmaking features was also assigned to Phase 4. The surface overlay a stony deposit, which may have been an earlier surface or a foundation deposit, from which both Iron Age tradition pottery and briquetage were recovered. The surface has been interpreted as a yard or area of hardstanding that may have been closely related to the putative saltmaking features to the west, although the possibility that the feature could relate to a subsequent phase of activity has been acknowledged.

## 15.4 Phase 5: 1st Century AD Pits, Posts and Abandonment of 'Working Hollow'

15.4.1 A series of layers infilled the Phase 4 'working hollow'. These deposits represent abandonment of that area as a focus of activity. Iron Age tradition pottery, some of it affected by exposure to salt, and briquetage was recovered from these deposits.

15.4.2 An area of relatively intensive pitting was encountered to the south-east of the former 'working hollow'. Most distinctive amongst the pits were a series of shallow, clay-lined features, some intercutting. It is likely that these features fulfilled the same function, although precisely what that was is not certain. Clay-lined pits often functioned as storage facilities, although this would seem unlikely in this case as, even taking into account a degree of truncation at the site, the pits do not appear to have been particularly deep.

15.4.3 It seems more probable that the clay-lined features were associated with an industrial or manufacturing process, possibly acting as shallow basins, with the lining providing the presumably crucial function of holding liquid. One of the pits truncated a putative saltmaking feature from Phase 4 and, on this basis, the group as a whole has been assigned to Phase 5.

15.4.4 A number of other pits in the vicinity did not have clay linings, although they have been assigned to this same broad phase of activity on the basis of their proximity to those that were lined. Finds from one of the pits included a fragment of 1st century AD samian ware and a fragment of opaque glass bangle of 1st or early 2nd century AD design. Although it is possible that the other pits in the vicinity pre- or post-dated this feature, they have been phased together due to their general similarity in form and proximity.

## 15.5 Phase 6: Medieval

15.5.1 The site was seemingly not occupied again until the medieval period. When activity resumed, it was probably of an agricultural nature. A substantial field boundary in the south-eastern corner the excavation area, recut on at least one occasion, suggests that the site lay within an agricultural landscape on the periphery of the town. However, it is not apparent to what intensity the land was used, as its position, on a cliff top in a generally poorly-drained area, may have meant that the area was marginal agricultural land.

## 15.6 Phases 7 and 8: Post-Medieval and Modern

15.6.1 The excavation area and the development site as a whole have been under plough since the medieval period. Attempts at improving the quality of the land through drainage during the post-medieval period were evident in the form of numerous shallow drains and sumps. Field clearance also appears to have taken place, with a considerable concentration of stones and cobbles, from which post-medieval pottery and glass was recovered, exposed in the north-eastern corner of the excavation area, filling the uppermost portion of the depression left by the 'working hollow' from Phase 4.

# 16. RESEARCH AGENDA

## 16.1 Original Research Objectives

*The project's original outline research agenda, as set out in the Project Design, have been refined into the following research objectives, in light of the findings of the excavation.*

### *16.1.1 To assess the extent to which stratigraphic, artefactual and ecofactual evidence suggest multi-phase occupation of the site*

16.1.1.1 In broad terms, the earliest archaeological activity has been interpreted as representing a period when this cliff-top location was dominated by a substantial enclosure, only a small portion of which was exposed at the site, the majority extending beyond its limits to the north and east. Subsequently, although the enclosure evidently fell into disuse, activity at the site continued for some time in what has been termed an 'unenclosed' period of occupation. Both of these periods have been sub-divided into broad phases and sub-phases based on stratigraphic evidence. Whilst little direct evidence for actual habitation of the site was recorded, it has been inferred from the presence of domestic style pottery and food waste.

16.1.1.2 Interpretation of the earliest stratigraphic evidence remains tentative. Fragments of truncated linear features could suggest that the main enclosure was 'marked out' with a gully/trench in advance of its construction. If so, such activity would presumably immediately pre-date the primary phase of the main enclosure. However, the preferred interpretation is that the earliest activity represents an earlier phase of occupation.

16.1.1.3 With the enclosure in place, and extending to the north and east of the site, two entrances were identified in the south-western portion of the circuit. Stratigraphic evidence indicates that the northern enclosure entrance was redefined on at least six occasions, each redefinition or recutting possibly representing a separate sub-phase of activity. However, the extent of recutting perhaps suggests that maintenance was being undertaken on an intermittent basis, perhaps indicating that the site was occupied seasonally.

16.1.1.4 Two further periods of activity have been allocated to broad stratigraphic phases which post-date abandonment of the main enclosure, or which post-date usage of its ditches as functioning boundaries, since vestigial earthworks would have survived during these later phases. The phasing of the features assigned to the 'unenclosed' period of activity is largely based on the presence of salt-affected pottery and briquetage sherds. In this respect, it is considered significant that briquetage was only recovered from the 'abandonment fills' of the enclosure ditch, as well as from a group of features and deposits that have no stratigraphic relationships with the enclosure ditches. As no briquetage was recovered from deposits interpreted as being derived from the period when the enclosure ditches were open and functioning as boundaries, it is suggested that the presence of briquetage is a strong indicator that salt processing was perhaps the dominant activity being undertaken at the site during this 'unenclosed' period of activity.

16.1.1.5 A radiocarbon date (BC 500-BC 460 or BC 430-BC 380) obtained from material interpreted as being derived from the period of usage of the enclosure could be significantly earlier than a date (BC 380-170) obtained from material within a feature that was very similar in form to a number of features that produced briquetage. The overall conclusion is that the majority of features recorded in the area that was formerly the interior of the enclosure derive from activity which post-dates its abandonment.

16.1.1.6 Further evidence to suggest that the site had both an enclosed and an unenclosed period is provided by the presence of a substantial 'working hollow' close to the northern entrance to the enclosure. This feature would have presented a substantial obstruction to the entrance had it been contemporary with the enclosure. It is perhaps more likely that usage of the 'working hollow' post-dated usage of the enclosure.

16.1.1.7 Stratigraphic evidence provided by a cluster of discrete features, some intercutting, suggests a second broad phase of activity during the unenclosed period. These features comprised a series of pits and gullies, with artefactual evidence indicating a date for this activity around the 1st or 2nd century AD. It is uncertain, however, to what extent activity or occupation of the site was relatively continuous or more episodic, following abandonment of the enclosure.

16.1.1.8 In summary, stratigraphic and artefactual evidence, combined with absolute dating of biological remains, has already allowed a relatively detailed chronology of site usage to be formulated. During its earliest usage in the Iron Age, the site was dominated by an extensive enclosure, probably occupied seasonally. Subsequently, although the enclosure fell into disuse, activity continued at the site, again possibly on seasonal basis, during the Late pre-Roman Iron Age and into the early Roman Iron Age. One element, and perhaps the most dominant, of the later activity was saltmaking.

### *16.1.2 To assess the form and extent of any settlement associated with and internal to the enclosure and to determine the form and extent of the settlement when it was finally abandoned*

16.1.2.1 There was little indication of the form or extent of any settlement within the Iron Age enclosure, the main reason being that the majority (*c.* 90%) of the interior of the enclosure lay beyond the limits of excavation. With such a small portion of the interior of the enclosure available for excavation, any interpretation of the form of settlement associated with it must remain speculative.

16.1.2.2 It is noteworthy that archaeological evidence suggestive of actual settlement was recovered only from the area that was formerly the interior of the enclosure. Although no structural evidence was recorded that could reasonably be interpreted as being derived from habitation within the enclosure and during its lifetime, the presence of Iron Age pottery associated with domestic contexts, such as cooking pots, broadly suggests that the enclosure surrounded an area of habitation. Environmental evidence suggests that the occupants had access to cereal crops, presumably for food, although also possibly for fodder, and the presence of quernstones indicates that cereal processing was being undertaken at the site.

16.1.2.3 There is also some evidence to suggest that the occupants practised pastoralism; amongst a small assemblage of faunal material the species represented were horse, pig, cattle and sheep/goat. An outlying ditch associated with the enclosure has been interpreted as probably being related to the control of livestock. Concentrations of limpet and periwinkle shell, recovered from ditch fills demonstrate that the occupants of the site also utilised nearby coastal resources.

16.1.2.4 The majority of the activity assigned to Phases 4 and 5 lay within the extreme eastern portion of the excavation area, in the area that was previously interior to the enclosure. However, none of the Phase 4 and 5 activity is considered to have been contemporary with the lifetime of the enclosure. If, for example, the salt processing activity of Phase 4 had been undertaken in the proximity of settlement, then it would appear that that settlement was of an unenclosed form, with the enclosure ditch being at least partially infilled by that stage. The presence of a midden containing probable food refuse also suggests that habitation in the vicinity was likely.

16.1.2.5 A general absence of archaeological features west of the enclosure ditch suggests that the settlement did not expand to the south-west during the later, unenclosed period, and that it largely remained confined within the boundary created by the abandoned enclosure ditch. The feature probably remained as an earthwork for many years following disuse, thereby forming an unofficial boundary, the influence of which should not perhaps be underestimated. By the time activity finally ceased at the site in the early Roman Iron Age, there did not appear to have been any expansion beyond the limits of the earlier enclosure and the topography of the area would have constrained the extent of any activity, as previously discussed. As with the earlier period of activity, it is uncertain to what extent remains of 1$^{st}$ or 2$^{nd}$ century AD date are indicative of permanent habitation or episodic, perhaps seasonal, visitation.

### *16.1.3 To determine the location, form and nature of entrances to the enclosure and examine associated ditch terminals*

16.1.3.1 Two entrances, northern and southern, to the enclosure were recorded, spaced *c.* 55m apart. Complete excavation of the ditch terminals defining each entrance was undertaken, revealing a complex sequence of alterations, redefinitions and repositioning of the entrances, particularly the northern entrance.

16.1.3.2 Evidence for the primary phase, Phase 3.1, of the main enclosure survived only at the northern entrance. The north-western side of the entrance was formed by a substantial ditch terminus, with slightly squared edges in plan and steep sides, becoming notably steeper towards the base, where it formed a steep-sided slot with a concave base. The terminus was 2.10m wide and 1.30m deep, including the slot, which was *c.* 0.60m deep and 0.90m wide. No trace of the south-eastern side of the Phase 3.1 entrance survived. However, it was clear that the entrance causeway had partially survived to a width of 3.60m, this representing the minimum width of the earliest northern entrance.

16.1.3.3 The entrance was redefined during Phase 3.2, when the north-western side of the entrance was relocated *c.* 1.60m to the north-west. Again there was a broad rounded terminus with steep sides leading to a steeper sided slot in the base, similar to that seen in Phase 3.1, and it was similar in scale to the earlier feature, being 2.70m wide and 1.20m deep. The remnants of a ditch terminus marking the south-eastern side of the entrance were identified. The width of the entrance during this sub-phase was 6.0m-6.50m.

16.1.3.4 Significant repositioning of the northern entrance was undertaken during Phase 3.3, as the terminus on the north-western side was relocated *c.* 3.0m to the south of its previous position, and to the west. The scale of the ditch was also much diminished, the surviving portion being 1.20m wide and 0.60m deep. These dimensions suggest that the feature is unlikely to have served any useful defensive purpose, unless it was as a bedding trench for a palisade, although there no evidence for this. The full width of the northern entrance during this sub-phase was not apparent due to truncation which had removed all evidence of the south-eastern side.

16.1.3.5 The northern entrance was further altered with the insertion of a Phase 3.4 ditch, the terminus of which marked the south-eastern side of the entrance. The ditch truncated the terminus of the Phase 3.3 ditch, which had either completely silted-up or been backfilled. It was not possible to identify the north-western side of the Phase 3.4 entrance, which had apparently been truncated by a later version. However, the excavated evidence indicates a minimum width of 6.50m for the Phase 3.4 entrance.

16.1.3.6 Phase 3.5 saw significant changes to the northern entrance. The south-eastern side was significantly altered, probably due to the addition of an outlying ditch contemporary with this sub-phase. The south-eastern terminus was moved further to the south-east, this seemingly resulting in a substantial increase in the width of the entrance. Although the north-western side of the entrance had been completely truncated by a later version, it is possible that the Phase 3.5 terminus was simply removed by a feature in the same location which, if true, suggests a minimum entrance width of 10.0m.

16.1.3.7 A ditch terminus marking the north-western side of the southern entrance was also assigned to Phase 3.5. Despite heavy truncation by later versions, enough survived to determine the position of the terminus. No feature marking the corresponding south-eastern side of the entrance could be confidently assigned to Phase 3.5. However, a feature tentatively interpreted as the terminus of a ditch representing this side of the entrance has been assigned to Phase 3.6 but it is acknowledged that this could equally be assigned to Phase 3.5. Whichever is true, the feature indicates a minimum width for the entrance of *c.* 11.0m.

16.1.3.8 Further redefinition of the enclosure ditches occurred during Phase 3.6, with the northern entrance again being altered on its south-eastern side, possibly to create a wider causeway. There was no terminus on the south-eastern side of the entrance during this sub-phase as the enclosure ditch and the outlying south-western ditch were formed by a continuous feature. The north-western side of the entrance was marked by the terminus of a substantial enclosure ditch, 4.40m wide and 1.19m deep, the terminus having rounded edges and moderately steep sides which became considerably steeper towards its concave base. The width of the causeway at the northern entrance during this sub-phase was *c.* 13m.

16.1.3.9 At the southern entrance in Phase 3.6 there was a recut of the north-western side, in a similar position to that seen in Phase 3.5. Part of what may have been the ditch terminus at the south-eastern side was identified which, if true, signifies a minimum width of *c.* 11m for the southern entrance during this sub-phase.

16.1.3.10 In summary, stratigraphic evidence demonstrates that the width of the northern entrance to the Iron Age enclosure increased through Phases 3.1-3.6. The earliest entrance to be identified in this sequence was 3.60m-5.0m wide, with the higher figure probably being most likely. In Phase 3.2, the width had increased to 6m-6.50m and it was not possible to ascertain the width during the subsequent sub-phase. In Phase 3.4, the entrance had a minimum width of 6.50m and this was then significantly increased to a minimum of 10m during Phase 3.5 and finally to 13m during Phase 3.6. Evidence for the width of the southern entrance during these sub-phases was far more limited. The surviving evidence is tentatively interpreted as suggesting that it remained fairly consistent at *c.* 11m during Phases 3.5 and 3.6, and, despite an absence of direct evidence for its dimensions during previous sub-phases, the entrance must have measured a minimum of 11m.

16.1.3.11 The precise reason for continual widening and alteration of the position of the northern entrance is uncertain. However, it is considered noteworthy that the northern entrance attained more than double its original width, whilst the southern entrance probably remained relatively constant. This is likely to have been related to the function of the northern entrance, possibly reflecting a variation in the type or amount of traffic utilising it. The relatively narrow northern entrance as seen in its earliest version may have been required only for pedestrian traffic, whereas the system developed to cater for a requirement to drive livestock through. Support for this theory comes from the interpretation of the outlying south-western ditch as probably being related to the control of livestock. The southern entrance may have always been utilised for the movement of livestock; as it appears to have been relatively wide from its inception, further widening may not have been required.

### *16.1.4 To assess the function of the enclosure, given that it would appear to have been sited at a location with poor strategic and defensive properties*

16.1.4.1 Aerial photographic evidence demonstrates that the ditches assigned to Phase 3 formed the southwestern portion of a substantial sub-circular or oval enclosure occupying part of a relatively level area of ground overlooking the North Sea cliffs. The presence of Iron Age tradition pottery in the ditches strongly suggests that the enclosure was associated with a settlement site. The excavated evidence shows that the ditches delineating the perimeter of the enclosure varied in scale, through episodic recutting, throughout the lifetime of the feature. The preferred interpretation therefore is that the site was occupied seasonally, probably due in part to its exposed cliff top location, with the occupants probably engaging in a variety of subsistence activities.

16.1.4.2 Accordingly, the preferred interpretation for the enclosure ditches is that they essentially served a 'defensive' purpose, surrounding an area of settlement. There are several examples of similar enclosures in the archaeological record in Northern Britain, some of which may date from the Iron Age, perhaps reflecting an expansion in population from the end of the Bronze Age. In strategic defensive terms, the setting of the North Road site appears disadvantageous. While the enclosure occupies a slightly elevated area of ground, particularly noticeable when viewed from the south, it lies at the foot of sloping ground rising to the west and is thus overlooked from that direction. However, it seems that the socio-economic advantages afforded by establishing such a site far outweighed the disadvantages of this location. The slightly elevated area was formed by a sandy, free-draining sub-stratum which would have offered some distinct advantages to settlers and the proximity to the sea must have also been a factor in influencing its establishment.

16.1.4.3 The excavation did not identify any trace of a bank flanking the perimeter ditch, either internally or externally. A probable drainage feature, apparently contemporary with the Phase 3.5 enclosure ditch, was recorded at the interior edge of the ditch and this might suggest that no internal bank was ever formed, at least at that location. The presence of an internal bank would have suggested that defence protection was a major concern of the inhabitants. No evidence was recorded for an external bank, which might have been expected if defence was perhaps a lesser consideration.

16.1.4.4 It is acknowledged that the nature and purpose of the ditches delineating the North Road enclosure should not be viewed wholly in functional terms such as protection (of both people and livestock) from thieves or predators or on a larger scale for communal defence against aggressive neighbouring communities or external raiders.[30] Enclosure of a settlement might be equally desirable for other reasons and the ditches may have had a symbolic function, perhaps to demonstrate status and power or to define the nodal points of a settlement.

16.1.4.5 It is worthy of note that the Phase 3.3 enclosure ditch was of a substantially smaller scale, approximately half that of the preceding and succeeding sub-phases, and this may suggest that its function differed, although the reason for this is uncertain.

### *16.1.5 To place the enclosure in a broader landscape context by examining external features, such as field boundaries and droveways*

16.1.5.1 The principal external feature associated with the enclosure was the substantial south-western outlying ditch. The earliest phase of this ditch was contemporary with the Phase 3.5 enclosure ditch. It extended at approximately ninety degrees to the line of the enclosure on a NE-SW orientation. The earliest version had been largely truncated along its length by a recut, which was contemporary with the Phase 3.6 enclosure ditch. To the south-west, the ditch turned to run north-south, continuing beyond the limit of excavation. The outlying ditch was of slightly lesser dimensions than the main enclosure ditch, measuring a maximum of 3.50m wide and 1.10m deep, although considerable variations were visible along its length.

[30] Harding, 2004, 290.

16.1.5.2 The function of the outlying ditch is uncertain, but the preferred interpretation is that it was related to the control of livestock. Perhaps a less likely explanation is that it formed part of an irregularly shaped annexe.

16.1.5.3 A putative fenceline was recorded extending from the south-western limit of the outlying ditch, continuing on the same alignment. Despite this evidence, it seems unlikely that a wider network of land divisions lay beyond the perimeter of the enclosure, certainly on the sloping ground to the west. For one thing, features of Iron Age date were not recorded in that area during the evaluation which preceded the main excavation.

16.1.5.4 At the southern entrance to the enclosure, several shallow linear features were recorded, apparently associated with the entrance. These extended, for the most part, on a NE-SW orientation, with the north-easternmost feature extending through the entrance, before turning to a NW-SE orientation, evidently respecting the ditch terminus. These features could represent the remnants of fencelines, contemporary with the enclosure, and may be further evidence for droveways into the enclosure, perhaps also protecting the edges of the entrance enclosure ditches.

### *16.1.6 To assess the form and function of the 'working hollow' in the northernmost portion of the site*

16.1.6.1 The 'working hollow' appears to have occupied what was originally a natural depression in the underlying geological deposits, one of many undulations visible in the wider landscape around the site. However, the depression, which would have afforded a degree of natural shelter, had apparently been modified by human activity and utilised, as indicated by a group of features, including shallow gullies and pits within its base. A possible drainage ditch ran round its south-western edge and it seems improbable that, with this in place, the feature could have been in use contemporaneously with the enclosure. The modified depression would have presented a considerable obstacle to access through the northern entrance to the enclosure, since it lay only 3-4m inside this entrance. Therefore, while the depression almost certainly existed during the lifetime of the enclosure, by the time it became a 'working hollow' it is considered unlikely that the enclosure perimeter remained in use.

16.1.6.2 The precise nature of activity undertaken within the 'working hollow' was not ascertained. However, briquetage and salt-affected Iron Age pottery recovered from features within the 'working hollow', along with further pottery and briquetage recovered from abandonment layers suggest that salt processing was being undertaken. One feature, a wide, shallow stone-filled pit may have been directly associated with salt processing, however the presence of two similar features to the south of the 'working hollow' indicates that such activity was not confined to the 'working hollow'. The 'working hollow' may therefore have been a generalised activity area rather than one reserved for a particular use, although the quantities of pottery recovered from the abandonment layers of the 'working hollow' broadly suggest that it may have been a focus of activity.

### *16.1.7 To examine evidence for subsistence patterns of the occupants of the site and assess whether such patterns changed through time*

16.1.7.1 Preservation of organic material in archaeological levels at North Road was generally poor, due to the acidity of the soils. However, some material was recovered, enabling broad conclusions to be drawn regarding subsistence patterns during the main archaeological periods of note.

16.1.7.2 Ancient plant remains within the assessed bulk samples were relatively scarce, again probably due to soil acidity. Of those that were recovered, the material principally comprised charred cereal remains (sometimes with chaff) including hulled barley, emmer and spelt wheat, along with a small quantity of oat recovered from a shell midden. Such remains were recovered from both the enclosed and unenclosed periods of activity at the site, although deposits assigned to the earlier of these periods generally produced fewer plant remains than those from the later. Whilst the cereal remains probably derive from human food crops, the low concentrations recovered give little scope for a fuller interpretation at this stage. It is assumed that fields were set out on the periphery of a settlement area at the site. The presence of quernstones at the site certainly indicates that cereal processing was being undertaken there; such bulky and heavy items are unlikely to have been transported to the site unless *in situ* processing was being undertaken. This provides further evidence that arable agriculture formed part of the subsistence economy.

16.1.7.3 Marine shells, mainly limpet and periwinkle, were recovered from bulk samples of a number of contexts. The collection of limpet and periwinkle can generally be taken to be indicative of a number of activities. Limpets and periwinkles (or just their shells) may have been collected for use as some form of adornment or for use as bait for fishing or as a food (or medicinal) source. Of these possibilities, the first seems unlikely, given the considerable quantities to be encountered, along with the absence of any worked examples. The use of limpets for bait is perhaps also unlikely, since it would have been more practical to store bait closer to the sea for collection immediately prior to use. The preferred explanation for the presence of limpets and periwinkles is that they were collected for food. In the past, limpets have sometimes been considered to be a 'famine food', an indicator of a society subsisting in unfavourable conditions, as discussed previously in Section 13. The presence of limpet and periwinkle shells in large numbers at the site is taken as a strong indication that shellfish, probably gathered from intertidal rock pools, formed a significant part of the subsistence economy. Concentrations of shell were recovered from deposits associated with the Iron Age enclosure, from ditch fills deposited prior to abandonment of the enclosure ditches, from abandonment fills of the ditches, and from later features, most notably a shell midden. This indicates that the sea was exploited as resource for food throughout successive phase of activity at the site, irrespective of the nature of the occupancy.

16.1.7.4 Relatively small and poorly preserved animal bone assemblages were recovered from the enclosure ditches, all in close proximity to concentrations of marine shell (although not necessarily from the same context or even phase). The reason was that the concentrations of shell had sufficiently altered the microenvironment within the immediate area to allow at least partial preservation of bone. However, in general, the bone fragments were too poorly preserved to allow for identification or further analysis.

16.1.7.5 Of those fragments identifiable to species, cattle, pig, sheep/goat and horse were all represented, some of which may represent butchery waste. As discussed above, the external enclosure ditches suggest the presence of droveways leading into the enclosure, further evidence that pastoralism played a part in the subsistence economy.

16.1.7.6 Charred hazelnut shells were recovered from one bulk soil sample, along with a single fish vertebrae from another sample, both of these deposits have been assigned to the unenclosed phase of activity at the site. The presence of this material provides further evidence for the exploitation of wild and coastal resources.

16.1.7.7 The excavated evidence gives a general picture of a mixed subsistence pattern at the site, through both the enclosed and unenclosed periods, based on a pastoral and arable economy supplemented by the exploitation of coastal resources and foraging of wild species. There is evidence that cereal crops were cultivated in the area, and that the rearing of cattle, sheep, pig and horse, as domesticated livestock, was undertaken. Coastal resources were probably heavily utilised, with shellfish forming a part of the dietary intake of the community, alongside the gathering of wild resources. The preservation of biological remains was insufficient to allow any significant assessment of variations to the subsistence economy through the periods represented by the stratigraphic evidence.

### *16.1.8 To assess the extent to which faunal remains recovered from the site provide information about subsistence patterns*

16.1.8.1 The poor and generally fragmentary survival of faunal remains at North Road prevents the small assemblage from providing a substantial amount of information regarding subsistence patterns. Preservation of animal bone occurred, in the main, only where bone was physically in close proximity to deposits of marine shell or, in a few instances, where it had been burnt. Improved survival adjacent to shell appears to have been the result of changes to the microenvironment within the soils caused by the shell. Even under these conditions, preservation was still poor, with most bone fragments unidentifiable. It is considered that the assemblage does not form a representative sample due to the prevailing conditions for survival of faunal remains rather than the low quantities being an indication of an absence of livestock and wild fauna in the subsistence economy. The fragmentary remains do broadly indicate that the economy was based in part on pastoralism, with the bones of cattle, pig, sheep/goat and horse all represented.

### *16.1.9 Assess the extent to which foraged foods formed part of the subsistence patterns of the settlement*

16.1.9.1 Foraged foods were represented at North Road by the remains of hazelnut shells and shellfish. Hazelnut shells were recovered from only a single deposit, the fill of a pit, although their presence suggests that wild resources were being exploited, as does the presence of a single fish vertebra. The generally small quantities of such material could indicate that they played a minimal role, or more likely may be due to poor preservation conditions.

16.1.9.2 Given the setting of the site, it is probable that exploitation of intertidal zone resources was a major component of the subsistence economy at the site. Concentrations of marine shell, mainly limpet and periwinkle, formed a constituent part of several deposits, including the remains of a shell midden. The excavated evidence therefore indicates that foraged foods formed a proportion of the subsistence economy but the full extent of their role is difficult to ascertain due to poor preservation.

### *16.1.10 To identify, recover and analyse food residues on pottery sherds and assess the potential for lipid analysis*

16.1.10.1 Carbonised residues were identified on a small number of pottery sherds from North Road, indicating their use in food preparation or cooking. In addition, a further 18 vessels have been identified as possible cooking pots on the basis of their form or soot deposits on their exteriors. Carbonised residues have been used to obtain a radiocarbon date of cal. BC 500-460 and cal. BC 430-380 from one pottery sherd and the potential to obtain radiocarbon dates from carbonised residues on other sherds is considered high. Given the possibility that a number of sherds from the site originate from vessels used as cooking pots, it is considered that the potential for some of the sherds to be suitable for lipid analysis is also high.

### *16.1.11 To determine whether absolute dating can assist with the development of the chronological sequence for Iron Age ceramics in northern Britain*

16.1.11.1 The chronological sequence of native Iron Age tradition pottery in the Tyne-Forth region remains relatively poorly understood. This is due both to generally low recovery rates for ceramic material from Iron Age sites and a lack of generally diagnostic forms and fabrics. The North Road assemblage has the potential to add significant information to an area of study where data has been relatively scarce.

16.1.11.2 The assessment has established that use of radiocarbon dating, in this case through the AMS technique, to provide absolute dates for carbonised residues and soot deposits on pottery sherds can provide a tighter chronological framework within which the site activity can be examined. Importantly, the majority of the ceramic material from the site was recovered from stratified deposits. It is considered that there is significant potential for further absolute dating of biological material recovered from bulk samples and from ceramic material. Such information will undoubtedly assist in refining the chronological sequence of Iron Age ceramics both at the site and across the broader region.

### 16.1.12 *To assess how the site compares and contrasts with other Iron Age settlement sites in the region*

16.1.12.1 A large number of possible later prehistoric sites have been identified in the Tyne-Forth region, mostly through aerial photography or as upstanding landscape features. However, relatively few of the sites have been subject to archaeological investigation through excavation. Of those that have, much of the work undertaken on enclosures has focused on those situated in commanding positions on high ground. Relatively little work has been undertaken on what might be described as lowland enclosures, or at least those occupying less commanding topographical locations. Enclosures along the north Northumberland and south-eastern Scottish coast have been subject to relatively little archaeological investigation, with a few notable exceptions, such as the site at Port Seton, East Lothian.[31] As a result, the available excavated evidence for Iron Age coastal communities is relatively scarce, certainly when compared with evidence from southern Britain.

16.1.12.2 Comparisons between the North Road site in its enclosed period and potentially similar sites in the Tyne-Forth region are hampered by several factors: a) the relatively small area of the enclosure that was available for investigation at North Road; b) poor definition of internal features on aerial photographs; c) the relative lack of excavation of similar sites in the region. Integration of the excavated evidence from North Road with aerial photographic evidence indicates a roughly circular enclosure *c.* 1.2 ha in size, with two entrances in the south-western side, and perhaps others elsewhere. This perhaps most closely resembles the eastern enclosure at Murton High Crags, which lies *c.* 6km to the south-west of the North Road site. Although Jobey[32] thought that site to be most likely unfinished and not necessarily for domestic occupation, its form, scale and location, in that it does not command a necessarily defensive position, suggest possible similarities to the North Road site.

16.1.12.3 It is difficult to compare the proposed unenclosed period of activity at North Road with other unenclosed settlement sites in the region due to the limited extent to which it was possible to expose the potential settlement area. An increasing number of unenclosed Iron Age settlement sites have been discovered in the region during the last 20 years, with ring-ditches or post-rings representing roundhouses being their most obviously defining features. No evidence for structural features representing habitation was recorded at North Road or has been identified to date on aerial photographs. However, the unenclosed period of activity at North Road was characterised by salt production, and there are few parallels in the region for unenclosed sites with an industrial component and no parallels in the Tyne-Forth region, or indeed in Northern Britain, for an Iron Age salt processing site.

[31] Haselgrove and McCullagh, 2000.
[32] Jobey, 1987.

16.1.12.4 In general, ceramic material recovered from Iron Age sites in the Tyne-Forth region is scarce, although as Willis[33] has pointed out, few sites in northern England and southern Scotland have produced no pottery at all. In this respect, the North Road site is perhaps unusual as it produced a relatively large assemblage of Iron Age pottery, certainly one of the largest yet to be recovered from a site in Northumberland and the biggest assemblage of briquetage from the Tyne-Forth region. The full significance of the relatively large ceramic assemblage is not yet understood, although it is possible that pottery and briquetage were being manufactured simultaneously in the vicinity.

16.1.12.5 In broad terms, the sequence of activity at North Road has been interpreted as the establishment of a ditched enclosure – probably with an associated settlement - during the Iron Age, followed by continued activity - notably salt production - following disuse of the enclosure ditches through to the early Roman Iron Age. Recent studies have increasingly emphasised that the picture of settlement in the Tyne-Forth region is far more varied and complex than has sometimes been appreciated in the past. The relevance of sequential models of settlement development, such as that proposed by Piggott[34] and based on a site at Hownam Rings, Roxburghshire, has been increasingly questioned in recent years.[35] Archaeological investigations have revealed that apparently typologically similar enclosures may be very dissimilar in chronological terms and that a general progression from simple to complex, perhaps with palisaded enclosures superseded by univalliate and then multivalliate enclosures, does not necessarily fit the sequence at all sites. Increasing numbers of unenclosed settlements have been recognised, both at sites with and without an enclosure. Where enclosures are present, unenclosed settlements have, at times, been shown to precede enclosures and succeed them elsewhere.

16.1.12.6 With studies of Iron Age settlement in the Tyne-Forth region developing rapidly in the light of current excavation and research, the site at North Road both compares and contrasts with other sites. However, the evidence for salt processing is unique in this region and no other Iron Age site in the region has produced such a large assemblage of briquetage and salt-affected pottery. Whilst briquetage has been recovered from sites elsewhere, this is likely to have been the result of salt traded in briquetage containers and not necessarily the product of salt production. The assemblage at North Road offers compelling evidence that salt processing was undertaken at the site. A relatively large assemblage of salt-affected pottery suggested that brine was transported or stored in the vessels and the presence of two briquetage rods, similar to those found at salt production sites in the Lincolnshire Fens, as discussed previously in Section 7, strongly indicates that processing was undertaken at North Road.

[33] Willis, 1999.
[34] Piggott, 1966.
[35] *e.g.* Harding, 2004.

## 16.2 Additional Research Objectives

*The archaeological data-set generated by the project has contributed important evidence towards the original research agenda. However, the significance of the evidence has necessitated the formulation of additional research questions. These are set out and discussed below.*

### *16.2.1 To what extent do the positions of the enclosure entrances compare or contrast with the entrances of similar Iron Age enclosures in the region?*

16.2.1.1 Two closely-spaced entrances to the enclosure were located within the excavation area. The northernmost faced approximately south-west and the southernmost faced in a slightly more southerly direction. The earlier geophysical survey extended beyond the northern limit of the development area and identified further elements of the enclosure that were not available for excavation. Through geophysical survey, another probable entrance was identified *c.* 60m beyond the excavated northern entrance and there may even have been another entrance only *c.* 20m beyond the excavated northern entrance, although the evidence for that was less convincing. The archaeological and geophysical evidence therefore suggests that the enclosure had at least three entrances, 50m-60m apart, in its western side. The significance of multiple entrances at North Road is not fully understood and further comparative research would need to be undertaken to elucidate this matter. A possible parallel is the enclosure at Dryburn Bridge in East Lothian, which had two entrances a similar distance apart on its eastern side.[36]

### *16.2.2 What is the significance of the presence of briquetage and salt-affected pottery?*

16.2.2.1 A significant assemblage of briquetage was recovered from the site, numbering 90 sherds, this being the largest assemblage of such material to be recovered to date from a site in Northumberland. While the presence of briquetage in itself does not necessarily prove that salt processing was undertaken at the site (salt was traded within briquetage containers), the identification of two possible briquetage rods amongst the assemblage, along with the overall quantity of material, effectively confirm that processing was being undertaken. Briquetage rods or supports have been identified on a number of Iron Age sites in the Lincolnshire Fens and are believed to have been used to support containers during salt processing. Further evidence to suggest that salt processing was undertaken at the site is demonstrated by the presence of a number of pottery sherds apparently affected by exposure to salt.

16.2.2.2 The range of sizes of pottery vessels from the site appears to be biased towards medium and larger sizes, rather than the smaller sizes more commonly found on Iron Age sites in the region. The vessel sizes are therefore perhaps indicative of a specific activity, perhaps salt processing, being undertaken at North Road, which is not apparent at other sites of this date in the region.

[36] Harding, 2004, 30.

16.2.2.3 As no other Iron Age salt processing sites have yet been identified in the Tyne-Forth region, there are no regional parallels for the North Road evidence. However, taking a wider perspective, the site has a number of fundamental differences to other sites where Iron Age salt working was has been identified. The most obvious difference when comparing North Road with other salt production sites, for example in the Lincolnshire Fens, is the location of the site itself. The North Road site lies on top of cliffs overlooking the sea, some 45m above sea level. If salt was being extracted from sea water at the site, the practical difficulties of transporting water to the site would have been considerable and it is suggested, therefore, that secondary processing of salt was more probably being undertaken. Primary evaporation may have been undertaken at a location closer to sea level. At the majority of Fenland salt processing sites, primary evaporation was evidently the principal activity. However, there are other examples of salt processing sites in southern England at similar locations, in terms of access to the sea, to North Road. There are several examples based on the Isle of Purbeck in Dorset and although some, perhaps even the majority, of this group are probably of Roman date, at least one, at Gaulter Gap near Kimmeridge, dates to the Iron Age.[37] The sites are located either on or near a sea cliff, at least 15m above sea level, and it has been suggested that secondary processing of salt was undertaken at the sites, either drying loads of wet salt or re-dissolving impure salt before refining it.[38] It is entirely possible that similar processes were undertaken at North Road. A major component of further research on the North Road data will comprise an examination of evidence from other salt processing sites from a variety of archaeological eras, both in Britain and abroad.

### *16.2.3 Is there any evidence for structured deposition at the site?*

16.2.3.1 Evidence for prehistoric structured deposition is a widely acknowledged phenomenon and recent research had begun to identify the existence of such practices within the archaeological record of the North East.[39]

16.2.3.2 The North East Regional Research Framework for the Historic Environment (NERRF) is an English Heritage-funded initiative that aims to provide a viable, realistic and effective academic basis for the undertaking of archaeological investigations.[40] The NERRF has identified the need for a depositional/contextual consideration of ceramic material from prehistoric sites.[41] There was no definite indication that the deposition of ceramics at North Road was the result of structured deposition. In general, it would appear that the enclosure ditches had been utilised on an *ad hoc* basis for the disposal of waste. Both ceramics and marine shell had been deposited in a range of features during both the enclosed and unenclosed periods of activity. Shell deposits within the enclosure ditch were perhaps more concentrated towards the terminus of the southern entrance, which could perhaps represent some form of structured deposition.

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[37] Farrar, 1975.
[38] *ibid.*
[39] Willis, 1999, 83.
[40] North East Regional Research Framework, www.durham.gov.uk.
[41] NERFF, Topic 3.3.3.

16.2.3.3 A complete upper stone from a rotary quern was recovered from the abandonment fills of the enclosure ditch. It appeared to be undamaged and although worn at the extremities of its grinding surface was otherwise in good condition. The quern lay horizontally within a ditch fill in the centre of the feature, and may represent some form of structured deposition within a boundary feature, although this cannot be proven. There is a general indication from the region that quernstones and quern fragments were used as structured deposits, for example at Doubstead, Berwick-upon-Tweed,[42] Thorpe Thewles[43] and Pegswood Moor Farm.[44]

16.2.3.4 Perhaps more convincing evidence for structured deposition was a small ceramic artefact, SF 15, within a small pit that had been cut through the backfill of a ditch terminus forming the Phase 3.1 northern enclosure entrance. The form and location of this feature strongly suggest that it may have been a structured deposit. Structured deposits at symbolic locations such as entranceways have been noted at other sites in the region, *e.g.* pits dug through the filled terminals of an eaves drip gully at Burradon[45] and ceramic material within terminal ditches at Pegswood Moor Farm.[46] Further research should be undertaken to identify SF 15 and hence assess its potential significance.

### *16.2.4 To what extent do artefacts recovered from the site have the potential to provide information about regional and national exchange networks in the Iron Age?*

16.2.4.1 The artefacts recovered from North Road are considered to have significant potential to provide information about regional and national exchange networks in the Iron Age. Recent studies of artefacts from the region have provided the first convincing evidence for the existence of exchange networks.[47] New work on quernstones has shown that some sites acquired examples which had evidently been produced at some distance from the consumer site. Petrological analysis of the quernstones and other stone objects recovered from North Road would have to be undertaken in an attempt to determine provenance of these artefacts.

16.2.4.2 There has been much debate over the provenance of glass bangles. Such objects are commonly found on native Iron Age sites in Northumberland, although it is not known whether they were a product of the Roman military sold to the local population, or *vice versa*.[48] A number of native sites have produced early Roman fine ware pottery, including South Gaulish samian ware, and it is entirely possible that such material arrived via extant indigenous networks.

16.2.4.3 A key component of further research will focus on the possibility of ascertaining whether or not briquetage recovered from the North Road site is comparable, in terms of form and fabric, with that from other Iron Age sites in the region.

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[42] Willis, *op cit.*, 99.
[43] Heslop, 1987.
[44] PCA, 2002.
[45] Willis, *op cit.*, 96.
[46] PCA, *op cit.*
[47] Willis, *op. cit.*, 100.
[48] Price, 1988.

### *16.2.5 What is the function of the clay-lined pits encountered at the site and how do they relate to other features at the site?*

16.2.5.1 As yet, the function of the clay-lined pits at North Road is not clear. Although horizontally truncated, it seems unlikely that the pits originally had a substantial depth and they might be better described as shallow 'basins' rather than true pits. The linings are likely to have performed one of two functions, either to keep moisture in or to keep it out. Given that salt processing was being undertaken at the site, it is entirely possible that the clay linings allowed brine to be stored in the pits for use during the salt winning process. Through chemical analysis of the linings it may be possible to elucidate the function(s) of these intriguing features.

# 17. SIGNIFICANCE OF THE PROJECT DATA AND PUBLICATION OUTLINE

## 17.1 The Site Data

17.1.1 The archaeological remains recorded at North Road are of high significance at a local and regional level. This assessment of the archaeological data-set has demonstrated that elements of the stratigraphic, artefactual and palaeoenvironmental evidence warrant further research and full publication of the results.

17.1.2 Academic justification for the conclusion above is provided by a research framework defined by two recent documents.

17.1.3 The first of these documents is a report produced in 2001 by the Iron Age Research Seminar (IARS) and the Council of the Prehistoric Society (CPS) '*Understanding the British Iron Age: An Agenda for Action*'.[49] This assessed the overall research priorities for British Iron Age archaeology in the coming decades. Five strategic areas central to future research were identified:

- Chronological frameworks
- Settlements, landscapes and people
- Material culture
- Regionality
- Processes of change

17.1.4 The IARS report highlights the fact that in many regions of Britain, even basic Iron Age chronology is a problem, while most others rely heavily on a few key sequences or artefact associations, and identifies the need for multiple single-entity radiocarbon dating to become routine for Iron Age sites. It also advocates the wider use of AMS dating of organic residues on pottery. The assessment of the North Road data has identified the potential for obtaining AMS dates from such sources and preliminary appraisal suggests that much additional data of relevance can be obtained from carbonised residues and soot deposits associated with ceramic material from the site.

17.1.5 The IARS report indicates that more work is required on how the different components of Iron Age societies were organised spatially and seasonally across the landscape, and on how Iron Age people understood and perceived their landscapes. The assessment of the North Road data has identified how the ability to exploit nearby resources on a seasonal basis may have been a key consideration for the occupants of the site.

17.1.6 The IARS report suggests that the potential of material culture to contribute information about Iron Age life remains under-exploited and suggests that scientific analysis of all categories of artefacts should be undertaken. It is considered that an essential component of the further work on the site data from North Road should incorporate such scientific analysis. There have been various general reviews of ceramic research and some authors have considered technology, typology, distribution, use and meaning. However, relatively little of this work has been undertaken on pottery from north of the Humber.

[49] Haselgrove, *et al.*, 2001.

17.1.7 The recent identification of briquetage in North East England is highly significant, and given the quantity of such material recovered from North Road, this component of the artefactual assemblage assumes greater significance. Artefacts can provide information about the context and site where they were found, but also contain data about all phases of their life, from production to discard. Actual production sites are under-studied, in part because they are often elusive and located in the landscape rather than coinciding with settlements. Previous research on Kimmeridge shale production sites and salterns have provided good examples of the insight which industrial sites alone can produce, since they have a value far beyond the local context, and touch on much broader questions of exchange and interaction. There is mounting evidence, for instance around the Humber Basin, to suggest that certain production activities were preferentially located in marginal areas of landscape, whether for cultural or economic reasons. The unusual setting of the North Road site is perhaps worthy of further consideration in this respect.

17.1.8 Broad-scale patterns of artefact production have been considered, although with an inevitable bias to the material from southern Britain, yet few detailed regional studies of the organisation of production exist. The IARS report has highlighted that distribution studies merit further work and this remains an area where artefact study and scientific analysis can play an important role in revealing patterns, to date studies of salt, iron and glass have highlighted such potential. Given the significance of the assemblage of briquetage form North Road, it is considered that an examination of all, or as much as possible, of similar material recovered from Northern England should be undertaken for comparative purposes as part of further work. Since the IARS report recommends that petrological examination of all medium to large (defined regionally) pottery assemblages should be standard, the North Road pottery assemblage should be subject to such analysis given that it is to date one of the largest assemblages of Iron Age pottery recovered from the region.

17.1.9 The other key area within material culture is function, where techniques of organic residue analysis have now developed to the extent where important information can be gathered. The assessment has established that the large pottery assemblage recovered from the North Road site has undoubted potential for such analysis.

17.1.10 While there has been some work done on the sourcing and distribution of quernstones, in general provenance of stone artefacts remains an under-researched topic, and again the North Road material can provide important information in this respect.

17.1.11 The IARS report highlighted that within the last decade, it has become increasingly clear that regional variations are a central feature of the British Iron Age, and defining and evaluating these differences should be a core objective of future research. Efforts are needed to correct the substantial variations in knowledge that exist between different parts of Britain. Some areas are effectively blank, and, in these, any opportunities for fieldwork on Iron Age sites should be treated as potentially significant for advancing understanding at a national level. Many other regions would benefit from synthesis and from projects aimed at filling gaps in the existing framework. In this respect, the North Road data is considered to have a high potential to fill such a gap.

17.1.12 The IARS report identified another feature of the later Iron Age, namely settlement expansion and intensifying use of the landscape, both of which being almost certainly linked to a significant rise in population. The closing centuries of the last millennium BC saw settlement expansion into many previously sparsely settled areas, so that by the 1st century AD, large parts of the lowland landscape were virtually fully settled. It seems likely that prior to this period, many areas were relatively sparsely occupied and exploited, one reason being that the fertile but heavy soils which characterise many of the relevant areas were previously relatively difficult to cultivate.

17.1.13 The IARS report discussed the theory that use of iron-tipped plough shares and cereal crops suited to heavier soils and the introduction of the rotary quern, together with the climatic improvements after *c.* 400 BC, undoubtedly assisted settlement expansion, although the impetus to agricultural expansion may have come from changes in social organisation. This expansion into thinly-settled areas and the social processes underlying the phenomenon are increasingly emerging as one of the crucial features of the later Iron Age. Frequently the expansion process is linked with developing craft specialisation and production of non-local exchange, as well as with new kinds of settlement, which in turn indicate new forms of social organisation. In some cases, colonisation of new land may have been accompanied by the laying out of extensive field systems. In other cases, settlement expansion may actually have promoted agricultural innovation.

17.1.14 The IARS report highlighted that the phenomena described above require further investigation, both to understand the mechanisms at work locally, and to assess to what extent similar processes were operating throughout different regions of both lowland and upland Britain. In Northern Britain, the absence of a well-understood regional sequence, the longevity of material culture forms and the general lack of pottery, all combine to present major obstacles to the investigation of the nature and timing of changes at the end of the Iron Age and into the period of Roman occupation. Thus, the North Road data-set assumes high regional significance. Thus, if as proposed, there were indeed moves towards political centralisation and greater social complexity at this time, then routine use of absolute dating becomes an essential element for further research. In addition, the impact of the Roman occupation on Iron Age settlement forms and the often highly selective uptake of Romanised material culture, both within and beyond the frontier, and as evidenced at North Road, are other key areas for further research.

17.1.15 The second document to contribute to the relevant research agenda is the aforementioned North East Regional Research Framework for the Historic Environment (NERRF). A NERRF research topic for the prehistoric (settlement) period highlighted the need for research on salt production along the North Sea littoral.[50] Assessment of the North Road data has established that the site is unique to Northern Britain as being the only Iron Age salt processing site yet discovered. The discovery of an Iron Age saltmaking site at North Road is of high regional significance.

[50] Topic 3.3.13.

17.1.16 The NERRF also highlighted the need for new work on pottery types and production.[51] It is important to provide a framework for late prehistoric ceramics which has hitherto been largely lacking. An improved understanding of pottery types and their production will also contribute to understanding of late prehistoric economic relationships, shedding light on the presence/absence of economic specialism and trade. Therefore, the relatively large ceramic and briquetage assemblages from North Road assume high significance, with respect to this NERRF research topic.

17.1.17 The NERRF also discussed the need for further research into quernstones to be undertaken, including extending northwards the Yorkshire Quern Survey.[52] An understanding of the geological origins of querns has great potential in enhancing current understanding of trade links and economic interaction in the region and thus the significance of the quernstones from North Road is underlined.

17.1.18 In summary, it is considered that dissemination of the archaeological evidence from North Road through publication would contribute much significant information to current understanding of Iron Age though to the early Roman Iron Age in the region. The undoubted importance of the site data underlines the need for further analysis ultimately leading to production of a lengthy publication in a refereed academic journal such as *Archaeologia Aeliana*. The justification for this recommendation has been demonstrated by examining existing academic research frameworks, which has highlighted the significance of many elements of the North Road data.

## 17.2 Summary of Potential of the Artefactual and Palaeoenvironmental Material for Further Analysis

### *17.2.1 Pottery and briquetage*

17.2.1.1 The ceramic assemblage, though moderate in size, is large in relative terms due to the general paucity of ceramic artefacts recovered from Iron Age sites in the Tyne-Forth region. The 152 sherds of pottery deriving from Iron Age vessels represents one of the largest assemblages of Iron Age pottery recovered from the region. As such, a detailed examination of the assemblage has the potential to greatly enhance our knowledge of activity, diet and culture at the site and by comparison with finds from other sites, increase our understanding of sites in the broader region.

17.2.1.2 The briquetage assemblage, represented by a total of 90 sherds, is the largest assemblage of its type from the region. It represents the earliest evidence for salt processing in Northumberland and the most northerly evidence for prehistoric salt processing yet discovered in Britain.

[51] Topic 3.3.4.
[52] Topic 3.7.

17.2.1.3 The recommendations for further analysis of the ceramic material from North Road, Berwick-upon-Tweed, are as follows:

- Petrological thin sectioning should be undertaken of selected pottery and briquetage sherds in order to indicate the source of the clay used for manufacture. It is estimated that between 15 and 30 samples would need to be analysed.
- Analysis of the differences in sizes of the vessels should be undertaken to establish any regional trends through association with their use.
- All of the 17 rims and the knob should be illustrated.
- Variations in the fabrics and rim types of the assemblage throughout the phased deposits should be established in order to determine any chronological variation.
- Mean sherd weight data should be established and comparison to similar information form other sites in the region should be undertaken in order to explore the nature of deposition of the assemblage.
- Comparative examination of the wall thickness of vessels from North Road and those elsewhere in the region should be undertaken to investigate whether the apparent 'massiveness' of sherds in the North Road assemblage represents a style zone not previously recognised.
- Detailed examination of the briquetage vessels and supports should be undertaken along with comparison with other assemblages in Britain and the Continent. Macro photography of the fingering on the vessel sherds may reveal details about those involved in the salt processing.
- Lipid residue analysis should be undertaken on a selection of ceramic sherds representative of the type series, ensuring that all ceramic phases are represented, to allow analysis of the potential function of vessels within a chronological framework.

### *17.2.2 Medieval and Post-medieval artefacts*

17.2.2.1 No further interpretation or analysis of the assemblage is recommended.

### *17.2.3 Small finds*

17.2.3.1 The majority of the small finds recovered from the site do not warrant further work. However, Small Find 14, a ball or sphere of unknown function, should be examined further in comparison with small stone balls found at sites in south-east Scotland, such as Broxmouth. Petrological analysis of the object should also be undertaken to ascertain the possible source of the raw material. A selection of the small finds should be illustrated for inclusion in the publication report.

### *17.2.4 Stone artefacts*

17.2.4.1 A number of quernstones were recovered from the site, mostly from stratified deposits. Further work is warranted on a number of the objects. Petrological analysis should be undertaken on Small Finds 1, 2, 13, 19, 23, 24 and 27 (all rotary quern fragments) and 18, 20 and 21 (all possible fragments of saddle querns), to establish possible provenance. Such analysis may indicate whether the querns are of local manufacture or traded items. Analysis of the exact form and probable date of the querns should also be undertaken through comparison with querns recovered from other sites in the region.

### *17.2.5 Lithics*

17.2.5.1 No further work on the lithic assemblage from the site is required. However, a short description and discussion, including illustrations of the cores and retouched flakes, of the assemblage should be included in the publication report.

### *17.2.6 Slag and other high temperature debris*

17.2.6.1 No further work on the assemblage is recommended.

### *17.2.7 Biological remains*

17.2.7.1 The quantities of charred plant remains recovered from the assessment samples were small, but, given the early date of many of the deposits, it would be worthwhile to fully record the larger assemblages. Recommendations for further work are as follows:

- All of the remaining sediment from contexts [119], [131], [167], [187], [238] and [249] should be processed to recover as much material as possible. Charred material may also be useful for AMS dating.
- Iron Age deposits with waterlogged preservation are rarely encountered in the north of England and all of the remaining sediment from context [302] should be processed for the recovery of plant and invertebrate macrofossils. The resultant assemblages should be recorded in detail.
- Shell remains were recovered from contexts [131], [187] and [188]. The remaining sediment from these contexts should be processed in order to recover the remainder of the shell. The shell assemblage should be fully recorded, together with that from context [28.6] (recovered during the evaluation phase of work), to provide data for comparison with other sites.

- Each of the samples not seen during the assessment should be examined with a view to identifying further concentrations of plant remains, shell and waterlogged deposits. As the presence of waterlogged remains in context [302] was not immediately apparent, further work should include processing a small sub-sample from **all** of the deposits not yet assessed. If any sample proves to contain ancient biological remains in valuable quantities then the remaining sediment should be processed and analysed.
- No further work is warranted on the hand collected bone assemblage.

### *17.2.8 AMS radiocarbon dates*

17.2.8.1 Two AMS radiocarbon dates have been already obtained during assessment of the project data. Both samples produced sufficient carbon to obtain accurate dates. Further radiocarbon dates would be required to clarify chronological relationships between different phases and sub-phases of activity at the site. The number of samples to be submitted for radiocarbon dating will be determined, at least in part, by the results of further work undertaken on the ceramic and biological assemblages. These will inform the selection of samples to be submitted for dating.

### *17.2.9 Additional*

17.2.9.1 The linings of each clay-lined pit were sampled in their entirety and it is considered that analysis of this material is warranted. Given the evidence for salt processing at the site, it is possible that the pits relate to this activity. The linings should be tested to assess levels of salt, to possibly indicate their use in the salt winning process. In addition, analysis of the clay is recommended to assess whether the clay linings have the same origin as the clay used for the manufacture of some of the ceramics recovered from the site. The same analysis is also recommended for clay deposits recovered from enclosure ditches.

## 17.3 Publication Proposals

17.3.1 It is considered that the archaeological data-set merits publication in the form of a lengthy and detailed synthesised report published in a suitable regional archaeological journal, such as *Archaeologia Aeliana.*

17.3.2 A full assessment of the data-set has been undertaken an summary of the its potential of each element for further research/analysis is set out in the preceding section. However, any publication of the site should, as a minimum, contain the following:

- A description of the site in its modern setting, detailing the background to the excavation and outlining the methodology of the excavation.
- A description of the geology and topography of the site and discussion of how these elements may have been influenced the origin and development of the site.

- Discussion of archaeological excavations and finds in the Berwick-upon-Tweed area, and the wider Tyne-Forth region as a whole, that have produced evidence for Iron Age settlement, along with a discussion of sites where briquetage has been found.
- Detailed phase descriptions of the results of the excavation.
- A proposed interpretation of the archaeological remains based on the excavated features, the artefactual and palaeoenvironmental evidence, consideration of comparable and contemporary sites excavated within the region. Amongst other considerations, any such discussion should seek to examine relationships between phases of activity, to identify any fluctuations in levels and types of activity, to identify instances of continuity and disuse/abandonment, as well as considering phases in isolation.
- A consideration of the wider, contemporary external environmental, including political and socio-economic factors, which may have had an influence on the development of the site.
- Any potentially relevant dating evidence, whether derived from ceramics, small finds, palaeoenvironmental material or absolute dating, should be integrated into phase discussions, as well as the overall discussion of the evidence, where appropriate, with due consideration of any implications for the excavated remains.
- There will also be a need for some discussion of individual finds groups and, in some cases, their interrelationships, under appropriate headings. This is particularly relevant in the case of the general pottery and briquetage, which merit full discussion in their own right and consideration of dating in the light of other categories of evidence. Additionally, all artefactual and palaeoeoenvironmental data will require cataloguing, with full cross-referencing to phase and context.

17.3.3 Any publication of the site would include, at a minimum, the following illustrations:

- Site location plans, showing the site in relation to its immediate and regional modern environment. Other, small-scale plans may also be necessary to illustrate relevant topographical and geographical features and to show the site in relation to other known prehistoric sites in the area.
- Location plan of the excavation area.
- Phase plans, illustrating the interrelationships of major features.
- Plans of individual features and groups of features, structures, *etc.* at a larger scale, as appropriate.
- Various section drawings, as appropriate.
- Artefact illustrations, including:
  *c.* 21 pottery
  *c.* 6 small finds
  *c.* 5 stone objects
  *c.* 2 flint

- Any other illustrations as deemed appropriate. These might include relevant finds distribution maps, plans of comparative excavated structures *etc.* (with due consideration of copyright) and interpretative/reconstructive illustrations.
- Site-wide, feature and artefact photographs, as appropriate.

# PART D: ACKNOWLEDGEMENTS AND BIBLIOGRAPHY

# 18. ACKNOWLEDGEMENTS AND CREDITS


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*Site Director and Author:* Gavin Glover

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*Post-excavation Manager:* Jenny Proctor

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*CAD*: Adrian Bailey

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# APPENDIX 1

## CONTEXT INDEX

| Context | Type | Type | Phase | Description | Interpretation |
|---|---|---|---|---|---|
| 1 | Masonry | Drain Lining | 7 | Red sandstone irregular rubble/blocks; average size 0.30m x 0.20m x 0.10m, no bonding material; E-W orientation; 14.30m x 0.40m x 0.17m high | Stone drain lining |
| 2 | Deposit | Fill | 7 | Soft; dark greyish brown; sandy silt; occasional fragments of coal and shale; 14.30m x 0.40m x 0.17m thick | Fill of stone-lined drain [3] |
| 3 | Cut | Ditch | 7 | Linear; straight; steep sides; flat base; 14.30m x 0.40m x 0.17m deep; E-W orientation | Drain construction cut |
| 4 | Deposit | Layer | 8 | Friable; dark brown; clayey silty sand; frequent charcoal flecks and coal fragments, frequent small sub-angular stones, patches of large cobbles in the NE corner of the site; extended across the entire site up to c. 1.0m thick | Ploughsoil |
| 5 | Deposit | Layer | 1 | Variable compaction from compact to very loose; light yellowish brown to light pinkish brown with light grey patches; sandy silt with patches of sandy clay; areas of pinkish brown silty clay visible in the north-western and south-western corners of the site, frequent areas of heavy manganese panning | Natural sub-stratum |
| 6 | Deposit | Fill | 7 | Sandstone rubble; up to 680mm x 230mm x 150mm; covered an area 1.80m x 0.60m x 0.63m deep | Rubble fill of sump [7] |
| 7 | Deposit | Fill | 7 | Soft; mid orange brown; silty sand; occasional small stones, occasional fragments of shale and coal; 0.63m thick | Fill of construction cut [8] |
| 8 | Cut | Pit | 7 | Sub-rectangular; steep sides; flat to concave base; 1.80m x 0.60m x 0.63m deep; N-S orientation | Sump cut |
| 9 | Deposit | Fill | 3.6 | Loose; greyish brown; silty sand; occasional medium sized sub-angular stones, occasional small sub-rounded stones; 0.30m thick | Fill of gully [10] |
| 10 | Cut | Gully | 3.6 | Curvilinear; steep sides; concave and irregular base; 24.80m x up to 1.80m wide x 0.30m deep; NE-SW orientation before partially returning to the NW at the NE end | Ditch or drainage gully |
| 11 | Deposit | Fill | 3.6 | Loose; mid orange brown; silty sand; occasional small sub-rounded stones; 0.22m thick | Fill of gully [12] |
| 12 | Cut | Gully | 3.6 | Linear; moderately steep sides; concave base; 8.25m x 0.84m x 0.22m deep; NE-SW orientation | Drainage gully |
| 13 | Deposit | Fill | 3.6 | Loose; mid orange brown; silty sand; occasional small sub-rounded stones; 0.21m thick | Fill of gully [14] |
| 14 | Cut | Gully | 3.6 | Linear; irregular sides; concave base; 40.80m x 0.28m x 0.21m deep; NE-SW orientation | Drainage gully |
| 15 | Deposit | Layer | 7 | Friable; mid brown; sandy clayey silt; occasional small sub-angular stones; 40m x 35m x 0.17m thick lensing out to the north and west | Sub-soil |
| 16 | Deposit | Fill | 7 | Friable; light brownish grey; sandy silt; occasional small and medium sub-angular stones; 0.43m thick | Fill of [17] |
| 17 | Cut | Pit | 7 | Oval; steep sides; flat base; 1.24m x 0.81m x 0.43m deep; E-W orientation | Sump |
| 18 | Deposit | Fill | 7 | Friable; light brownish grey; sandy silt; 0.08m thick | Fill of [19] |
| 19 | Cut | Gully | 7 | Linear, straight; gradual sides; flat base; 5.08m x 0.40m x 0.08m deep; E-W orientation | Drainage gully |
| 20 | Cut | Pit | 7 | Sub-circular; irregular sides; irregular base; 1.10m x 0.80m x 0.40m deep | ?animal disturbance/ treebole |
| 21 | Deposit | Fill | 7 | Compact; mid reddish brown; sandy silt with lenses of silty clay; frequent flecks of charcoal and coal, occasional large stones; 0.40m thick | Fill of [20] |
| 22 | Deposit | Fill | 6.2 | Firm; mid orange brown; clayey silt; occasional small stones, occasional small fragments of coal; 0.10m thick | Fill of gully [23] |
| 23 | Cut | Gully | 6.2 | Linear, straight; gradual sloping sides; concave to flat base; 5.18m x 0.70m x 0.10m deep; N-S orientation | Drainage gully |
| 24 | Deposit | Fill | 3.6 | Loose; mid orange brown; silty sand; occasional mid greenish grey slate fragments; 0.26m thick | Fill of [25] |
| 25 | Cut | Gully/ditch | 3.6 | Linear, straight with rounded terminus at either end; moderately steep sides; concave base; 14.0m x 0.76m x 0.26m deep | Drainage or boundary ditch/gully |
| 26 | Deposit | Fill | 6.2 | Soft; mid greyish brown; silty sand; occasional small stones; 0.26m thick | Fill of gully [27] |
| 27 | Cut | Gully | 6.2 | Linear; gradual sloping sides; concave base; 2.34m x 0.42m x 0.26m deep; N-S orientated | Drainage gully |
| 28 | Cut | Gully | 7 | Curvilinear; steep sides; flat base; 5.05m x 0.40m x 0.10m deep; NE-SW orientated | Gully |
| 29 | Deposit | Fill | 7 | Soft; mid reddish brown; sandy silt; occasional flecks of coal, occasional fragments of stone; 0.10m thick | Fill of gully [28] |
| 30 | Cut | Ditch | 6.2 | Linear; moderately steep sides; concave base; 23.74m x 3.48m x 1.26m deep; N-S orientated | Boundary ditch |
| 31 | Deposit | Fill | 6.2 | Soft; mid reddish brown; silty sand; frequent small rounded pebbles, occasional large round and sub-angular cobbles; 0.59m thick | Upper fill of ditch [30] |
| 32 | Deposit | Fill | 6.2 | Soft; light orange brown; silty sand; moderate medium sub-angular gravel, occasional sub-angular pebbles; 0.26m thick | Primary fill of ditch [30] |
| 33 | Cut | Ditch | 6.1 | Linear, rounded terminus at western end; moderately steep sides; concave base sloping towards the east; 2.04m x 0.88m x 0.27m deep; E-W orientation | ?drainage ditch |
| 34 | Deposit | Fill | 6.1 | Soft; mid orange brown with light yellow mottles; silty sand; frequent sub-angular gravel; 0.27m thick | Fill of [33] |
| 35 | Deposit | Fill | 6.2 | Firm; mid orange brown; silty sand; occasional small sub-angular stones; 0.15m thick | Fill of [36] |
| 36 | Cut | Ditch | 5.2 | Irregular in plan; gradual sides; irregular base; 4.97m x 1.92m x 0.15m deep; N-S orientation | ?drainage ditch/gully |
| 37 | Deposit | Fill | 7 | Loose; light to mid grey; silty sand, ash and coal; frequent charcoal flecks, occasional lumps of pink clay; 0.35m thick | Fill of [38] |
| 38 | Cut | Pit | 7 | Sub-rectangular; irregular sides; irregular base; 2.10m x 1.68m x 0.35m deep; E-W orientation | Possible firepit |
| 39 | Cut | Gully | 6.1 | Linear with an irregular terminus at either end; irregular sides; irregular base; 11.42m x 1.0m x 0.19m deep; E-W orientation | ?drainage gully |
| 40 | Deposit | Fill | 6.1 | Loose; mid brown; sandy silt; occasional small pebbles; 0.19m thick | Fill of [39] |
| 41 | Deposit | Fill | 7 | Loose; mid brown; sand; occasional charcoal flecks; 0.07m thick | Fill of gully [42] |
| 42 | Cut | Gully | 7 | Linear, slightly curved, rounded terminus at either end; steep sides; concave base; 4.06m x 0.28m x 0.07m deep; E-W orientation | ?plough score or drainage gully |
| 43 | Deposit | Fill | 3.6 | Friable; mid orange brown; sandy silt; occasional small sub-rounded stones; 0.08m thick | Fill of [44] |
| 44 | Cut | Gully | 3.6 | Linear; gradual sides; concave base; 10.40m x 0.50m x 0.08m deep; SW-NE orientation | ?drainage gully |
| 45 | Cut | Gully | 7 | Linear; moderate sides; irregular base; 24.20m x 1.05m x 0.20m deep; E-W orientation | ?drainage gully |
| 46 | Deposit | Fill | 7 | Soft; mid orange brown; sandy silt; frequent fragments of coal; 0.20m thick | Fill of [45] |
| 47 | Cut | ?Pit | 6.2 | Sub semi-circular in plan extended beyond the limit of excavation; moderately steep sides; concave base; 2.90m x 1.12m x 0.40m deep | ?tree throw |
| 48 | Deposit | Fill | 6.2 | Soft; mid orange brown; sandy silt; occasional sub-rounded pebbles; 0.40m thick | Fill of [47] |
| 49 | Cut | ?pit ?ditch | 3.6 | Irregular, sub semi circular in plan; moderately steep sides; base not visible; 3.10m x 1.24m x 0.65m deep | ?pit or ditch terminus |
| 50 | Deposit | Fill | 4 | Firm; mid to dark reddish brown; silty sand; frequent coarse gravel, occasional sub-rounded cobbles; 0.65m thick | Fill of [49] |
| 51 | Deposit | Fill | 6.1 | Loose; mid brown; sandy silt; occasional small pebbles; 0.15m thick | Fill of gully [39] |

| Context | Type | Type | Phase | Description | Interpretation |
|---|---|---|---|---|---|
| 52 | Deposit | Layer | 7 | Friable; mid pinkish brown; sandy silt; moderate small sub-rounded and sub-angular stones; 30m x 12m x 0.29m thick (max) | Sub-soil |
| 53 | Deposit | Fill | 6.2 | Loose; mid pinkish brown; sandy silt; occasional small and medium sub-angular and sub-rounded stones, occasional large sub-rounded stones; 0.23m thick | Upper fill of [30] |
| 54 | Deposit | Fill | 6.2 | Loose; mid greyish brown; silty sand; occasional small sub-angular and sub-rounded stones; 0.29m thick | Lower fill of ditch [30] |
| 55 | Deposit | Fill | 6.1 | Loose; mid greyish brown; silty sand and mixed gravel; moderate small rounded and sub-rounded stones; 0.16m thick | Fill of [56] |
| 56 | CUT | Ditch | 6.1 | Linear; moderately steep sides; flat base; 1.80m x 0.85m x 0.25m deep; N-S orientation | ?boundary ditch |
| 57 | Cut | ?Pit | 6.1 | Irregular in plan; moderately steep sides; irregular base; 4.48m x 1.92m x 0.61m deep | ?tree throw |
| 58 | Deposit | Fill | 6.1 | Loose; mid brown; sandy silt; frequent small pebbles, occasional medium sized stones; 0.61m thick | Fill of [57] |
| 59 | Cut | ?Pit | 7 | Sub-circular in plan (continues beyond limit of site); gradual sides; flat base; 1.0m x 0.30m x 0.27m deep | ?pit to remove stone |
| 60 | VOID | | | | |
| 61 | VOID | | | | |
| 62 | Deposit | Fill | 7 | Soft; mid reddish brown; silty sand; occasional large stones; 0.27m thick | Fill of [59] |
| 63 | Deposit | Layer | 7 | Firm; light orange brown; sandy silt; frequent fragments of stone; extends along eastern edge of site in excess of 3.65m x 0.41m thick | Sub-soil |
| 64 | Masonry | Surface | 4 | Limestone, sandstone and granite blocks; most had at least one flat side; average size 300mm x 300mm x 250mm, maximum 680mm x 620mm x 450mm; forms a surface, area 7.20m x 5.0m; plough damage on some stones | Stone yard surface |
| 65 | Cut | Gully | 7 | Linear; gradual sides; irregular base; 8.24m x 0.30m x 0.10m; E-W orientation | ?drainage gully, same as [69]? |
| 66 | Deposit | Fill | 7 | Loose; mid brown; sandy silt; occasional medium sized stones; 0.10m thick | Fill of gully [65] |
| 67 | Cut | Pit | 5 | Sub-circular; moderately steep sides; concave base; 1.40m x 1.44m x 0.50m deep | Pit |
| 68 | Deposit | Fill | 5 | Soft; mid reddish greyish brown with pale yellow mottling; sandy silt; moderate charcoal flecks, occasional sub-angular and rounded cobbles; 0.50m thick | Fill of pit [67] |
| 69 | Cut | Gully | 7 | Linear; gradual sides; irregular base; 10.74m x 0.48m x 0.08m deep; E-W orientation | ?drainage gully |
| 70 | Deposit | Fill | 7 | Loose; mid brown; sandy silt; occasional pebbles; 0.08m thick | Fill of [69] |
| 71 | Deposit | Fill | 4 | Loose; mid greyish brown; silty sand; occasional small and medium sub-angular stones, occasional charcoal flecks; 0.12m thick | Fill of pit [74] |
| 72 | Deposit | Fill | 4 | Friable; mid brown with orange and black mottling; sandy silt; moderate small and medium sub-angular and sub-rounded stones; 0.18m thick | Fill of pit [74] |
| 73 | Masonry | ?Structure | 4 | Sandstone and limestone slabs and cobbles; average size 200mm x 150mm x 50mm, maximum size 550mm x 500mm x 120mm; 3.40m x 2.20m x 150mm | Plough damaged surface or structure |
| 74 | Cut | Pit | 4 | Sub-circular; gradual sides; flat base; 3.56m x 3.10m x 0.18m deep | Shallow pit for stone [73] |
| 75 | Cut | Pit | 5 | Sub-circular; moderately steep sides; irregular base; 0.58m x 0.48m x 0.21m deep | ?posthole |
| 76 | Deposit | Fill | 5 | Loose; mid brown; sandy silt; occasional medium sized stones; 0.21m thick | Fill of [75] |
| 77 | Deposit | Fill | 5 | Loose; mid brown; silty sand; frequent stones and gravel, moderate flecks of burnt clay, ash and charcoal; 0.20m thick | Fill of gully [78] |
| 78 | Cut | Gully | 5 | Linear with irregular edges; steep sides; flat base; 5.0m x 0.80m x 0.20m deep; N-S orientation | Shallow gully |
| 79 | Deposit | Fill | 4 | Friable; dark greyish brown; sandy silt; occasional gravel and stones, occasional charcoal and burnt clay flecks; 0.60m thick | Fill of enclosure ditch [80] |
| 80 | Cut | Ditch | 3.6 | Linear, L-shaped with outward facing 'hook' at south-west end; moderately steep sides becoming steeper towards the base; base varies between flat and concave; 49.50m NW-SE x 30.0m NE-SW x 4.20m wide x 1.20m deep; NW-SE orientation before returning to the SW at the NW end | Enclosure ditch |
| 81 | Deposit | Fill | 7 | Variable; dark reddish brown; silty sand; frequent stone fragments, occasional fragments of coal; 0.30m thick | Fill of robber trench [321] |
| 82 | Deposit | Fill | 4 | Friable; mid brown; sandy silt; occasional charcoal flecks, occasional stones and gravel, occasional fragments of burnt clay; 0.25m thick | Fill of enclosure ditch [80] |
| 83 | Void | Void | Void | Void | Void |
| 84 | Cut | Tree bole | 5 | Irregular in plan; irregular sides; irregular base; 0.95m x 0.82m x 0.12m deep | Tree bole |
| 85 | Deposit | Fill | 5 | Friable; mid brown; sandy silt; occasional charcoal flecks and fragments, occasional stone fragments; 0.12m thick | Fill of tree bole [84] |
| 86 | Deposit | Fill | 4 | Friable; mid brown; sandy silt; occasional gravel and stones, occasional charcoal; 0.35m thick | Fill of enclosure ditch [80] |
| 87 | Deposit | Fill | 4 | Loose; mid brown; sandy silt; occasional small pebbles; 0.10m thick | Fill of enclosure ditch [80] |
| 88 | Deposit | Fill | 3.6 | Soft; mid pinkish brown; sandy silt; occasional gravel and stones; 0.30m thick | Primary fill of ditch [80] |
| 89 | Deposit | Fill | 4 | Friable; mid brown; sandy silt; occasional sub-rounded and sub-angular stones; 0.20m thick | Fill of [90] |
| 90 | Cut | Pit | 4 | Sub-circular; moderately steep sides; flat base; 0.20m deep | ?posthole |
| 91 | Masonry | Packing | 4 | Pink sandstone; rubble; average size 100mm x 100mm x 60mm; | ?packing stones within [90] |
| 92 | Cut | ?Pit | 4 | Partially survived sub semi-circular in plan; moderately steep sides; concave base; 0.60m x 0.12m x 0.17m deep | ?posthole |
| 93 | Deposit | Fill | 4 | Soft; dark brown; silty sand; occasional stone fragments; 0.17m thick | Fill of [92] |
| 94 | Deposit | Fill | 2 | Friable; mid brown; sandy silt and gravel; occasional small stones; 0.40m thick | Fill of gully [95] |
| 95 | Cut | Gully | 2 | Curvilinear; steep sides; concave base; 6.60m x 0.60m x 0.40m deep | Gully along edge of enclosure |
| 96 | Deposit | Fill | 5 | Friable; mid greyish brown; sandy silt; moderate charcoal flecks, occasional small sub-rounded and sub-angular stones; 0.26m thick | Upper fill of pit [97] |
| 97 | Cut | Pit | 5 | Sub-circular; near vertical sides; flat base; 0.76m x 0.75m x 0.33m deep | Small pit/ large posthole |
| 98 | Cut | Pit | 7 | Sub-circular; steep sided; concave base; 0.70m x 0.55m x 0.27m deep | Small pit/ large posthole |
| 99 | Deposit | Fill | 7 | Friable; light greyish brown; sandy silt; occasional small sub-rounded stones, occasional larger stones concentrated at edge of pit; 0.14m thick | Fill of [98] |
| 100 | Deposit | Fill | 7 | Friable; mid to dark brown; sandy silt; occasional small sub-rounded stones; 0.11m thick | Upper fill of [98] |
| 101 | Cut | Pit | 5 | Sub-circular; near vertical sides; flat base; 0.50m x 0.40m x 0.18m deep | Small pit/ posthole |
| 102 | Deposit | Fill | 5 | Friable; mid brown; sandy silt; occasional charcoal flecks, occasional small stones; 0.18m thick | Fill of [101] |

| Context | Type | Type | Phase | Description | Interpretation |
|---|---|---|---|---|---|
| 103 | Cut | Ditch | 3.1 | Linear with sub-rounded terminus; steep sides becoming very steep towards the base in a slot; concave base; 3.45m x 2.10m x 1.30m deep; NW-SE orientation | Enclosure ditch and terminus forming northern side of entrance |
| 104 | Deposit | Fill | 3.1 | Soft; mid orange greyish brown; sandy silt; occasional charcoal flecks and occasional sub-rounded cobbles; 0.20m thick | Upper fill of enclosure ditch [103] |
| 105 | Deposit | Fill | 3.1 | Loose; mid brownish orange and yellowish brown; silty sand and gravel; frequent coal flecks and sub-rounded and sub-angular stones, occasional charcoal flecks; 0.45m thick | Fill of enclosure ditch [103] |
| 106 | Cut | Pit | 3.1 | Sub-circular; moderately steep sides; concave base; 0.17m diameter x 0.07m deep | Small pit |
| 107 | Deposit | Fill | 3.1 | Friable; light to mid brown with yellow mottling; sandy clay and clay; occasional charcoal flecks; 0.07m thick | Fill of pit [106] |
| 108 | Cut | Pit | 5 | Sub-circular; near vertical sides; concave base; 0.96m x 0.92m x 0.36m deep | Small pit |
| 109 | Deposit | Fill | 5 | Friable; mid greyish brown with yellow mottling; sandy silt; occasional charcoal flecks, occasional small stones; 0.24m thick | Primary fill of pit [108] |
| 110 | Deposit | Fill | 5 | Friable; mid to dark brown; sandy silt; occasional charcoal flecks, occasional small sub-angular stones; 0.11m thick | Secondary fill of pit [108] |
| 111 | Deposit | Fill | 5 | Firm; dark brown; clayey silt; occasional charcoal flecks, occasional coal fragments; 0.10m thick | Upper fill of pit [108] |
| 112 | Cut | Pit | 5 | Sub-circular; steep sides; concave base; 0.39m diameter x 0.25m deep; | Clay-lined pit |
| 113 | Deposit | Fill | 5 | Firm; mid pinkish grey; clay; occasional small stones; 0.10m thick | Clay lining pit [112] |
| 114 | Deposit | Fill | 5 | Friable; mid to light greyish brown with yellow mottling; clayey silt; occasional charcoal flecks, occasional small stones; 0.24m thick | Upper fill of clay-lined pit [112] |
| 115 | Cut | Pit | 5 | Sub-circular; steep sides; concave base; 0.92m x 0.68m x 0.40m deep | Small pit |
| 116 | Deposit | Fill | 5 | Friable; mid brown; sandy silt; occasional small sub-rounded stones; occasional charcoal flecks; 0.15m thick | Upper fill of pit [115] |
| 117 | Deposit | Fill | 5 | Loose; dark yellow; silty sand; 0.05m thick | Secondary fill of pit [115] |
| 118 | Deposit | Fill | 5 | Friable; mid greyish brown with yellow mottling; sandy silt; occasional charcoal flecks, occasional small sub-angular stones; 0.26m thick | Primary fill of pit [115] |
| 119 | Deposit | Fill | 5 | Friable; mid greyish brown; sandy silt; occasional small sub-rounded and sub-angular stones; occasional charcoal flecks; 0.11m thick | Fill of pit [97] |
| 120 | Cut | Ditch | 3.5 | Linear; steep sides; concave base; 4m x 1.35m (excavated portion) x 1.13m deep; NW-SE orientated | Enclosure ditch |
| 121 | Deposit | Fill | 3.6 | Firm; pinkish brown with yellow laminations; clayey silt and sand; occasional large and small stones and occasional coal fragments; 0.27m thick | Primary fill of ditch [80] |
| 122 | Deposit | Fill | 4 | Loose; mid brown; silty sand; frequent small and large stones *c.* 10% fire-cracked, occasional flecks of charcoal; 0.18m thick | Secondary fill of enclosure ditch [80] |
| 123 | Deposit | Fill | 4 | Loose; mid brown; silty sand; frequent small stones, occasional large stones, occasional flecks of charcoal; 0.45m thick | Fill of enclosure ditch [80] |
| 124 | Deposit | Fill | 4 | Loose; mid brown; silty sand; frequent small stones, occasional large stones, occasional fire-cracked stones, occasional flecks of charcoal; 0.27m thick | Fill of enclosure ditch [80] |
| 125 | Deposit | Fill | 3.1 | Stiff; mid reddish pink; sandy clay; frequent coal fragments, occasional charcoal flecks; 0.15m thick | Fill of enclosure ditch [103] ?clay lining |
| 126 | Cut | Ditch | 3.2 | Linear with slightly squared terminus at south end; steep sides with a step in the eastern side leading to a very steep sided slot; concave base; 4.40m x 2.70m x 1.20m deep; NW-SE orientation | Enclosure ditch |
| 127 | Deposit | Fill | 3.2 | Soft; dark greyish brown; sandy silt; frequent coal flecks, occasional sub-angular stones; 0.15m thick | Upper fill of enclosure ditch [126] |
| 128 | Deposit | Fill | 3.2 | Soft; dark brownish grey; sandy silt and charcoal; occasional sub-angular and sub-rounded burnt stones, occasional clay mottling; 0.37m thick | Fill of enclosure ditch |
| 129 | Deposit | Fill | 4 | Loose; mid greyish brown; clayey silty sand; frequent charcoal flecks, occasional small stones; 0.11m thick | Fill of enclosure ditch [80] |
| 130 | Deposit | Fill | 4 | Friable; mid brown; sandy silt; occasional coal, gravel and stones; 0.30m thick | Upper fill of enclosure ditch [80] |
| 131 | Deposit | Fill | 4 | Friable; dark greyish brown; sandy silt; occasional gravel and stone, some burnt, occasional dump of limpet and periwinkle shell, area of brown staining along eastern edge; 1.11m thick | Secondary fill of enclosure ditch [80] |
| 132 | Deposit | Fill | 3.2 | Soft; mid greyish brown; sandy silt with light pink clay mottling; frequent sub-rounded stones, occasional charcoal flecks; 0.30m thick | Fill of enclosure ditch [126] |
| 133 | Deposit | Fill | 3.5 | Friable; brownish grey; clayey sandy silt; occasional small sub-rounded and sub-angular stones; 0.40m thick | Fill of enclosure ditch [257] |
| 134 | Deposit | Fill | 4 | Friable; mid greyish brown; clayey sandy silt and limpet shell; 0.20m thick | Fill of enclosure ditch [80] |
| 135 | Deposit | Fill | 5 | Soft; mid greyish brown; sand; occasional small sub-rounded stones; 0.06m thick | Fill of possible posthole [136] |
| 136 | Cut | Pit | 5 | Sub-circular; gradual sides; concave base; 0.44m x 0.30m x 0.06m deep | ?posthole |
| 137 | Deposit | Fill | 5 | Soft; mid greyish brown; sand; occasional small and medium sub-rounded stones; 0.15m thick | Fill of [139] |
| 138 | Deposit | Fill | 5 | Soft; mid greyish brown; sand; frequent charcoal flecks; 0.08m thick | Primary fill of [139] |
| 139 | Cut | Pit | 5 | Sub-circular; near vertical sides; concave to flat base; 0.42 diameter x 0.23m deep | ?posthole |
| 140 | Cut | Gully | 3.6 | Linear, rounded terminus at either end; moderately steep sides becoming steeper towards the base; concave base; 12.70m x 1.0m x 0.45m deep; NW-SE orientation | Gully/ shallow ditch |
| 141 | Deposit | Fill | 3.6 | Compact; mid greyish brown; sand; occasional small rounded stones, occasional charcoal flecks; 0.30m thick | Fill of [140] at northern terminus |
| 142 | Deposit | Fill | 3.2 | Firm; mid reddish pink; sandy clay; frequent coal fragments, moderate sub-rounded stones, moderate charcoal flecks; 0.15m thick | Fill of enclosure ditch [126] ?clay lining |
| 143 | Deposit | Fill | 3.2 | Firm; mid reddish pink with light greyish brown mottling; sandy silty clay; frequent sub-rounded and sub-angular stones, moderate coal fragments; 0.25m thick | Fill of enclosure ditch [126] |
| 144 | Deposit | Fill | 6.2 | Firm; mid greyish brown; sand; occasional small sub-rounded stones, occasional large sub-angular stones; 0.24m thick | Fill of pit [145] |
| 145 | Cut | Pit | 6.2 | Irregular shaped in plan; moderately steep sides; concave base; 1.42m x 0.76m x 0.24m deep | Pit |
| 146 | Deposit | Fill | 3.5 | Firm; mid to light pinkish brown; clayey silt with sandy laminations; occasional fragments of coal, occasional small sub-angular stones; 0.26m thick | Primary fill of enclosure ditch [120] |
| 147 | Deposit | Fill | 3.5 | Variable compaction; mid greyish brown; silty sand; frequent small sub-angular stones, occasional fire cracked stones, occasional large angular stones | Upper fill of enclosure ditch [120] |
| 148 | Deposit | Fill | 3.2 | Soft; light brownish grey; sandy silt; moderate charcoal flecks, occasional sub-rounded stones, occasional coal fragments; 0.15m thick | Primary fill of enclosure ditch [126] |
| 149 | Deposit | Fill | 3.6 | Firm; mid brown; silty sand; frequent small to medium sub-rounded stones; 0.08m thick | Primary fill of enclosure ditch [80] |
| 150 | Cut | ?Ditch | 3.5 | Linear with rounded terminus at southern end; steep sides; concave base; 0.38m x 0.25m x 0.20m deep; NW-SE orientation; northern extent completely truncated | ?ditch or gully |
| 151 | Deposit | Fill | 3.5 | Firm; mid to light pinkish brown with yellow laminations; clayey sand with sand laminations; occasional small stones; 0.20m thick | Fill of [150] |

| Context | Type | Type | Phase | Description | Interpretation |
|---|---|---|---|---|---|
| 152 | Deposit | Fill | 4 | Friable; mid brown; silty sand; occasional small sub-rounded and sub-angular stones, occasional charcoal flecks; 0.28m thick | Fill of enclosure ditch [80] |
| 153 | Deposit | Fill | 4 | Friable; mid greyish brown; silty sand; occasional small stones and gravel; 0.40m thick | Fill of enclosure ditch [80] |
| 154 | Deposit | Fill | 3.6 | Friable; mid orange greyish brown; silty sand; frequent flecks of coal, occasional small sub-rounded stones; 0.26m thick | Primary fill of enclosure ditch [80] |
| 155 | Deposit | Fill | 3.6 | Compact; mid greyish brown; sand; frequent small to medium rounded stones; moderate charcoal flecks; 0.45m thick | Fill of ditch [140] at southern terminus |
| 156 | Cut | Pit | 5 | Sub-circular; steep sides; concave base; 0.90m x 0.60m x 0.30m deep | Small pit/ posthole |
| 157 | Deposit | Fill | 5 | Compact; mid greyish brown; stony sand; moderate charcoal flecks; 0.30m thick | Fill of [156] ?packing stones |
| 158 | Deposit | Fill | 3.2 | Loose; light brownish yellow; fine and coarse sand; occasional coal fragments; 0.13m thick | Fill of enclosure ditch [126] |
| 159 | Deposit | Fill | 3.2 | Soft; dark greyish brown; silty sand; occasional small stones; 0.06m thick | Fill of enclosure ditch [126] |
| 160 | Deposit | Fill | 3.2 | Loose; light orange brown; silty sand; occasional small pebbles; 0.12m thick | Fill of enclosure ditch [126] |
| 161 | Cut | Gully | 2 | Linear, rounded terminus at either end; moderately steep sides; concave base; 3.40m x 0.90m x 0.39m deep; NE-SE orientation | Gully |
| 162 | Deposit | Fill | 2 | Soft; mid brown with lighter laminations; sandy silt; frequent small stones, frequent flecks of charcoal; 0.39m thick | Fill of gully [161] |
| 163 | Deposit | Layer | 7 | Sandstone rubble; rounded; unworked; average size 0.30m x 0.30m x 0.10m; covered an area 8.0m x 3.80m x 0.30m thick | Irregular stones, field clearance |
| 164 | Cut | Pit | 5 | Sub-circular; steep sides; flat base; 0.75m diameter x 0.24m deep | Clay-lined pit |
| 165 | Deposit | Fill | 5 | Firm; light pinkish grey; clay; occasional small stones; 0.08m thick | Clay lining of pit [164] |
| 166 | Deposit | Fill | 5 | Friable; mid to light grey with orange and green mottling; clayey silt; occasional charcoal flecks; 0.20m thick | Fill of clay-lined pit [164] |
| 167 | Deposit | Layer | 5 | Loose; mid reddish brown; silty sand; occasional charcoal flecks, occasional small stones; 12.20m x 9.0m x 0.11m thick | ?accumulation layer |
| 168 | Cut | Ditch | 3.6 | Linear with rounded terminus; moderately steep sides at the top becoming steep towards the base; flat base; 10.40m x 4.40m x 1.19m deep; NW-SE orientation | Enclosure ditch |
| 169 | Cut | Gully | 2 | Linear; steep sides; concave base; 1.10m x 0.25m x 0.21m deep; NW-SE orientation | Gully, same as [171]? |
| 170 | Deposit | Fill | 2 | Firm; mid brown; sandy silt; frequent small stones; occasional charcoal flecks; 0.21m thick | Fill of gully [169] |
| 171 | Cut | Gully | 2 | Linear; steep sides; flat base; 0.80m x 0.18m x 0.24m deep; NW-SE orientation | Gully, same as [169]? |
| 172 | Deposit | Fill | 2 | Firm; mid brown; sandy silt; frequent small stones, occasional charcoal flecks; 0.26m thick | Fill of gully [171] |
| 173 | Deposit | Fill | 3.1 | Loose; light yellowish brown and mid greyish brown; silty sand and gravel; frequent coal fragments, occasional large sub-rounded cobbles, occasional charcoal flecks; 0.82m thick | Primary fill of enclosure ditch [103] |
| 174 | Deposit | Fill | 3.6 | Loose; light orange brown; silty sand; 0.09m thick | Primary fill of enclosure ditch [168] |
| 175 | Deposit | Fill | 3.6 | Loose; light pinkish brown; silty sand; 0.10m thick | Fill of enclosure ditch [168] |
| 176 | Deposit | Fill | 3.6 | Loose; light greyish brown; silty sand; 0.09m thick | Fill of enclosure ditch [168] |
| 177 | Deposit | Fill | 4 | Friable; mid pinkish brown; clayey silty sand; moderate medium sized stones, occasional charcoal flecks; 0.14m thick | Fill of enclosure ditch [168] |
| 178 | Deposit | Fill | 4 | Friable; mid pinkish brown; clayey sand; occasional medium to large stones; 0.19m thick | Fill of enclosure ditch [168] |
| 179 | Deposit | Fill | 4 | Friable; light pinkish brown; clayey sand; frequent medium to large stones; 0.35m thick | Fill of enclosure ditch [168] |
| 180 | Deposit | Fill | 4 | Compact; light greyish brown; silty clayey sand; occasional medium stones; 0.32m thick | Fill of enclosure ditch [168] |
| 181 | Cut | Gully | 5 | Linear; moderately steep sides; flat base; 3.30m x 0.34m x 0.08m deep; NE-SW orientation | Gully |
| 182 | Deposit | Fill | 5 | Friable; mid to dark reddish brown; sandy silt; frequent coal fragments, occasional large stones, occasional charcoal flecks; 0.08m thick | Fill of gully [181] |
| 183 | Cut | Gully | 5 | Linear; irregular sides; irregular base; 4.0m x 0.50m x 0.12m deep; E-W orientation, turning NW-SE at eastern end | Gully |
| 184 | Deposit | Fill | 5 | Friable; mid to dark reddish brown; sandy silt; occasional coal fragments, occasional charcoal flecks | Fill of gully [183] |
| 185 | Cut | Pit | 4 | Sub-rectangular; gradual sides; flat base sloping towards the south; 2.80m x 1.30m x 0.07m deep; E-W orientation | Shallow rectangular pit |
| 186 | Deposit | Fill | 4 | Compact; dark bluish grey; sandy silt; occasional small sub-rounded stones, occasional charcoal flecks; 0.07m thick | Fill of pit [185] |
| 187 | Deposit | Layer | 4 | Loose; orange brown; silty sand and shell (limpet and periwinkle); frequent coarse gravel, occasional small stones, occasional charcoal flecks; 1.74m x 0.90m x 0.08m thick | Shell midden |
| 188 | Deposit | Fill | 3.5 | Friable; mid brown; sandy silt; frequent limpet and periwinkle shell; 0.50m thick | Upper fill of enclosure ditch [196] |
| 189 | Cut | Pit | 4 | Irregular in plan; moderately steep sides; largely flat base; 7.20m x 5.0m x 0.26m deep | Construction cut for stone surface [64] |
| 190 | Deposit | Fill | 4 | Loose; mid brown; silty sand; frequent small sub-angular stones, occasional charcoal flecks; 0.26m thick | Primary fill of construction cut [189], possible bedding layer for stone surface [64] |
| 191 | Masonry | Leveling | 4 | Limestone, sandstone and granite blocks; average size 100mm x 100mm x 100mm; unfinished blocks; covered an area 7.20m x 5.0m | ?leveling layer for stone surface [64] |
| 192 | Cut | Gully | 4 | Curvilinear; moderately steep sides; concave base; 4.90m x 0.70m x 0.16m deep; E-W orientation | Shallow gully |
| 193 | Deposit | Fill | 4 | Compact; dark greyish brown; silty sand; occasional charcoal flecks, occasional small rounded stones; 0.16m thick | Fill of gully [192] |
| 194 | Deposit | Fill | 4 | Compact; dark greyish brown; silty sand; occasional small sub-angular and sub-rounded stones, occasional charcoal flecks; 0.09m thick | Fill of gully [192] |
| 195 | Deposit | Fill | 3.5 | Friable; mid pinkish brown; sandy silt and gravel; occasional stones and coal fragments; 0.41m thick | Primary fill of enclosure ditch [196] |
| 196 | Cut | Ditch | 3.5 | Linear with rounded terminus to the south; steep sided with several slight steps; flat base; 6.0m x 2.50m x 1.40m deep; NW-SE orientated | Enclosure ditch |
| 197 | Cut | Pit | 4 | Sub-circular in plan; moderately steep sides; concave base; 1.0m x 0.50m x 0.30m deep | ?pit |
| 198 | Deposit | Fill | 4 | Firm; pinkish brown with patches of light pink; sandy silt with clay patches; occasional small stones, occasional coal fragments; 0.27m thick | Primary fill of [197] |
| 199 | Deposit | Fill | 4 | Soft; mid brown; silty sand; frequent stones; 0.07m thick | Secondary fill of [197] |
| 200 | Cut | ?Pit | 4 | One curved edge visible in plan; steep sides; base not visible; 2.20m x 2.10m x 0.35m deep | ?pit |
| 201 | Deposit | Fill | 4 | Soft; mid brown; sandy silt; occasional small stones, occasional lenses of gravel; 0.35m thick | Fill of [200] |

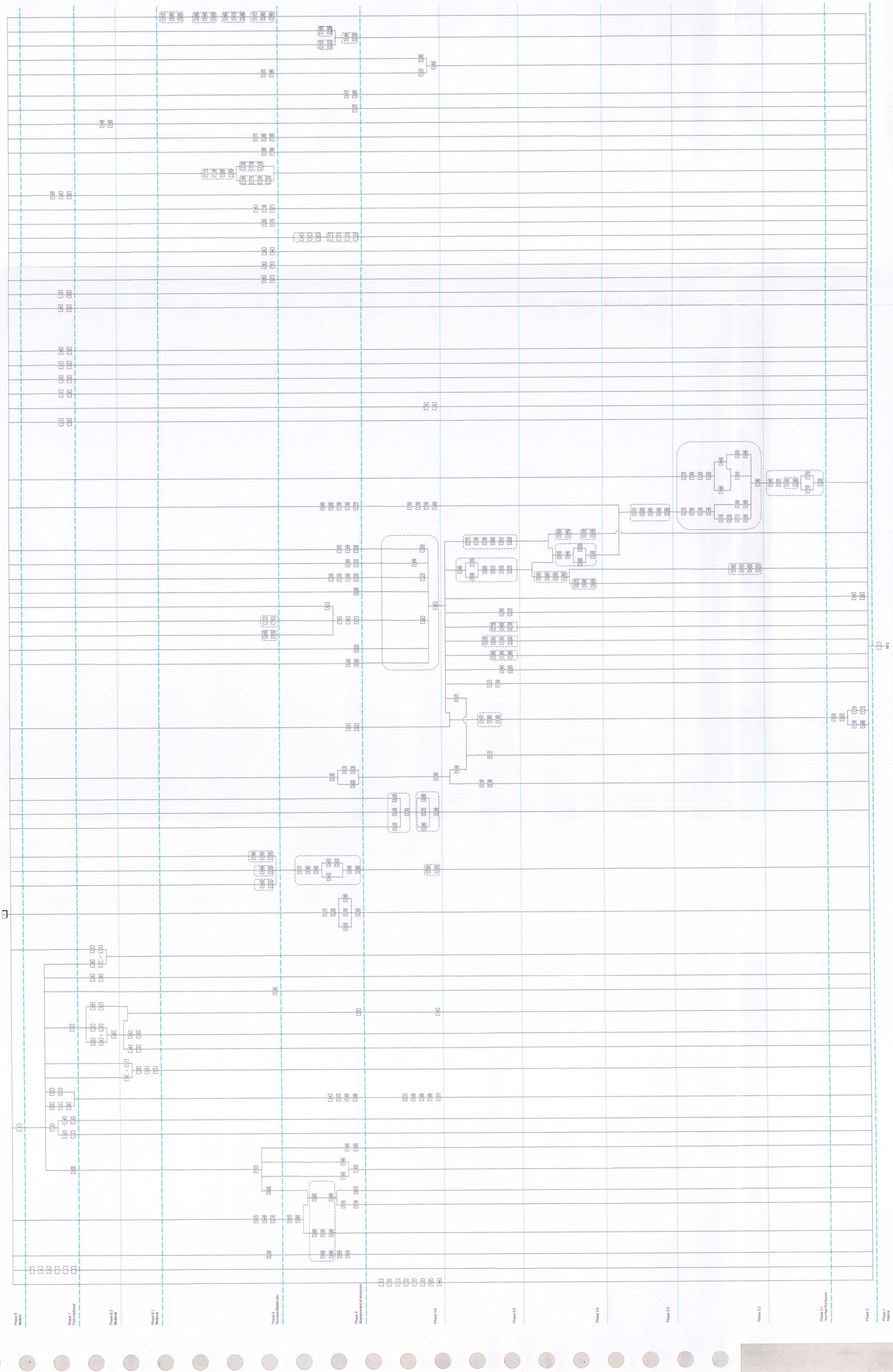
| Context | Type | Type | Phase | Description | Interpretation |
|---|---|---|---|---|---|
| 202 | Cut | Ditch | 3.5 | Linear; steep sides, slightly stepped; concave base; 5.50m x 1.40m x 1.0m deep; NW-SE orientation | Enclosure ditch |
| 203 | Deposit | Fill | 3.5 | Friable; mid brown; sandy silt; occasional small stones and gravel, occasional charcoal flecks; 0.20m thick | Upper fill of ditch [202] |
| 204 | Deposit | Layer | 5 | Compact; mid yellowish brown; silty sand; occasional small stones, occasional charcoal flecks; 6.0m x 4.0m x 0.23m thick | Accumulation layer |
| 205 | Deposit | Fill | 3.5 | Loose; light brown with reddish brown lenses; silty sand with sandy silt lenses; occasional gravel, occasional charcoal flecks; 0.25m thick | Fill of enclosure ditch [202] |
| 206 | Cut | Pit | 4 | Sub-circular; steep sides; flat base; 0.49m x 0.36m x 0.26m deep | ?posthole |
| 207 | Deposit | Fill | 4 | Loose; light greyish brown; silty sand; occasional small to medium angular stones, occasional charcoal flecks; 0.26m thick | Fill of [206] |
| 208 | Deposit | Fill | 4 | Compact; light greyish brown; clayey silty sand; frequent small stones; 0.26m thick | Upper fill of enclosure ditch [168] |
| 209 | Cut | Ditch | 3.3 | Linear with rounded terminus at southern end; steep sides; variable base, flat at terminus, concave elsewhere; 6.70m x 1.20m x 0.60m deep; N-S orientation | Ditch at enclosure entrance |
| 210 | Deposit | Fill | 3.2 | Soft; mid orange pink; silty clayey sand; frequent charcoal flecks; 0.11m thick | Primary fill of enclosure ditch [126] |
| 211 | Deposit | Fill | 3.2 | Hard; light brownish pink; clay; occasional small stones; 0.24m thick | Fill of enclosure ditch [126], ?clay lining |
| 212 | Deposit | Fill | 3.2 | Soft; light brownish pink; silty clayey sand; occasional small to medium stones; 0.09m thick | Fill of enclosure ditch [126] |
| 213 | Deposit | Fill | 3.2 | Stiff; light greyish pink; sandy clay; moderate medium stones; 0.23m thick | Fill of enclosure ditch [126] |
| 214 | Deposit | Fill | 3.2 | Compact; mid brownish grey; clayey silty sand; occasional small stones; 0.14m thick | Fill of enclosure ditch [126] |
| 215 | Deposit | Fill | 3.2 | Compact; light greyish brown; clayey silty sand; occasional small to medium stones, occasional charcoal flecks; 0.18m thick | Fill of enclosure ditch [126] |
| 216 | Deposit | Fill | 3.2 | Loose; dark greyish brown; silty sand; occasional medium stones, occasional charcoal flecks; 0.25m thick | Fill of enclosure ditch [126] |
| 217 | Deposit | Fill | 3.2 | Loose; mid greyish brown; silty sand; occasional small stones; 0.20m thick | Upper fill of enclosure ditch [126] |
| 218 | Deposit | Fill | 3.2 | Hard; light greyish pink; clay; 0.05m thick | Primary fill of enclosure ditch [126] |
| 219 | Deposit | Fill | 3.2 | Hard; light brownish pink; clay; 0.15m thick | Secondary fill of enclosure ditch [126] ?clay lining |
| 220 | Deposit | Fill | 3.5 | Friable; mid reddish brown; sandy silt; occasional lenses of brown sands and silty sands; 0.10m thick | Primary fill of ditch [202] |
| 221 | Deposit | Fill | 4 | Soft; dark greyish brown; humic silt; occasional small to medium sub-angular stones, occasional charcoal flecks; 0.12m thick | Upper fill of pit [224] |
| 222 | Deposit | Fill | 4 | Firm; mid brown; sandy silt; occasional small sub-angular stones, occasional charcoal flecks; 0.15m thick | Fill of pit [224] |
| 223 | Deposit | Fill | 4 | Firm; black; silt and charcoal; occasional small sub-angular stones; 0.04m thick | Primary fill of pit [224] |
| 224 | Cut | Pit | 4 | Sub-circular; gradual sides; concave base; 4.44m x 4.08m x 0.25m deep | Large shallow pit |
| 225 | Deposit | Layer | 5 | Soft; dark greyish brown; silty sand; occasional rounded ad fractured stones, occasional charcoal flecks; 3.0m x 3.0m x 0.30m thick | Accumulation layer |
| 226 | Deposit | Fill | 3.5 | Friable; mid brown; sandy silt; occasional gravel and small stones; 0.44m thick | Fill of gully [227] |
| 227 | Cut | Gully | 3.5 | Linear; steep sides; flat base; 3.40m x 0.65m x 0.44m; NW-SE orientation | Gully |
| 228 | Masonry | Rubble | 4 | Sandstone and granite blocks; sorted, average size 120mm x 100mm x 80mm; covered an area 3.44m x 2.98m x 0.25m thick | Stone rubble within pit [224] |
| 229 | Cut | Pit | 4 | Sub-circular; gradual sides; concave base; 0.50m x 0.42m x 0.04m deep | Shallow pit |
| 230 | Deposit | Fill | 4 | Loose; dark brownish grey; silty sand; occasional small rounded stones; 0.04m thick | Fill of pit [229] |
| 231 | Cut | Pit | 4 | Sub-rectangular; gradual sides; flat base; 1.50m x 0.54m x 0.10m; NE-SW orientation | Shallow rectangular pit |
| 232 | Deposit | Fill | 4 | Loose; light greyish brown; sand; occasional small to medium angular stones, occasional charcoal flecks; 0.10m thick | Fill of pit [231] |
| 233 | Cut | Pit | 4 | Sub-rectangular; gradual sides; concave base; 1.40m x 0.60m x 0.02m deep; NW-SE orientation | Shallow rectangular pit |
| 234 | Deposit | Fill | 4 | Loose; dark yellowish brown; silty sand; occasional small sub-rounded stones; 0.02m thick | Fill of pit [233] |
| 235 | Deposit | Layer | 5 | Soft; mid to dark brown; sandy silt; frequent small to medium sub-angular stones; 6.0m x 3.80m x 0.10m thick | Accumulation layer |
| 236 | Cut | Pit | 4 | Sub-circular; moderately steep sides; flat base; 5.80m x 4.0m x 0.40m deep | Stone-filled pit |
| 237 | Deposit | Fill | 4 | Friable; dark brown with black patches; clayey silt; frequent charcoal flecks, occasional small and large stones; 0.40m thick | Upper fill of pit [236] |
| 238 | Deposit | Fill | 4 | Friable; dark brown with black mottling; clayey silt; frequent shell fragments, frequent charcoal flecks; 0.10m thick | Fill of pit [236] |
| 239 | Void | Void | Void | Void | Void |
| 240 | Deposit | Fill | 4 | Friable; mid yellowish brown; sandy silt; occasional shell fragments, occasional charcoal flecks, occasional gravel and stones; 0.25m thick | Fill of pit [236] |
| 241 | Deposit | Fill | 4 | Friable; mid yellowish brown; sandy silt; frequent gravel, occasional moderate stones; 0.30m thick | Fill of pit [236] |
| 242 | Deposit | Fill | 4 | Firm; mid brownish grey with occasional orange mottling; clay; occasional small rounded stones; 0.08m thick | Fill of pit [236] |
| 243 | Masonry | Collapse | 4 | Sandstone and limestone blocks; sorted by size, average size 150mm x 150mm x 150mm, with two much larger stones 400mm x 400mm x 400mm | Stone fill of pit [236] ?collapsed structure/foundation |
| 244 | Deposit | Fill | 4 | Loose; mid yellowish brown; sandy silt; 0.20m thick | Primary fill of pit [236] |
| 245 | Cut | Gully | 3.5 | Curvilinear; gradual sides; concave base; 3.80m x 0.52m x 0.24m deep; NW-SE orientation | Gully |
| 246 | Deposit | Fill | 3.5 | Friable; mid brownish grey; sandy silt; occasional flecks of coal; 0.24m thick | Fill of gully [245] |
| 247 | Deposit | Layer | 5 | Loose; mid to dark brown; sandy silt; frequent gravel; 19.05m x 5.20m x 0.20m thick | Accumulation layer |
| 248 | Deposit | Layer | 5 | Loose; mid to dark brown; sandy silt; frequent gravel, occasional stones; 19.20m x 5.80m x 0.32m thick | Accumulation layer |
| 249 | Deposit | Fill | 3.3 | Friable; dark yellowish brown; silty sand; occasional charcoal, occasional small stones; 0.11m thick | Fill of ditch [209] |
| 250 | Deposit | Fill | 3.3 | Soft; dark brown; clayey silty sand; occasional charcoal flecks, occasional small to medium stones; 0.07m thick | Fill of ditch [209] |
| 251 | Deposit | Fill | 3.3 | Compact; mid yellowish brown; silty sand; occasional medium to large stones; 0.20m thick | Upper fill of ditch [209] |
| 252 | Deposit | Fill | 4 | Friable; dark greyish brown; sandy silt; occasional gravel and small stones; 0.17m thick | Fill of enclosure ditch [80] |

| Context | Type | Type | Phase | Description | Interpretation |
|---|---|---|---|---|---|
| 253 | Cut | Pit | 5 | Sub-oval in plan; steep sides; flat base; 2.05m x 0.84m x 0.13m deep; NW-SE orientation | Oval pit |
| 254 | Deposit | Fill | 5 | Soft; mid brown; silty sand; moderate small stone fragments, occasional flecks of coal; 0.13m thick | Fill of pit [253] |
| 255 | Cut | Gully | 3.6 | Curvilinear; moderately steep sides; concave base; 2.10m x 0.36m x 0.15m deep; NE-SW orientation | Gully |
| 256 | Deposit | Fill | 3.6 | Friable; mid to dark greyish brown; clayey silt; occasional sub-angular and sub-rounded stones; 0.15m thick | Fill of gully [255] |
| 257 | Cut | Ditch | 3.5 | Linear; moderately steep sides; concave base; 7.64m x 1.86m x 1.06m deep; N-S orientation | Enclosure ditch |
| 258 | Deposit | Fill | 3.5 | Friable; mid brown; silty sand; occasional small sub-rounded and sub-angular stones, occasional medium sub-angular stones, occasional flecks of coal; 0.28m thick | Fill of enclosure ditch [257] |
| 259 | Deposit | Fill | 3.5 | Soft; mid brown; silty sand; occasional sub-rounded stones; 0.40m thick | Fill of enclosure ditch [257] |
| 260 | Deposit | Fill | 3.5 | Soft; pinkish greyish brown; sandy silt; moderate flecks of charcoal, occasional small and medium sub-angular and sub-rounded stones; 0.16m thick | Fill of enclosure ditch [257] |
| 261 | Deposit | Fill | 3.5 | Soft; mid greyish brown; sandy silt; occasional small and medium sub-rounded and sub-angular stones, occasional gravel, occasional coal fragments; 0.20m thick | Fill of enclosure ditch [257] |
| 262 | Deposit | Fill | 3.5 | Friable; mid greyish brown; clayey silty sand; occasional small sub-rounded stones; 0.09m thick | Primary fill of enclosure ditch [257] |
| 263 | Cut | Gully | 4 | Curvilinear; steep, irregular sides; concave base, flat in places; 2.50m x 0.50m x 0.20m deep; NE-SW orientation | Gully/elongated pit |
| 264 | Deposit | Fill | 4 | Soft; mid yellowish brown; silty sand; frequent sub-rounded, irregular and fractured (possibly fire cracked) stone, frequent charcoal flecks; 0.20m thick | Fill of gully [263] |
| 265 | Cut | Pit | 5 | Sub-circular; steep sides; flat base; 0.94m x 0.80m x 0.28m deep | Clay-lined pit |
| 266 | Deposit | Fill | 5 | Firm; dark yellow with pinkish grey patches; clay; occasional small sub-rounded stones; 0.11m thick | Clay lining of pit [265] |
| 267 | Deposit | Fill | 5 | Friable; dark reddish brown; clayey silt; frequent charcoal flecks; 0.20m thick | Fill of clay-lined pit [265] |
| 268 | Cut | Gully | 4 | Curvilinear; steep sides; variable base, flat and concave; 2.50m x 1.0m x 0.10m deep; NW-SE orientation | Possible drainage gully in base of hollow, same as [298] and [338] |
| 269 | Deposit | Fill | 4 | Soft; mid yellowish brown; silty sand; occasional sub-rounded and fractured (possibly fire-cracked) stones, occasional charcoal flecks | Fill of gully [268] |
| 270 | Void | Void | Void | Void | Void |
| 271 | Void | Void | Void | Void | Void |
| 272 | Cut | Gully | 3.5 | Linear; steep sides; base slopes down towards the SW; 9.10m x 0.88m x 0.30m deep; NE-SW orientation | ?drainage gully discharging into enclosure ditch |
| 273 | Deposit | Fill | 3.5 | Firm; dark bluish brown; sandy silt; frequent large and moderate stones, moderate flecks of charcoal; 0.29m thick | Secondary fill of gully [272] |
| 274 | Deposit | Layer | 5 | Loose; mid to dark brown, merging to a light orange brown to the east; sandy silt; frequent small stones and manganese panning; 0.52m thick | Accumulation layer |
| 275 | Deposit | Fill | 4 | Friable; light greyish brown; silty sand and sandy silt; frequent Fe and Mg panning, occasional clayey lenses, occasional gravel and small stones; 1.40m thick | Upper fill of enclosure ditch [276] |
| 276 | Cut | Ditch | 3.6 | Linear; steep sides becoming very steep towards the base; flat base but at a series of differing levels; 3.0m wide, 7.30m long E-W, 5.0m long NE-SW; E-W orientated before returning at an acute angle to head NE-SW at the western end | ?stock control |
| 277 | Deposit | Fill | 3.5 | Soft; mid brown; silty sand; occasional sub-rounded and sub-angular stones, occasional flecks of coal; 0.24m thick | Fill of enclosure ditch [282] |
| 278 | Deposit | Fill | 3.5 | Soft; greyish brown; silty sand; occasional small stones; 0.31m thick | Fill of enclosure ditch [282] |
| 279 | Deposit | Fill | 3.5 | Firm; light yellow and light and mid brown; silty sand; occasional coal fragments; 0.13m thick | Fill of enclosure ditch [282] |
| 280 | Deposit | Fill | 3.5 | Soft; light yellow, mid brownish grey and black; sandy silt; frequent coal fragments; 0.19m thick | Fill of enclosure ditch [282] |
| 281 | Deposit | Fill | 3.5 | Friable; orange greyish yellow; silty sand; occasional flecks of coal, occasional small stones; 0.12m thick | Primary fill of enclosure ditch [282] |
| 282 | Cut | Ditch | 3.5 | Linear; steep sides; concave base; 5.30m x 2.05m x 0.96m deep; E-W orientation | ?stock control, contemporary with enclosure ditch [257] |
| 283 | Cut | Pit | 5 | Sub-circular; steep sides; concave; 0.80m x 0.60m x 0.22m deep | Clay-lined pit |
| 284 | Deposit | Fill | 5 | Firm; mid brownish grey; clay; 0.08m thick | Clay lining of pit [283] |
| 285 | Deposit | Fill | 5 | Friable; dark reddish brown; clayey silt; frequent charcoal flecks, occasional clay fragments, occasional small sub-rounded and sub-angular stones; 0.22m thick | Fill of clay-lined pit [283] |
| 286 | Cut | Pit | 5 | Sub-circular; moderately steep sides; flat base; 0.90m diameter x 0.16m deep | Clay-lined pit |
| 287 | Deposit | Fill | 5 | Firm; dark orange and brownish grey, greyish pink and yellowish mottling; clay; occasional small sub-angular and sub-rounded stones; 0.10m thick | Clay lining of pit [286] |
| 288 | Deposit | Fill | 5 | Friable; dark reddish brown; clayey silt; frequent charcoal flecks; 0.13m thick | Fill of clay-lined pit [286] |
| 289 | Cut | Pit | 5 | Sub-circular; moderately steep sides; flat base; 0.64m x 0.52m x 0.13m deep | Clay-lined pit |
| 290 | Deposit | Fill | 5 | Firm; light greyish pink; clay; 0.07m thick | Clay lining of pit [289] |
| 291 | Deposit | Fill | 5 | Friable; mid yellowish brown; clayey silt; occasional charcoal flecks; occasional small sub rounded and sub angular stones; 0.13m thick | Fill of clay-lined pit [289] |
| 292 | Deposit | Fill | 4 | Soft; black; silt; occasional small sub angular stones, occasional charcoal flecks; 0.08m thick | Fill of pit [224] |
| 293 | Deposit | Fill | 3.4 | Friable; mid pinkish greyish brown; sandy silt; occasional small sub-rounded and sub-angular stones, occasional charcoal flecks; 0.24m thick | Fill of [294] |
| 294 | Cut | Pit | 3.4 | Sub-oval; moderately steep sides; concave base; 0.69m x 0.46m x 0.24m deep; NE-SW orientation | ?posthole/ gully |
| 295 | Deposit | Fill | 3.5 | Loose; light orange brown; sandy gravel; frequent coal fragments; 0.15m thick | Primary fill of gully [272] |
| 296 | Cut | Pit | 4 | Sub-oval; moderately steep sides; flat base; 3.46m x 1.72m x 0.95m; NE-SW orientation | Pit |
| 297 | Deposit | Fill | 4 | Soft; mid orange brown with pinkish brown and brownish yellow mottling; silty sand; frequent small sub-rounded and sub-angular stones, occasional large cobbles; 0.95m thick | Fill of pit [296] |
| 298 | Cut | Gully | 4 | Curvilinear; moderately steep sides; concave base; 9.22m N-S x 13.22m E-W x 0.40m deep | ?drainage gully at base of hollow |
| 299 | Deposit | Fill | 4 | Loose; dark brown; sandy silt; occasional small pebbles; 0.05m thick | Fill of gully [338] |
| 300 | Deposit | Fill | 4 | Loose; mid brown; sandy silt and pea grit; occasional medium sized stones; 0.33m thick | Fill of [298] |

| Context | Type | Type | Phase | Description | Interpretation |
|---|---|---|---|---|---|
| 301 | Deposit | Layer | 4 | Soft; mid orange brown; sandy silt; frequent sub-rounded and sub-angular sandstone cobbles, frequent charcoal flecks; 3.40m N-S x 5.80m E-W x 0.15m thick | Accumulation layer |
| 302 | Deposit | Fill | 4 | Soft; grey; sandy clay and clayey sand; frequent silty patches, frequent Fe and Mn panning, moderate gravel and small stones; 0.50m thick | Primary fill of enclosure ditch [276] |
| 303 | Deposit | Fill | 3.4 | Soft; mid greyish brown; sandy silt; moderate small sub-rounded and sub-angular stones, moderate coal fragments; 0.42m thick | Upper fill of ditch [306] |
| 304 | Deposit | Fill | 3.4 | Loose; mid brownish grey; silty sand; frequent coal flecks, frequent small and medium sub-angular stones; 0.44m thick | Fill of ditch [306] |
| 305 | Deposit | Fill | 3.4 | Friable; mid brownish grey; silty sand and silt; frequent coal flecks, frequent small sub rounded and sub-angular stones, occasional medium sub-angular stones; 0.24m thick | Primary fill of ditch [306] |
| 306 | Cut | Ditch | 3.4 | Linear; rounded terminus at eastern end; steep sides; concave base; 3.46m x 2.90m x 0.60m deep; NE-SW orientation | Ditch at enclosure entrance |
| 307 | Deposit | Fill | 3.4 | Friable; mid greyish brown; clayey silt; moderate small rounded and sub-angular stones, moderate flecks of coal; 0.25m thick | Upper fill of [309] |
| 308 | Deposit | Fill | 3.4 | Friable; pinkish brown; clayey silt; occasional coal flecks, occasional small sub-rounded stones; 0.12m thick | Primary fill of [309] |
| 309 | Cut | ?Pit | 3.4 | Linear/sub-rectangular; near vertical sides; flat base; 1.72m x 0.65m x 0.49m deep; NW-SE orientation | Elongated pit/ ditch segment |
| 310 | Deposit | Fill | 3.5 | Firm; mid grey; silty sand; occasional small and medium sub-angular stones; 0.59m thick | Fill of gully [311] |
| 311 | Cut | Gully | 3.5 | Linear; moderately steep sides; concave base; 9.0m x 1.22m x 0.59m deep; NE-SW orientation | Gully/ditch |
| 312 | Deposit | Fill | 4 | Friable; dark yellowish brown; silty sand; frequent Fe and Mn panning, moderate gravel; 0.25m thick | Fill of enclosure ditch [276] |
| 313 | Deposit | Fill | 4 | Friable; mid greyish brown; silty sand; moderate gravel and small stones; moderate Fe and Mn panning; 0.40m thick | Primary fill of enclosure ditch [276] |
| 314 | Cut | Gully | 4 | Linear with rounded terminus at either end; moderately steep sides; concave base; 4.90m x 0.58m x 0.19m deep; NE-SW orientation | ?drainage gully/ partition |
| 315 | Deposit | Fill | 4 | Friable; mid to dark orange brown; sandy silt with pea grit; frequent sub-angular sandstone cobbles; 0.19m thick | Fill of gully [314] |
| 316 | Void | Void | Void | Void | Void |
| 317 | Void | Void | Void | Void | Void |
| 318 | Deposit | Fill | 3.5 | Firm; mid grey; silty sand; occasional small and medium sub-angular stones; 0.42m thick | Fill of gully [319] |
| 319 | Cut | Gully | 3.5 | Linear; moderately steep sides; concave base; 1.34m x 0.46m x 0.42m deep; NE-SW orientation | Short gully/ elongated pit |
| 320 | Cut | Ditch | 3.4 | Linear with rounded terminus at northern end; moderately steep sides becoming steeper towards the base; segmented base with two distinct deeper slots *c.* 1.40m apart and 0.50m deep; 5.60m x 2.10m x 1.05m; NW-SE orientation | Enclosure ditch |
| 321 | Cut | Ditch | 7 | Linear; steep sides; flat base; 2.65m x 0.74m x 0.30m deep; E-W orientation | Robber trench |
| 322 | Deposit | Fill | 3.5 | Friable; light greyish brown; sandy silt; frequent Fe panning, occasional gravel and small stones; 0.28m thick | Fill of gully [325] |
| 323 | Deposit | Fill | 3.5 | Friable; mid brownish grey; silty sand; occasional gravel and small stones; 0.22m thick | Fill of gully [325] |
| 324 | Deposit | Fill | 3.5 | Friable; mid brownish grey; sandy silt; occasional Fe panning; 0.26m thick | Fill of gully [325] |
| 325 | Cut | Gully | 3.5 | Linear; moderately steep sides; concave base; 20.0m x 0.70m x 0.26m deep; E-W orientation | ?drainage gully |
| 326 | Deposit | Fill | 3.5 | Friable; mid brown; sandy silt; frequent Fe panning, occasional small stones; 0.20m thick | Fill of gully [329] |
| 327 | Deposit | Fill | 3.5 | Friable; mid brownish grey; silty sand and Fe pan; occasional gravel and small stones; 0.20m thick | Fill of gully [329] |
| 328 | Deposit | Fill | 3.5 | Friable; mid brownish grey; sandy silt; moderate Fe panning; 0.23m thick | Fill of gully [329] |
| 329 | Cut | Gully | 3.5 | Linear; moderately steep sides; flat base; 18.0m x 0.60m x 0.23m deep; E-W orientation | ?drainage gully |
| 330 | Deposit | Fill | 3.3 | Stiff; dark brownish pink; clay; frequent sandy lenses; 0.25m thick | Primary fill of ditch [209], ?clay lining |
| 331 | Cut | Ditch | 3.2 | Linear, squared terminus at northern end; steep sides; flat base; 6.85m x 1.20m x 0.71m deep; NW-SE orientation | Enclosure ditch |
| 332 | Deposit | Fill | 3.4 | Loose; light grey and light brown; sand; frequent charcoal and coal flecks; 0.26m thick | Fill of ditch [333] |
| 333 | Cut | Ditch | 3.4 | Linear, rounded terminus at southern end; steep sides; flat base; 1.85m x 0.40m x 0.26m deep | Ditch segment continuation of [320] |
| 334 | Deposit | Fill | 4 | Friable; light reddish brown; slightly clayey silty sand; occasional gravel and small stones; 0.30m thick | Primary fill of enclosure ditch [80] |
| 335 | Deposit | Fill | 4 | Friable; light reddish brown; sandy silt; occasional gravel and small stones; 0.85m thick | Upper fill of enclosure ditch [80] |
| 336 | Deposit | Fill | 4 | Friable; light greyish brown; sandy silt; moderate Fe and Mn panning; occasional small stones and gravel; 0.10m thick | Fill of enclosure ditch [80] |
| 337 | Deposit | Fill | 3.5 | Friable; light greyish brown; sandy silt; moderate Fe and Mn panning, occasional gravel and stones; 0.35m thick | Fill of gully [311] |
| 338 | Cut | Gully | 4 | Curvilinear; moderately steep sides; concave base; 5.50m N-S and 4.20m E-W x 1.72m wide x 0.73m deep | ?drainage gully at base of hollow, same as [298] and [268] |
| 339 | Deposit | Fill | 4 | Soft; light pinkish brown; silty sand; occasional sub-rounded pebbles; 0.63m thick | Fill of gully [338] |
| 340 | Deposit | Fill | 3.2 | Friable; light pinkish brown; sandy silt; occasional sub rounded and sub-angular stones; 0.10m thick | Upper fill of enclosure ditch [331] |
| 341 | Deposit | Fill | 3.2 | Friable; mid pinkish brown; sandy silt; occasional small sub-rounded and sub-angular stones, occasional possibly fire-cracked stones; 0.20m thick | Fill of enclosure ditch [331] |
| 342 | Deposit | Fill | 3.2 | Friable; mid brownish grey; silty sand; occasional small sub-rounded and sub-angular stones, occasional coal fragments; 0.05m thick | Primary fill of enclosure ditch [331] |
| 343 | Deposit | Fill | 3.4 | Compact; mid brown; clayey sand; occasional charcoal flecks, occasional sandstone fragments; 0.43m thick | Fill of enclosure ditch [320] |
| 344 | Deposit | Fill | 3.4 | Firm; laminated light yellowish brown and light pink; silty clay and sand lenses; frequent coal and charcoal flecks, occasional Fe panning; 0.26m thick | Secondary fill of enclosure ditch [320] |
| 345 | Deposit | Fill | 3.4 | Loose; mixed light grey, light yellow, pink, black and mid brown; sand and sandy clay lenses; occasional coal and charcoal flecks; 0.42m thick | Primary fill of enclosure ditch [320], contained only within slot in terminus of the ditch |
| 346 | Deposit | Fill | 3.4 | Loose; mixed light grey, light yellow and light brown; sand and sandy clay lenses; occasional coal and charcoal flecks; 0.20m thick | Primary fill of enclosure ditch [320], contained only within slot in base of the ditch, south of the terminus |

# APPENDIX 2

## STRATIGRAPHIC MATRIX


Phase 8
Modern
Phase 7
Post-medieval
Phase 6.2
Medieval
Phase 6.1
Medieval
Phase 5
Romano-British pits
Phase 4
Abandonment of enclosure
Phase 3.6
Phase 3.5
Phase 3.4
Phase 3.3
Phase 3.2
Phase 3.1
Post-Roman Enclosure
Phase 2
Phase 1
Natural
N

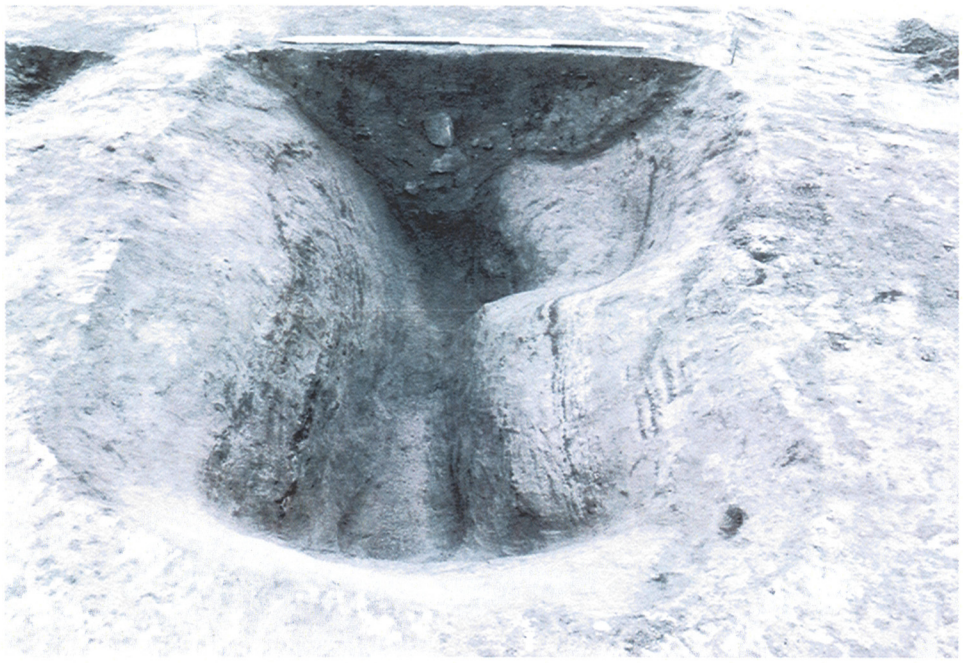


Plate 1. Enclosure ditch terminals [103] and [126], looking north-west *(2m scale).*

Plate 2. Enclosure ditch terminal [168] and enclosure ditches [126] and [209], looking north-west *(2m scale).*

Plate 3. Junction of enclosure and outlying ditches at northern entrance, looking north-west.

Plate 4. Enclosure ditches [80] and [202]/[196], and Phase 2 ditch [95] looking north-west *(2m scale).*

Plate 5. Enclosure ditch terminal [80] and [196] at southern entrance, looking east.

Plate 6. Outlying ditches [276] and [311], looking north-east.

Plate 7.Shell midden [187], looking north-east *(1m scale).*

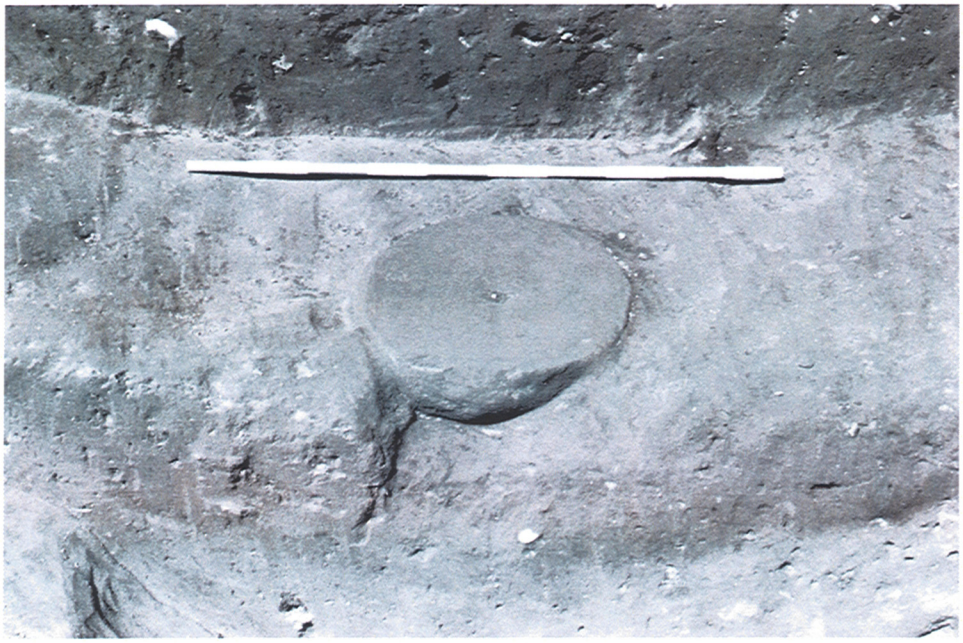


Plate 8. Quernstone (SF 13) in enclosure ditch [80], looking north-west *(1m scale).*

Plate 9. Possible Saltmaking Feature 1, looking south-west *(1m scale)*.

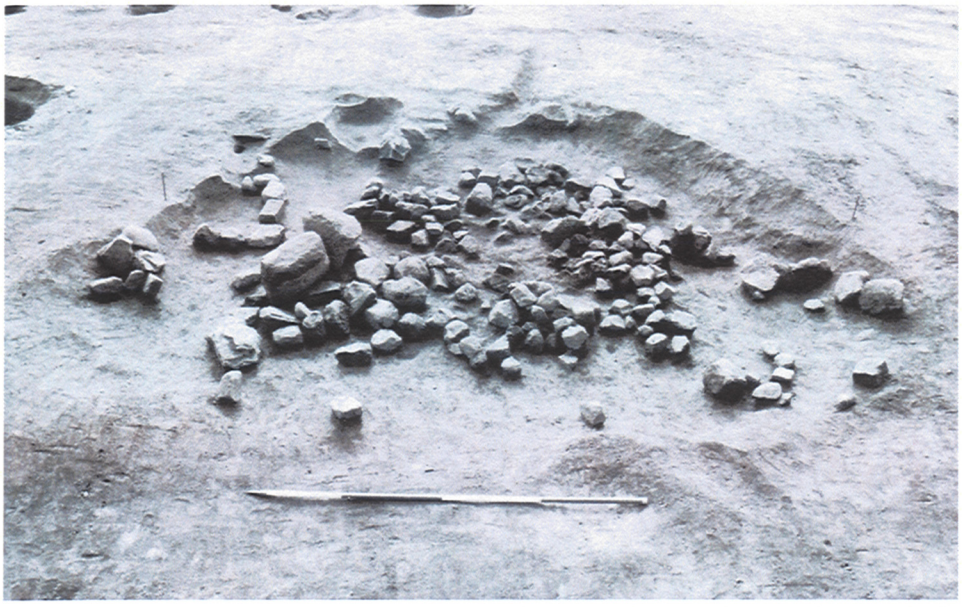


Plate 10. Possible Saltmaking Feature 2, looking south-west *(2m scale)*.

Plate 11. Stone surface [64], looking south-west *(2m scale)*.

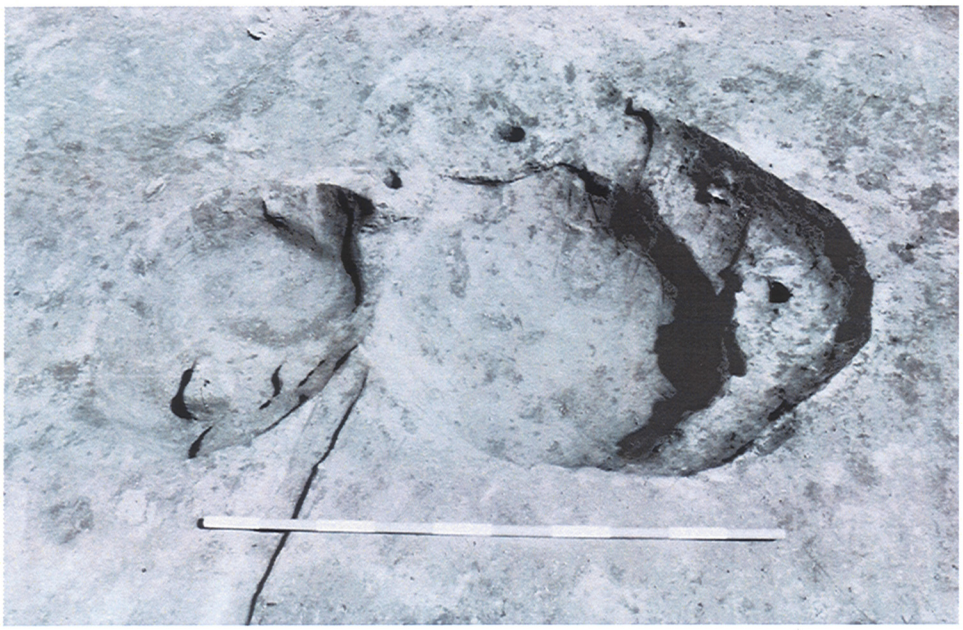


Plate 12. Clay-lined pits [265], [283], [286] and [298], looking north-west *(1m scale)*.


Plate 13. Upper rotary quernstone (SF 13), grinding surface *(0.5m scale)*.


Plate 14. Upper rotary quernstone (SF 13), outer surface *(0.5m scale)*.


Plate 15. Spindle whorls (SF 9 and 10).


Plate 16. Glass bangle fragments (SF 8 and 11) and slate ring (SF 12).


Plate 17. Stone sphere (SF 14).

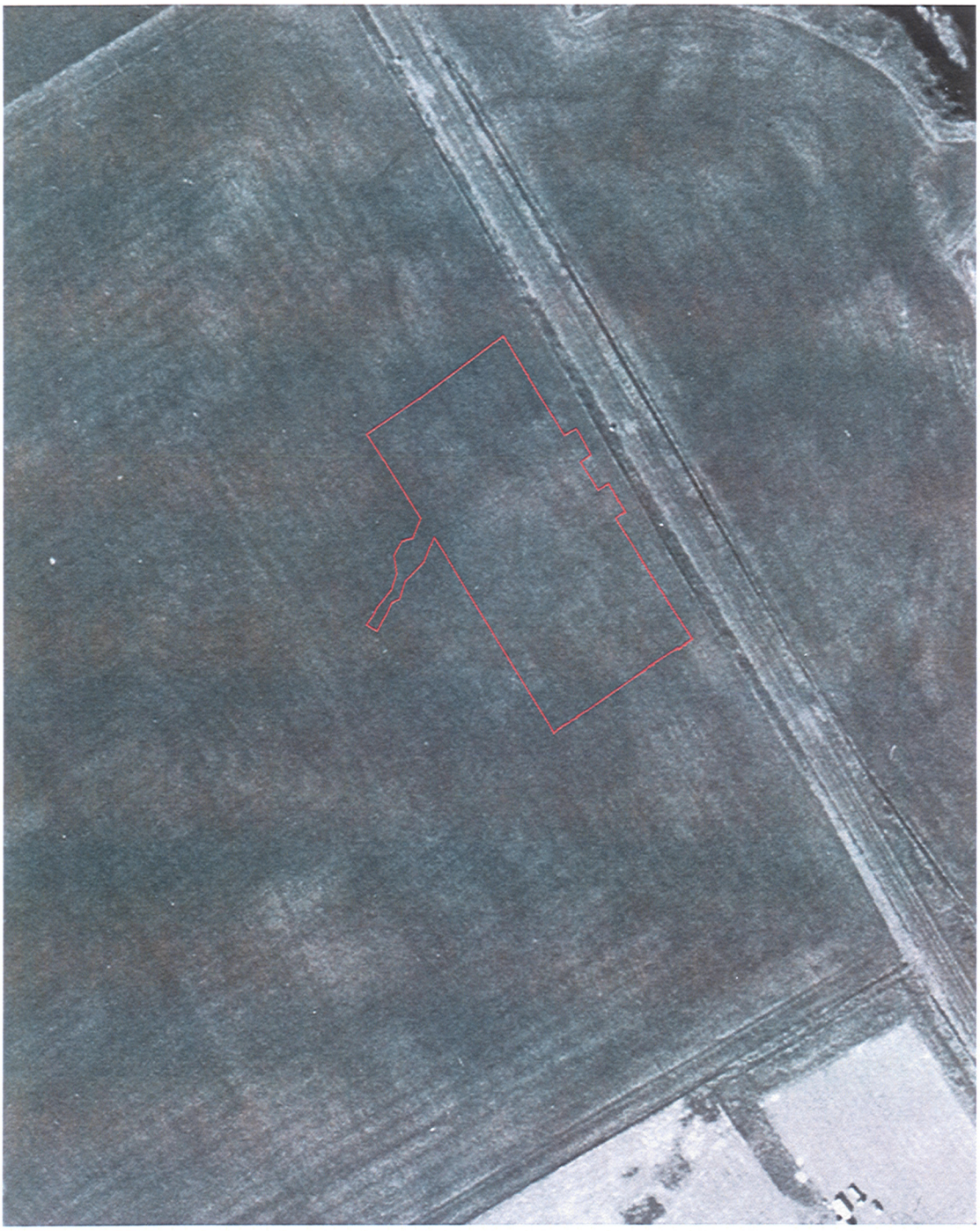



Plate 18. Aerial photograph showing outline of excavation area
Scale 1:2,000

# APPENDIX 4

## AMS DATES

# CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-22:lab. mult=1)

**Laboratory number:** **Beta-208954**

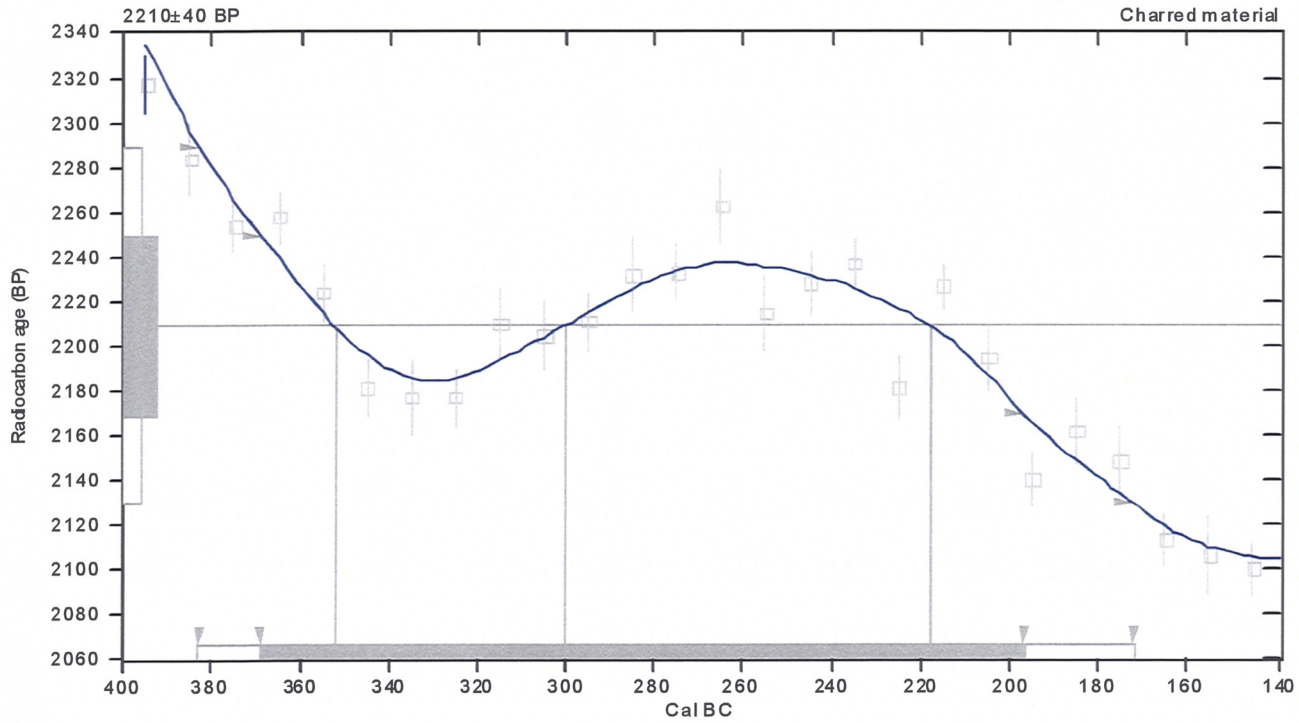
**Conventional radiocarbon age:** **2210±40 BP**

**2 Sigma calibrated result: (95% probability)** **Cal BC 380 to 170 (Cal BP 2330 to 2120)**

Intercept data

Intercepts of radiocarbon age with calibration curve: Cal BC 350 (Cal BP 2300) and Cal BC 300 (Cal BP 2250) and Cal BC 220 (Cal BP 2170)

1 Sigma calibrated result: (68% probability) Cal BC 370 to 200 (Cal BP 2320 to 2150)




References:


***Database used***
*INTCAL98*

***Calibration Database***

***Editorial Comment***
*Stuiver, M., van der Plicht, H., 1998, Radiocarbon 40(3), pxii-xiii*

***INTCAL98 Radiocarbon Age Calibration***
*Stuiver, M., et. al., 1998, Radiocarbon 40(3), p1041-1083*

***Mathematics***

***A Simplified Approach to Calibrating C14 Dates***
*Talma, A. S., Vogel, J. C., 1993, Radiocarbon 35(2), p317-322*



**Beta Analytic Radiocarbon Dating Laboratory**

*4985 S.W. 74th Court, Miami, Florida 33155 • Tel: (305)667-5167 • Fax: (305)663-0964 • E-Mail: beta@radiocarbon.com*

# CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-26:lab. mult=1)

**Laboratory number:** **Beta-208953**

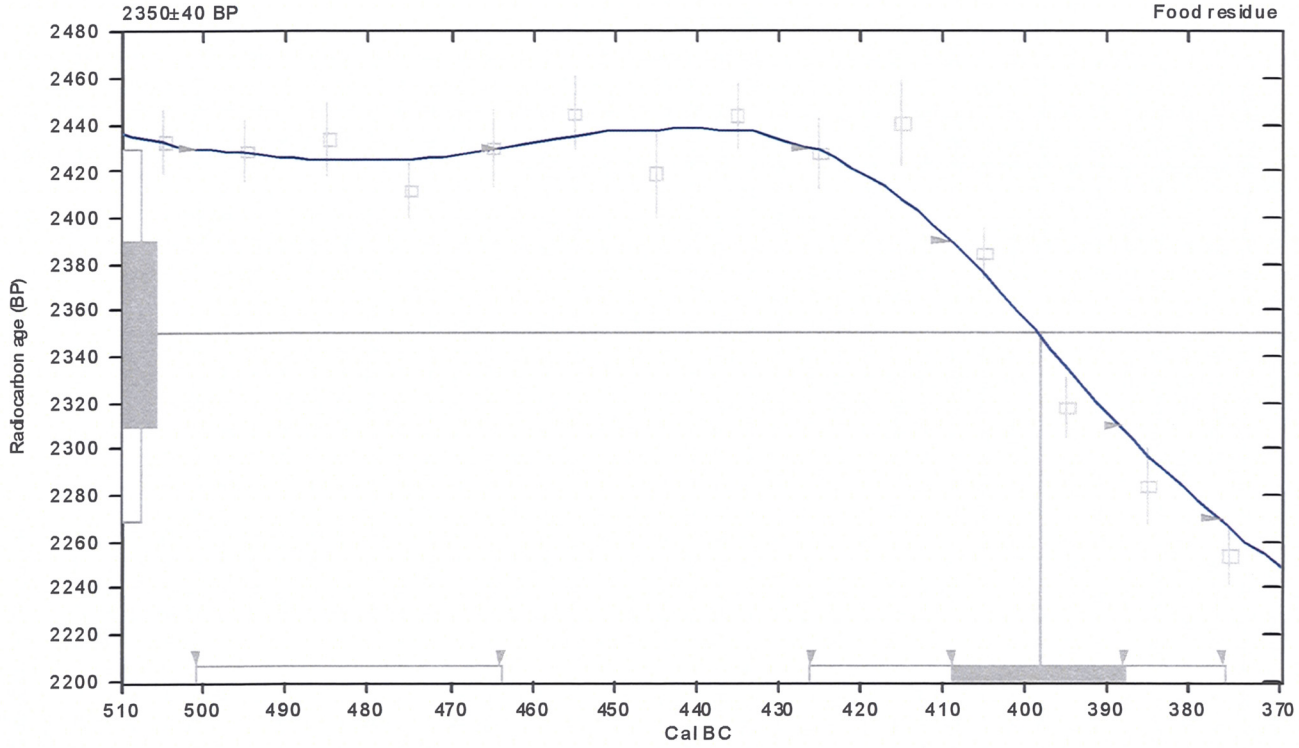
**Conventional radiocarbon age:** **2350±40 BP**

**2 Sigma calibrated results:** **Cal BC 500 to 460 (Cal BP 2450 to 2410) and**
**(95% probability)** **Cal BC 430 to 380 (Cal BP 2380 to 2330)**

Intercept data

Intercept of radiocarbon age with calibration curve: Cal BC 400 (Cal BP 2350)

1 Sigma calibrated result: (68% probability) Cal BC 410 to 390 (Cal BP 2360 to 2340)




References:


***Database used***
*INTCAL98*
***Calibration Database***
***Editorial Comment***
*Stuiver, M., van der Plicht, H., 1998, Radiocarbon 40(3), pxii-xiii*
***INTCAL98 Radiocarbon Age Calibration***
*Stuiver, M., et. al., 1998, Radiocarbon 40(3), p1041-1083*
***Mathematics***
***A Simplified Approach to Calibrating C14 Dates***
*Talma, A. S., Vogel, J. C., 1993, Radiocarbon 35(2), p317-322*



**Beta Analytic Radiocarbon Dating Laboratory**

*4985 S.W. 74th Court, Miami, Florida 33155 • Tel: (305)667-5167 • Fax: (305)663-0964 • E-Mail: beta@radiocarbon.com*

# P C A

PRE - CONSTRUCT ARCHAEOLOGY LIMITED

UNIT 54

BROCKLEY CROSS BUSINESS CENTRE

96 ENDWELL ROAD

BROCKLEY

LONDON SE4 2PD

TEL: 0207 732 3925 0207 639 9091

FAX: 0207 639 9588

EMAIL: info@pre-construct.com

PRE-CONSTRUCT ARCHAEOLOGY LIMITED (NORTHERN OFFICE)

UNIT 19A

TURSDALE BUSINESS PARK

DURHAM DH6 5PG

TEL: 0191 377 1111

FAX: 0191 377 0101

EMAIL: info.north@pre-construct.com