NAA

POST-EXCAVATION ASSESSMENT REPORT

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DELHI, BLAGDON HALL, NORTHUMBERLAND

on behalf of

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Summary

This document presents the results of an archaeological excavation at the site of an extension to an opencast coal and clay extraction site at Delhi, Blagdon Hall, Northumberland (centred on NZ 218 763). The site lies within the Registered Park and Garden of Blagdon Hall and consists of approximately four hectares of arable land, some of which contains 20th century opencast workings. An archaeological evaluation and subsequent watching brief across the site of an earlier opencast (to the west and south-west of the excavated area) had demonstrated the presence of early mining activity and horticultural features associated with the Blagdon estate surviving across several parts of the site. As a result a programme of archaeological monitoring and recording was proposed within the area of the opencast extension between two World War II expedient opencast mines. This area was considered to exhibit the greatest potential for archaeological remains relating to early mining activity to exist. The objectives of the monitoring were to establish the presence or absence of archaeological remains relating to early mining activity. The work was undertaken in accordance with an agreed Written Scheme of Investigation prepared by Northern Archaeological Associates for H. J. Banks and Company Ltd and agreed with Northumberland County Council Archaeology Section.

Significant archaeological activity dating from the prehistoric through to the 20th century was exposed across the entire area designated for the watching brief. The remains related to landscape division, settlement, industrial, agricultural and horticultural activity. The earliest features encountered combined to form a Bronze Age boundary delineation. Three distinct complexes of Iron Age settlement remains were identified, one of which was multi-phased. Two of the settlement complexes included agricultural activity, and possible industrial activity was also exposed that was associated with one the multi-phased complex. Truncating the prehistoric features was an extensive medieval field system that exhibited cultivation remains and probably succeeded a medieval enclosure relating to animal husbandry. The majority of features dating to the post-medieval period across the site appeared to form part of the designed landscape of the Blagdon estate and comprised horticultural features relating to formal planting and drainage. A later post-medieval field system overlay the garden features and by the modern period all activity across the site was associated with coal extraction.

The excavation at Delhi represents one of the larger areas of investigations of part of a prehistoric landscape within the region. The later remains relating to horticultural remains provide an insight into a possibly early 18th century landscape garden. It is recommended that further analysis is undertaken on the site record and that a series of radiocarbon dates from several phases across the site will refine the chronology of the site and enable the evolution of the settlements to be studied. It is also recommended that documentary research be undertaken to examine and attempt to establish the dates and layout of the

designed landscape remains. A publication report should be prepared on the results of the further analysis.

1.0 INTRODUCTION

1.1 Northern Archaeological Associates Ltd were commissioned by H. J. Banks and Company Ltd to undertake a scheme of archaeological monitoring and recording in advance of coal and clay extraction at the extension to the Delhi opencast site, in Blagdon Park, Northumberland (centred on NZ 218 763). In the course of the monitoring significant multi-phased archaeological remains were encountered. The excavation took place between July and December 2005. This report has been prepared by Northern Archaeological Associates Ltd (NAA) for H. J. Banks and Company Ltd.

1.2 An archaeological desk-top assessment (AC Archaeology 2005) was undertaken of the location and extent of coal seam outcrops and previous mining activity at the Delhi opencast extension as requested by Northumberland County Council (NCC) Archaeology Section, to appraise the archaeological potential of the site. A programme of archaeological monitoring was recommended, which proceeded in accordance with a Written Scheme of Investigation (NAA 05/99) complied by NAA and agreed with NCC Archaeology Section.

1.3 This post-excavation assessment document has been prepared in accordance with current English Heritage guidelines (1991). This report summarises the historical and archaeological background to the site, describes the excavation methodology and details the results of the excavation, divided into five broad phases of activity identified on site. The specialist assessments of artefactual and environmental information recovered are summarised and the significance of the excavated evidence is assessed. It states the potential for further analysis and proposes a programme for further work in order to produce a final post excavation report.

2.0 LOCATION, TOPOGRAPHY AND GEOLOGY

2.1 The site was located in a large arable field to the south-east of Blagdon Hall within Blagdon Park, a Registered Park and Garden. The exiting opencast site was then located to the south of Blagdon Hall and north of the road between Shotton Grange and Horton Grange to the west of the A1, in the civil parish of Stannington and district of Castle Morpeth (Figure 1).

2.2 The area of the development consisted of gently undulating land lying between 45m and 75m OD with an overall trend downwards to the west. The superficial geology comprises glacial deposits consisting of boulder clay and morainic drift with coal measures of the Westphalian series forming the solid geology. The overlying soils consist of loamy over clayey soils of the Brickfield 3 association and restored opencast workings (Jarvis *et al* 1984).

3.0 ARCHAEOLOGICAL BACKGROUND

Previous archaeological works

3.1 An archaeological evaluation was undertaken of the present Delhi opencast site in 2001 (NAA 01/65), which encountered parkland features and former mining activity. In addition a programme of monitoring and recording was subsequently undertaken in this area. This phase of work also encountered probable parkland features and exposed a series of partially collapsed mine galleries at a depth of some 12.5m below ground surface (NAA 05/81). An assessment of the Delhi extension was carried out in 2005 (AC Archaeology 2005). The assessment indicated the possibility of encountering former mining remains.

3.2 An archaeological evaluation at the proposed opencast mine at the nearby Shotton site involved the excavation of 536 trenches. Prehistoric remains were found in two areas both within the northern half of the site. Two parallel ditches and a curvilinear gully were interpreted as a palisaded settlement of probable 6th century BC to pre-Roman date. Within the other area and of a similar date was a curvilinear gully which contained slag and was thought to be of an industrial nature (Cox *et al* 2006).

3.3 An archaeological excavation in advance of coal extraction at Fox Covert some 2km to the west of Delhi encountered a pit alignment which was dated to the Bronze Age. The form and characteristics of the alignment was similar to the alignment at Delhi. Further remains encountered largely consisted of medieval agricultural remains (Gary Brogan *pers. comm.*).

Prehistoric

3.4 There is much evidence for prehistoric occupation along the coastal plain in Northumberland, settlements appearing to line the corridor of the A1. Excavations in recent years have seen settlements dating from the prehistoric period located within this corridor.

3.5 In the immediate vicinity of Blagdon several cropmark enclosures have been identified from aerial photographs. Those at Stannington and Cramlington are thought to be of later prehistoric date.

Medieval

3.6 The name Blagdon is thought to derive from an Anglo-Saxon place, *Blaikdene* or *Blaigden* that is generally thought to mean an open, exposed area. An alternative origin is that it comes from a northern dialect term for golden or yellow, in connection with the wooded valley in the grounds of the present house (Wardell Armstrong 2000).

3.7 In 1242 the manor of Blagdon was recorded as bring in the possession of John de Pleasey who held it off the Barons of Morpeth. Thirteenth century

documents record six taxpayers at Blagdon and charters from the same time indicated the existence of an open field system being in operation (Wardell Armstrong, 2000). Blagdon medieval village is said to be located to the west of South Drive and the extensive upstanding ridge and furrow remains along the drive attest to the former settlement's land use. The medieval settlement at Blagdon was probably displaced from its original location before the sale of land at Blagdon in 1672 possibly due to the emparkment. A deer park, recorded from cartographic records in 1805 may date from this period and have been a reason for the removal of the village. The present Blagdon Hall dates to the late 17th century when the creation of parkland on former agricultural land and the wholesale removal of settlements may have occurred.

3.8 A further medieval settlement in close proximity was at Milkhope, meaning *rich pasture in the blind valley* (Mawer 1920). No remains can be seen today though cultivation furrows in the area could be associated with this settlement.

Post-medieval

3.9 Blagdon Hall was built between 1735 and 1752 for Matthew White though it is thought that it contains earlier elements. The earliest gardens were laid out in the early 18th century, with alterations made in the late 18th century Cartographic evidence from 1805 records a deerpark surrounded by a sub-rectangular enclosure, which was 67 acres in size, to the south of the hall. In the early 19th century the Blagdon Hounds were established on the estate and a number of model farms were established at the same time. The grounds of the hall were frequently modified throughout the 19th century

Modern

3.10 The latest phase of modifications to the parkland was undertaken by Gertrude Jekyll and Edward Lutyens in the 1920s and 1930s. However, little remains of these gardens which have been largely destroyed by mining. The grounds were extensively opencast mined with coal deposits being extracted in the 1940s, 1950s, 1960s and 1970s.

3.11 Two areas of previous opencast workings have been identified from aerial photographs of 1946 and 1947, both, of which are shown on the Mining Record OS 1:2500 plan LS/NE/1/380 (Cottrell 2003).

4.0 AIMS AND OBJECTIVES

4.1 The aim of the project was to monitor the groundworks within the development area in order to assist in the formulation of an appropriate strategy which would mitigate against the loss of any surviving archaeological features prior to, or during the course of, the development.

4.2 The principal objectives of the programme of archaeological monitoring and recording were:

- to investigate and record any archaeological features identified during the course of topsoil stripping prior to extraction works and recover any associated artefacts

- to establish the location, date and nature of any areas of archaeological activity and assess the degree of preservation of any remains encountered

- to prepare an illustrated report on the results of the monitoring to be deposited with both the Northumberland Historic Environment Record and the National Monuments Record

- to prepare a report on the results of the excavation of any significant archaeological remains for publication in a local, regional or national journal as appropriate

5.0 METHODOLOGY

5.1 Archaeological monitoring was undertaken during topsoil stripping across two areas designated by Northumberland County Council. The main area was located in the central portion of the field between two World War II expedient opencast mines. It covered an area of some 100m by 375m. The additional area measured 30m by 200m and was situated just north of the southern opencast. Along the southern edge of the monitored area, a thick deposit of opencast material was encountered which was sealed by the topsoil. For this area a two–phase programme of soil stripping was implemented.

5.2 Removal of topsoil was carried out using a 32 tonne, 360° mechanical excavator fitted with a toothless ditching bucket. This was operated under direct archaeological supervision at all times. Once an area had been stripped it remained un-trafficked by the contractor until archaeological recording had been completed. On the completion of any necessary excavation within designated areas these were released to the contractor. A vehicular route along the corridor was made available to the contractor after initial recording and investigation. Soil was removed from the site with articulated dumper trucks along the vehicular routes. The soil was then compacted into soil bunds which acted as screens, located to the south and north of the site.

5.3 All exposed surfaces where archaeological features were identified were cleaned by hand and these were then planned and photographed. Hand excavation of archaeological features was undertaken to evaluate the depth, character, and degree of preservation, and to attempt the recovery of sufficient artefactual and environmental evidence to enable dating and assessment of the archaeology. Discrete features were half-sectioned. Linear features were sampled at a minimum of 10% along their length or a minimum of a 1m sample section, if the feature was demonstrably homogeneous or less than 10m long. The deposits at junctions or interruptions of linear features were sufficiently excavated for the relationship between components to be established. Other cut features such as post-holes and pits were half sectioned

and structural features such as curvilinear gullies were subjected to a 50% sample to determine and record their form.

5.4 Finds were recorded and processed using the NAA system and submitted for post-excavation assessment. Thirty-litre bulk palaeoenvironmental samples were taken where possible from appropriate deposits and submitted for assessment. Recovery and sampling of environmental remains was in accordance with guidelines prepared by English Heritage (2002).

5.5 All finds recovered were appropriately packaged and stored under optimum conditions. Finds recovery and storage strategies were in accordance with published guidelines (English Heritage 1995; Watkinson and Neal 1998).

5.6 All archaeological features were photographed and recorded at an appropriate scale. Sections were drawn at a scale of 1:10 or 1:20 where necessary. Archaeological plans were drawn at a scales of 1:20, 1:50 and 1:100 dependent upon the extent and nature of the archaeological activity. Levels were tied in to Ordnance Datum.

5.7 A written description of features was recorded on pro forma sheets using the NAA context recording system. A photographic record of the site was taken using monochrome prints and colour slide film at a minimum format of 35mm.

6.0 EXCAVATION RESULTS

6.1 Multi-phased archaeological activity was exposed across the excavation area which dated from the prehistoric period through to the 20th century and comprised domestic, agricultural, mining and horticultural remains. Many of the earliest features on site contained no dating material and have been phased by alignment, form and character. The excavation consisted of two stripped zones within an arable field that were up to 100m wide and up to 375m long. For ease of discussion of result the site has been divided into five areas. Areas 1 to 4 extended from east to west across the southern stripped zone with Area 5 comprising the northern stripped zone (Figure 2). A total of five phases were identified across the site these were; Phase 1-Bronze Age, Phase 2-Iron Age, Phase 3-Medieval, Phase 4-Post-medieval, and Phase 5-Modern. Where multi-phased remains of the same period were identified the phases were subdivided into a, b, c etc.

Area 1 (Figure 3)

6.2 Area 1 extended from the south-west limit of excavation for some 90m. Archaeological remains dating from the Bronze Age, medieval and modern periods were encountered in Area 1. These features related to boundary delineation, agriculture and extraction activities.

Phase 0: Natural

6.3 Natural boulder clay (02) was encountered across the entire site, which varied in composition but predominantly comprised a mottled mid yellow brown clay. It contained inclusions of small coal fragments and occasional stones, which ranged in size from small to large.

Phase 1: Bronze Age, pit alignment *(Figure 3) (Plates 1, 2 and 3)*

6.4 Extending from north to south across the centre of Area 1 was a pit alignment formed by a minimum of twenty pits which extended for 115m within the area. The alignment followed a straight line and terminated some 10m from the southern excavation limit. This conclusion in the line of pits may have denoted an entrance in the boundary delineation rather than its cessation.

6.5 The pits were sub-rectangular in form and spaced between 0.69m and 2.99m apart. They ranged in size from between 1m to 3.38m long, 0.93m to 0.48m wide and up to 0.40m deep. Some pits displayed evidence of having been cleaned out and contained up to seven fills indicating gradual silting. The fills varied between grey, brown and yellow clays and silts. The base of one pit (204) was cut by a posthole (232) whilst another pit (205) contained stones which may have represented post-packing.

6.6 Little dating material was encountered from this phase though a tertiary flint flake of Neolithic or early Bronze Age date, with abrupt retouch along its end was recovered from the secondary fill (157) of pit 155. Optically Stimulated Luminescence (OSL) dating was carried out on two soil samples though only one from pit 155 was conclusive. This gave a date of 735BC ±75 ±220, which would date the deposit to the late Bronze Age or early Iron Age. The alignment had few stratigraphic relationships, the earliest being truncation by medieval plough furrows.

Phase 3: Medieval, cultivation furrows

6.7 The medieval period within Area 1 was represented by agricultural activity and extensive ridge and furrow ploughing remains were exposed across the entire area. The furrows measured between 2.98m and 5.92m wide and were between 0.15m and 0.4m deep. Ploughsoil had accumulated within the furrows which was composed of brown clay silts and silty clays. The ridges were spaced up to 10m from crown to crown and aside from several sample hand excavated sections were machine excavated across each area. Due to the form and nature of the furrows they were likely be part of a system of medieval ridge and furrow cultivation. This cultivation continued to the north-east in a pasture field across the South Drive (one of the driveways to Blagdon Hall) where the system was perpetuated as upstanding earthwork remains. These cultivation remains may have been associated with the deserted medieval villages of Blagdon located some 800m to the north or Milkhope located some 50m to the west of the excavation area.

Phase 5: Modern, haul road

6.8 A compacted aggregate road crossed the southern half of Area 1 which was likely to be a haul road serving one of the World War II expedient mines. The road was approximately 10m wide and extended for some 160m within the excavation limits, crossing into Area 2.

Area 2

6.9 Area 2 extended for *c*.60m north-east from Area 1. Within Area 2 remains dating from the Iron Age, medieval, post-medieval and modern periods were exposed. These were generally located in the western portion of the area and related to settlement, cultivation and mining.

Phase 0: Natural

6.10 Natural boulder clay (02) was encountered across the area which was identical to that within Area 1.

Phase 2: Iron Age, structure 1 *(Figure 4) (Plates 4, 5 and 6)*

6.11 The earliest feature encountered within Area 1 was a penannular ditch (229) which was located just east of the excavation limit. The ditch measured 16.75m in diameter, and was between 1.06m and 0.56m wide and up to 0.76m deep. It enclosed an area of some 220m^2 and incorporated a north-east facing entrance, which measured 3.4m wide. The form and nature of the ditch and its deposits indicated that the ditch was structural (structure 1) though no internal features survived and no diagnostic artefactual material was recovered.

6.12 The ditch was V-shaped and appeared to have been left open for some time after cutting which was evinced by a sequence of silt deposits (278, 262, 253, 252) and some evidence of slumping (342, 897, 372, 373). Following the silting stones were deposited in several parts of the ditch (segments I, II, IV, IX, XVIII, XXI) possibly representing the remains of post-packing, the absence of stones throughout the ditch may have been as a result of robbing/removal following an episode of burning which covered the stones. Charcoal-rich layers (251, 264) were apparent in the northern portion of the ditch, and in the eastern and southern part of the ditch these layers were overlain by deposits of fired clay and daub (378, 314, 410, 358, 363, 375). These deposits were perhaps remnants of the structure's fabric. The two ditch termini had been re-cut (280, 898) at approximately the same level at which the burning had occurred, suggestive of a rebuild following fire damage. However, each re-cut extended for just 1.5m within the ditch termini, perhaps excluding a entire rebuild. The upper fills of the ditch generally comprised silts and clays with occasional sandy deposits which varied between grey and yellow.

Phase 3a: Medieval-enclosure 1 with associated postholes and gully 13 *(Figure 4)*

6.13 Phase 3 has been divided into two sub-phases the earliest of which consists of two curvilinear gullies and a series of postholes exposed alongside the western excavation limit. The southern gully (13) extended from the excavation limit for 47.44m before terminating. It was curvilinear and measured up to 0.5m wide, 0.08m deep and was filled with brown clayey silt (7). The other gully (23) was semi-circular and located directly north of gully 13. It extended for 45.4m from the northern excavation limit before terminating. The gully enclosed an area of approximately 328m² and was truncated by the opencast mine located to the north. The gully was 0.53m wide, 0.18m deep and filled with grey brown clay silt (22) and clay sand (307). A single sherd of medieval pottery was recovered from deposit 22. Positioned along the inner curve of gully 23 were eighteen postholes (287, 290, 293, 295, 298, 300, 302, 304, 306, 312, 316, 318, 331, 333, 344, 354, 356, 513). These probably would have carried a fenceline which had been truncated by later ploughing. The postholes measured from 0.3m to 0.6m in diameter and were up to 0.45m deep. The fills were composed of grey brown to yellow orange clays, silty sands, sandy clays, silty clays and clayey silts. A total of seven (287, 290 293, 318, 331, 333, 344) postholes contained postpipes. These features formed an enclosure (enclosure 1) that may have been used for animal husbandry. The enclosures may be associated with the medieval settlement of Milkhope probably located some 50m to the west. However, the First Edition Ordnance Survey map of 1864, depicts a semi-circular plantation in the same area as the gullies and postholes, though evidence exists for landscape features of an even earlier date to be perpetuated in later and modern landscapes.

Phase 3b: Medieval, cultivation furrows

6.14 The extensive ploughing remains seen across Area 1 continued through Area 2 and truncated the gullies and postholes of phase 3a.

Phase 4: Post-medieval, pit 16

6.15 A sub-circular pit (16) was exposed just south of the northern excavation limit. It was 3.10m wide and had been backfilled with clay, wood and stone. It is likely that the pit was a trial hole excavated in the post-medieval period to determine the depth of coal deposits. Similar features were encountered across Area 5 following the coal seam.

6.16 Two features (408 and 417) encountered within the central portion of the excavation area were interpreted as natural tree boles. They may have been part of the 18th century parkland of the Blagdon Hall estate and were cut by 19th century field drains.

Phase 5: Modern, mine

6.17 A large deposit of mixed clay and stone (27) was encountered in the southern half of the area, which measured 22m in diameter. It is likely that the deposit represented a capped mine shaft that related to the haul road which crossed from Area 1 into Area 2.

Area 3 (Plates 7 and 8)

6.18 Area 3 extended for approximately 60m to the north-east of Area 2. Extensive Iron Age settlement remains were exposed in Area 3, which consisted of four structures and a plot surrounded by a ditch. The complex represented an unenclosed multi-phased settlement and was associated with possible industrial activity. Medieval plough furrows were also present across Area 3.

Phase 0: Natural

6.19 Natural boulder clay (02) was encountered across the area which was identical in composition to that within Area 1.

Phase 2a: Iron Age, pit 666 *(Figure 5) (Plate 9)*

6.20 The earliest phase of activity in this area was represented by a pit (666) which had been heavily truncated by later features. It was at least 0.18m deep and 1.15m wide and contained four fills (667, 668, 669, 670). The fills varied between grey and yellow clays and silty clays and the tertiary fill was charcoal rich, perhaps suggestive of the deposition of refuse material.

Phase 2b: Iron Age, structures 2 and 3 *(Figure 5) (Plates 10, 11 and 12)*

6.21 This phase relates to the construction of two roundhouse structures (2 and 3), which appear from their alignment to be contemporaneous. Structure 2 was sub-circular and consisted of a series of curvilinear and segmented structural slots (05, 67, 113, 137) and drip gullies (03, 76, 81, 99). The gullies and slots were both V-shaped and U-shaped and measured between 0.8m and 2.68m long, between 0.19m and 0.59m wide and generally 0.15m deep. Fills varied between orange grey, grey brown and grey clays and silts. A posthole (95) which may have been a structural element of the roundhouse was located within the entrance. The posthole measured 0.21m in diameter and was 0.06m deep. It was filled with mid grey silty clay (96). Structure 2 measured 7.6m in diameter and though the eastern half had been truncated by later ploughing, it has been extrapolated to have enclosed an area of some 24m^2. It incorporated at least one west-facing entrance which measured 1.6m wide.

6.22 The other Phase 2 roundhouse (structure 3) had been constructed in at least two stages which were composed of inner wall construction trenches (31, 33, 85, 127,) and an outer drip gully (103). The trenches and gullies were generally U-shaped and measured between 0.26m and 0.63m wide and between 0.08m and 0.33m deep. The fills (32, 37, 58, 72, 86, 104, 128, 129) were composed

of grey orange, blue grey and grey brown clay silts and silty clays. The first construction stage of the roundhouse was too truncated to extrapolate any dimensions. The second stage appeared to be a slight realignment of the structure and measured 8.40m in diameter. It enclosed an area of some 55m² and had a single east-facing entrance which was 3.20m wide. It is likely that the smaller structure (2) remained in use throughout the two construction stages.

Phase 2c: Iron Age, first construction stage of structure 4 *(Figure 6) (Plates 13 and 14)*

6.23 This phase of activity on site was characterised by the truncation of structure 2 and 3 and the construction of a further roundhouse (structure 4) just to the north. The roundhouse was rebuilt twice and comprised three phases. The initial phase consisted of two wall construction trenches (164 (=181=141) and 56 (=92)) and a pit (143). The wall construction trenches were between 0.61m and 1.03m wide and up to 0.43m deep. They were filled with up to two fills (16, 60, 61, 83, 93, 116, 140, 154, 165, 387, 388) of grey and orange grey, silty clay, clayey silts and clays that derived from silting and backfill. The structure incorporated two opposing entrances, which faced east and west. The west facing entrance was affected by later truncation though was approximately 2.84m wide. The east facing entrance measured 4.2m wide and was interrupted by a pit (143) which was 1.8m from the southern gully terminus and 1.4m from the northern gully terminus. The pit was sub-oval and measured 1.40m long, 0.34m wide and 0.07m deep. It was filled with a deposit of grey clayey silt (142). The roundhouse measured 11m in diameter and enclosed some 95m².

Phase 2d: Iron Age, rebuild of structure 4 and enclosure 2 *(Figure 6) (Plates 15 and 16)*

6.24 The first rebuild of structure 4 enclosed approximately the same area as the earlier structure and utilised the same entrances. The roundhouse was composed of two wall construction cuts (59 (=90) and 153(=134=158=180)) which measured between 0.58m and 1.6m wide and up to 0.4m deep. The trenches had gradually silted and contained up to five fills (57, 91, 135, 136, 145, 150, 151, 152, 159, 160, 182) that were composed of orange grey, grey and orange brown clayey silt and silty clay.

6.25 The structure was contemporaneous with a three-sided, trapezoidal enclosure (enclosure 2) formed by a U-shaped ditch (34). The ditch extended for 42m and measured up to 0.39m deep and up to 1.10m wide. It has silted after being cut and contained up to nine fills (38-44, 49-50, 413-4, 440-1, 444-447, 510, 534, 558, 568-9), which varied between brown grey to grey orange to yellow grey clays, clayey silts and silty clays. The enclosure covered an area of approximately 260m², and was probably utilised as a garden plot or for animal husbandry. The eastern side was not enclosed, though an earlier structure (3) may have acted as the enclosure's eastern boundary following its disuse.

Phase 2e: Iron Age, third construction stage of structure 4 *(Figure 6)*

6.26 The final rebuild of structure 4 utilised the southern wall construction trench (59) of the earlier phase, though the northern half was re-cut (12(=578)). Gully 12 measured up to 0.9m wide, 17.55m long, 0.62m deep and appeared to have been backfilled. It contained up to four deposits (8-11, 147-9, 512, 519, 579-81) of grey brown to orange grey silt, clays, silty clays and clayey silts. A heat affected (sandstone) hammerstone (148AA) was recovered from deposit 148 which is likely to be of Iron Age date.

Phase 2f: Iron Age-structure 5 and pits 437, 549 and 522 *(Figure 6) (Plates 17, 18 and 19)*

6.27 The final phase within the settlement complex was characterised by a shift eastwards. A further structure (5), the least well preserved, was built and comprised a wall construction trench (506(=507=556=577)), with remnants of an entrance. The trench measured between 0.39m and 0.66m wide and 0.23m deep. It was filled with up to two deposits which varied between brown grey to grey brown silty clays to clayey silts (504-5, 508, 554, 555, 559-561, 572-4, 576). The northern terminus of the trench was truncated by gully 587 which continued the line of the structure southwards. It was 1.38m long, 0.40m wide, 0.17m deep and contained a single deposit of blue grey clayey silt (588). At its southern extent pit 587 was truncated by a sub-rectangular pit (591), which measured 0.42m long, 0.24m wide and 0.09m deep and was filled with blue grey clay silt (592). Pit 591 extended south from the roundhouse terminus forming a right angle. These pits would have formed part of the entrance of the structure, which measured 11m in diameter and had an east-facing entrance which had been truncated and was a maximum of *c*.4m wide. The structure had an internal area of 95m^2 though no internal features were encountered within the roundhouse and no artefactual material was recovered.

6.28 A series of three pits (437, 549, 552) and a linear slot (621) were located some 12m south-east of structure 5. The pits measured up to 1.50m in diameter and were up to 0.35m deep. The earliest feature was a linear slot (621) which was filled with grey clay sand (620) was cut by a pit (549). Pit 549 had been extensively re-cut (515, 521, 523) and cleaned out, and contained fills (438, 520, 522, 524, 548) of yellow grey, brown grey and grey silty clay sand, clay sand, sandy clay and silty sand. Directly east of pit 549 was another pit (437) which shared broadly similar characteristics. Pit 437 contained four fills (433, 434, 435 and 436) which varied between orange pink to light grey clay sand and sandy clay. Just east of pit 437 was a third pit (552) which contained two fills (550-1) of brown clay sand. The pits contained burnt material and burnt stones, and the natural clay into which they were cut was heat affected and it is thought that they may have been oven pits.

Phase 3: Medieval

6.29 The extensive ploughing remains seen across Areas 1 and 2 continued through Area 3 and truncated the structures and enclosure.

Area 4

6.30 Area 4 was located to the north-east of Area 3 and measured 140m long. The features encountered within Area 4 dated from the Iron Age to the modern period and consisted of settlement, agricultural, horticultural and mining remains An Iron Age enclosure and two further structures dating from the same period were exposed.

Phase 0: Natural

6.31 Natural boulder clay (02) was encountered across the area was identical to that within Area 1.

Phase 2: Iron Age *(Figure 7) (Plates 20-26)*

6.32 Within Area 4 Phase 2 features comprised an enclosed settlement and agricultural remains. At least one enclosure (3) was identified which comprised a series of ditches that had been successively re-cut. An entrance and a possible corralling system had been added to the enclosure at a later date. Within the central part the enclosure were the remains of two structures.

6.33 The western side of enclosure 3 was originally formed by a narrow ditch (807) that extended for some 63m from the southern excavation limit on a north-west to south-east alignment. At some point the boundary was re-defined by ditch 639 (=763) which followed the same line. This ditch was replaced by ditch 838 which curved to the east and formed the northern side of the enclosure. The enclosure was extended to the west by ditch 836, which was truncated by a later entrance added after both ditch 838 and ditch 836 had partially silted. The entrance was created by ditches 626 (=800=750) and 645. Ditch 626 extended to the north-east for some 78m and ditch 645 extended to the south-west for approximately 35m. Both ditches terminated adjacent to the original extent of the western side of the enclosure and formed a 4.4m wide entrance. The enclosure ditches measured up to 0.77m deep, 1.45m wide and were filled with deposits of grey, grey brown, orange grey and yellow brown clayey silts, silty clays, sandy silts and silts.

6.34 Directly north-east of the entrance were three sub-oval pits (783, 789, 869), which measured between 3.3m and 1.2m long, 0.5m and 0.6m wide and up to 0.20m deep. They contained fills of grey to brown silty clays and clayey silts (790, 868, 782, 787). The pits may have comprised part of a stock funnel which would have channelled animals into or out of the enclosure.

6.35 Two structures (6 and 7) were located in the centre of enclosure 3, some 30m east of the entrance. The larger structure (6) consisted of two V-shaped and U-shaped gullies (655 (=676=657)) and 707(=759)), interpreted as drainage gullies. These measured up to 0.82m wide and up to 0.4m deep. After initial silting (656), the northern gully (655) had been backfilled (653-4, 661) and terminated after some 20m. The line of the structure was continued by gully (707), which displayed a similar sequence of silting (758), following which a

charcoal-rich layer (757) had been deposited and then the gully had been backfilled (738). The gully enclosed an internal area of 118m² and incorporated a north-east facing entrance, which was 4.33m wide. The tertiary fill (734) of one excavated segment, contained a single sherd of Iron Age pottery.

6.36 Within structure 6 were several internal features which included postholes and gullies (792, 893, 847, 849, 855, 857, 859, 864, 866). Postholes 859 and 792 may have been part of the entrance and measured up to 0.3m in diameter and 0.37m deep. They were filled with deposits of orange grey and brown grey silty clay, clay and sandy silt (860, 791) and posthole 792 contained post-packing. Three curvilinear gullies (841, 891, 893) may have represented the survival of the structure's internal partitioning and these measured up to 2.47m by 0.20m and 0.05m deep. They were filled with grey sandy silts (842, 892, 894). The remaining postholes located in the structure's eastern half, did not form any coherent pattern. They measured up to 0.62m in diameter and 0.20m deep with deposits of brown and grey silts, clayey silts and sandy silts (840, 856, 865, 858, 867). Layers of post-occupation grey sandy silt deposits (797 and 890) were exposed within the structure which sealed several of the internal features.

6.37 Located directly north of structure 6 was structure 7 which comprised a pennanular gully (664(=621=697)) and an internal posthole (730). The gully was up to 1.18m wide and 0.55m deep, and its profile varied between V-shaped and U-shaped and has been interpreted as a drainage gully. The gully was backfilled with grey and brown clays, clayey silts and silty clays (677, 686-689, 691, 704, 714-5, 718, 720, 722-725, 740) and the southern terminus was re-cut (678). The re-cut was backfilled with deposits (682-3, 665) of similar composition to those in gully 664. A posthole (730) was located south of the centre of the structure and measured 0.31m wide, 0.38m long and 0.09m deep. The deposit that filled it was a blue grey clayey silt (788). The gully enclosed a sub-circular area of 78m² and incorporated an east-facing entrance that measured 4.29m wide. A glass Meare bead was found in the primary deposit (691) of one of the excavated segments of the gully. The design is thought to date from 400-100BC, possibly as late as 100AD.

Phase 3: Medieval

6.38 The extensive ploughing remains seen across Areas 1, 2 and 3 continued through Area 4 and truncated enclosure 3 and structures 6 and 7.

Phase 4: Post-medieval, 18th and 19th century landscaping *(Figure 8)*

6.39 Phase 4 relates to the laying out and formalisation of the Blagdon Hall gardens and parkland in the 18th and 19th centuries. It is clear that at some point the drainage system was updated and a field system was laid out which perhaps reflects a shift in focus from horticulture to agriculture

6.40 Two groups of features were encountered which were interpreted as horticultural in origin. In the south-west corner of Area 4, five sub-circular pits (garden feature 1) (525, 529, 535, 618, 631) were exposed which had steep sides and flat bases. The pits measured up to 2.57m across and up to 0.51m deep and were filled with similar sequences of deposits. The form of the pits suggests that they may have contained tree planters and their positioning in rows, is indicative of an avenue. A further garden feature (garden feature 2) was located towards the north-east corner of the area and consisted of ten pits (564, 853, 872, 874, 876, 878, 880, 882, 884 and 886) arranged in a circle. The pits measured up to 1.03m in diameter and 0.18m deep with straight sides and flat bases and were overlain by later opencast material. The form and nature of the pits and their spacing suggests a horticultural feature, such as a tree cluster, common in 18th century English landscaped gardens.

6.41 A drainage system was exposed in the area which dated from the 18th century and was made up of five culverts (544, 546, 547, 702 and 824). Culverts 546, 547 and 702, were constructed with hand-clamped bricks comprising two courses of stretcher bonded walls with header capping (230mm x 110mm x 60/70mm). A substantial dressed sandstone (600mm x 700 x 150mm) culvert (544) was exposed in the south portion of the area. It was north-west to south-east aligned and measured 0.50m wide and 15.8m long. The culvert may have a stood proud of the topsoil as an ornamental feature. A similar sandstone culvert (824) was exposed adjacent to the northern excavation limit. The culvert was oriented north-west to south-east and comprised a section of hand-clamped bricks and a section of dressed sandstone blocks (580mm x 320mm x 60m). A reused sandstone block (824AA) was incorporated into the capping and three sherds of 18th century refined whiteware were recovered from the culvert fill.

6.42 A later drainage system updated the earlier brick and sandstone culverts or related to a shift in focus from horticultural to agricultural use of the land, and was exposed across Area 4. A total of nine French Drains were exposed (614, 622, 696, 810, 811, 812, 813, 814 and 816), which were backfilled with fragmented sandstone. They generally measured 0.57m wide and 0.50m deep. Eighteenth century glazed and unglazed redware, creamware and refined whiteware pottery was recovered from two of the drain fills (695 and 817) as well as a flower pot base.

6.43 A further indication perhaps, of a change in landuse was a field system comprising six ditches (603 (=606), 636, 638, 647, 795 and 827). The northern side of the field system was formed by ditch 827 which was north-east to south-west oriented. The western (603(=606)) and eastern sides (647) of the system both truncated ditch 827 and were north-west to south-east aligned. The eastern ditch (647) terminated towards the southern limit of excavation and after a gap of 1.18m its line was continued by ditch 795. Interestingly the gap roughly corresponds to the circle of trees which may have been deliberate. The northern boundary of the system appeared to have been redefined at some point by two successive ditches (636, 638). The ditches measured up to 0.7m

wide and 0.25m deep. A fragment of 18th or 19th century brick was recovered from the fill (635) of ditch 636.

Phase 5: Modern, mining drainage *(Figure 8)*

6.44 Phase 5 refers to the mining which took place across the site during the 20th century. A large soakaway drainage ditch (609) crossed the area sloping downhill from the southern opencast mine. A spread of opencast material sealed the natural subsoil and features across the southern extent of the site.

Area 5

6.45 Area 5 was located to the south of Areas 1 and 2 and measured 60m in length by 15m wide. Modern activity associated with mining was exposed in Area 5.

Phase 0: Natural

6.46 Natural boulder clay (02) was encountered across the area was identical to that within Areas 1, 2, 3 and 4.

Phase 5: Modern-mining *(Figure 9)*

6.47 In the western part of the site several pits (119, 121 and 123) and two ditches (117 and 125) were exposed. The pits were likely to be mining related and may have been test holes as they were located in lines mimicking the coal seams. The pits measured up to 3.10m and were filled with mixed clays, coal and fragmented brick (17, 120, 122 and 124). Ditch 125 was north to south aligned and ditch 117 was east to west aligned. They were filled with deposits of grey clay silt and brown grey clay (118 and 126). These ditches may have been drainage associated with the earlier mines.

7.0 DISCUSSION

7.1 The excavation at Delhi provided the opportunity to examine multi-phased activity dating from the prehistoric to the modern period which survived across all areas of the site. Features relating to landscape organization, settlement, mining, agricultural and horticultural activity were exposed and a total of seven structures and four enclosures were identified. The earliest Phase 1 and 2 remains encountered were boundary delineations and multi-phased unenclosed and enclosed settlement remains which included possible industrial and agricultural activity. The existence of few stratigraphic relationships created problems with identifying contemporaneous features or structures. However, it appears that chronologically the earliest prehistoric activity was exposed in the south-west portion of the site with later remains encountered in the central and north-east portions, though it is not apparent whether settlements were contemporaneous or reflected shifts in settlement foci. The structures were of similar construction and little diagnostic artefactual material was encountered to provide secure dating. The Phase 3 medieval

remains were generally agricultural and related to deserted and dispersed settlements that once existed in the vicinity. By the post-medieval period (Phase 4) the area became part of the Blagdon Hall estate's designed landscape and features relating to this activity were encountered across Area 4. Later phases (4 and 5) are also dominated by mining remains in the form of shafts and opencasts with associated features also apparent across most areas.

Phase 1: Bronze Age

7.2 The pit alignment has been assigned to Phase 1, though the earliest stratigraphic relationships with other features on site were restricted to Phase 3 medieval ploughing remains. The alignment at Delhi did not contain quantifiable environmental material though a piece of flint recovered from one of the pit fills was dated to the Late Neolithic to Early Bronze Age and an OSL date from one of the pit fills was 735 BC ±75; ±200. An alignment excavated in the same year at Fox Covert some 2km was of a similar date.

7.3 Thomas (2003) states that pit alignments are generally difficult to date as they often contain sterile fills and few stratigraphic relationships, though a similar alignment at Milfield, Northumberland contained grooved ware pottery and was interpreted as Neolithic (Miket 1981). The alignment is probably attributable to the later Bronze Age, when the disappearance of communal ceremonial and burial sites coincided with the development of semi-permanent farming settlements with cultivation plots. At the same time collective efforts were focused more on division and organisation of the landscape (Haselgrove 1982).

7.4 The existence of the alignment and the evidence for maintenance in the form of cleaning out and re-cutting is indicative of community activity. The upkeep of such boundaries required continuous sustainment and suggests the presence of a substantial settlement within the vicinity. Some larger roundhouse structures in the region are datable to the Bronze Age. However, without the use of scientific dating, structure 1 just to the east of the alignment has been attributed to the Iron Age based on form and characteristics. Pit alignments often predate ditched field systems being intentionally discontinuous and often part of networks of boundaries (Thomas, 2003) such as the one at Fox Covert. However, alignments may have been more than purely land divisions as at Ferrybridge the pit alignments followed the line of a stream channel and separated the funeral/ritual area from the settled agricultural landscape of the Late Neolithic and Bronze Age (WYAS, 2005).

Phase 2: Iron Age

Area 2, Structure 1

7.5 Structure 1 has been interpreted as an unenclosed Iron Age settlement and several structures of a similar construction have been excavated in the north-east. One of these was located at Chester House in Northumberland. Structure 1 consisted of a pennanular ditch which was generally V-shaped with

quantities of stone which may have acted as supports for a split timber wall. Substantial deposits of fired clay and daub within the ditch were also indicative of it having at one time supported walls. At Chester House a V-shaped ring-groove with a diameter of 16.8m was interpreted as a wall trench. It had no visible post-settings and would have held a continuous row of split and sharpened timbers (Holbrook, 1988). Three phases of house were exposed at Chester House with a pottery sequence that dated between 1750 to 450 BC. Another example of this kind of house was seen at Scotstarvit I in Fife which was 19m in diameter. A survey of unenclosed settlements in Northumberland has suggested that 50% consisted of a single house (Gates, 1983) and it is speculated that the size of the structure at Delhi may have housed a large or extended family and with certain areas used for the winter stalling of cattle (Holbrook, 1988).

Area 3, Pit 666, structures 2, 3, 4, 5 enclosure 2 and pits 621, 545 and 437

7.6 The complex of structures in Area 3 was unenclosed and represented multi-phased settlement remains with associated storage structures and possible industrial activity. The settlement had been fairly long-lived with the realignment of the structures representing at least six sub-phases of settlement and one earlier sub-phase of probable refuse deposition. The structures had all suffered truncation from later phases of cultivation and drainage and all were constructed using the same techniques.

7.7 The earliest feature was a refuse pit (666), which predated the initial structures. The first two structures (2 and 3) were roundhouses which appear to have been used as a residence (3) and possibly storage (2). The residence was built using a wall construction trench which would have supported a timber wall and was ringed by drip gullies, no internal features were apparent and the doorway faced to the east. The store house was of the same construction though smaller and may have contained two opposing entrances, easy to enter with carts or for keeping animals in or may also be indicative of a threshing area.

7.8 The succeeding structure (4) underwent two rebuilds both of which were of similar dimensions and constructions and the final phase and included a trapezoidal enclosure which appeared to be open on one side however the presence of earlier structures along this open side may have acted as a fence. The enclosure was interpreted as being used for animal husbandry or as a garden plot.

7.9 The final structure (5) was associated with several pits which been cleaned out and re-cut. The pits fills were burnt and contained burnt stones and the natural subsoil into which they were cut was also heat affected. They may have been used for some type of industrial purpose or simply been used for cooking or washing. No slag or pottery sherds were found in association with the pits, which have been recovered from similar pits seen at sites such as Danebury, where they were interpreted as clamp kilns (Cunliffe 2000).

7.10 The average size of an Iron Age roundhouse was approximately 9m in diameter and would have been composed of low walls of wattle and daub or logs, with a high conical roof of thatch or skins. Single families may have occupied one or two houses and anthropological evidence suggests that between five and nine people could occupy a 10m diameter house. (Breeze, 1982). At Brandon in County Durham, a roundhouse was excavated which was represented by a circle of posts later replaced by a wall bedded in a continuous trench, inside which a multiple setting of posts would have supported the main weight of the roof (Gates, 1983). Another roundhouse at Harehope was made of split timbers erected as a continuous wall rather than wattle infilling between individual posts (Cunliffe, 1978). These types of construction are very similar to those of the roundhouses at Delhi. At Chester House a period of abandonment was recorded in the settlement which may also have been the case at Delhi. Also at Chester House an enclosure which was interpreted as being for drainage and to protect animals from predators rather than for defence (Holbrook 1988). Enclosure 2 at Delhi appears to have been constructed for the same reasons. The roundhouse beneath South Shields fort in Tyne and Wear was associated with a cultivation plot.

Area 4, enclosure 3 and structures 6 and 7

7.11 Within Area 4 the remains appeared to be of a later date then the unenclosed settlements to the south. It comprised two roundhouses and a field boundary division which enclosed them. The roundhouses were of a similar construction to those of the multi-phased complex, comprising wall trenches. These structures were in a better state of preservation and had some internal postholes. The postholes and gullies within structure 6 were not entirely coherent but possibly reflected internal partitioning dividing the inner from the outer areas of the house. Bewley (2003) suggests that space inside roundhouses was divided into a central area, the public area, the outer area being the private space.

7.12 The enclosure with possible corralling/stock funnel remains is likely to be of the same date as the roundhouse structures and may have acted as an enclosure for this purpose. Archaeological evidence from excavated sites in the Tyne - Forth area has indicated that palisaded or earthwork enclosures had multiple defence systems for the deliberate provision of protecting or corralling space for livestock.

Medieval: Phase 2

Area 2, enclosure 1

7.13 During the medieval period an enclosure was constructed which used a fenceline and a probable drainage gully which lined the fence and a further drainage gully located just to the periphery of the enclosure. The enclosure was truncated by later mining activity but it is assumed that it may have been sub-circular in form and was likely to have been used as a stock pen or enclosed a space for planting.

Areas 1, 2, 3, 4 and 5, cultivation furrows

7.14 The later phase of medieval activity indicates a shift in agricultural practice and relates to the open field ridge and furrow cultivation associated with two medieval settlements in close proximity, those of Blagdon and Milkhope.

Phase 4: Post-medieval

7.15 The earliest features within this phase were horticultural features located close to one of the main driveways into the Hall. These consisted of an avenue of trees (899), a probable parterre (852) and brick and stone culverts which dated to the 18th century. The large sandstone culvert (544) may have stood above the topsoil and been part of the landscaping as an ornamental feature. The second phase of activity may be indicative of a shift in the focus of the garden to more of an agricultural nature incorporating drainage and boundary delineation. The Hall at Blagdon was built between 1735 and 1752, during which time the first gardens were laid out in the surrounding parkland, with alterations made in the late 18th century. The prevalent form of garden design at this time was that of the 'naturalised' parkland created by Lancelot "Capability" Brown, who was actually born in Northumberland (Taylor, 1983). Gardens were engineered to look natural, and often included avenues and clusters of trees. In some parkland areas of ridge and furrow were flattened to smooth out the landscape (Taylor, 1983). Later additions to the gardens in the 20th century were carried out by Gertrude Jekyll and Edward Lutyens.

7.16 A system of agricultural drainage and boundary ditches were encountered which probably dated to the 19th century. These may have reflected a time when the parkland had diminished in size and became more utilitarian and agriculturally focused.

Phase 5: Modern

7.17 The final phase of activity on site relates to coal mining and consists of inspection pits for coal working and a mine shaft with an associated haul road and late World War II expedient opencast mines. This method of coal extraction through surface mining, previously unknown in Britain, began in 1941 using machinery from the United States and Panama.

8.0 ASSESSMENT OF THE SITE ARCHIVE

8.1 Initial analysis

As part of the assessment of the site records the following level of analysis has been undertaken:

1. A provisional matrix for the site was drawn up showing the stratigraphic relationships of all 899 contexts.

2. Plans and sections were checked against context record sheets to ensure cross-referencing. Catalogues of context and finds records have been put onto a computerised database.

3. Catalogues of slide and print photographs, and illustrations have been input onto a computerised database.

The quantification of the site record is as follows:

Table 1: Primary archive inventory

Context descriptions	899
Plans	99
Sections	259
Colour slides (films)	25
Black and White photographs (films)	26

8.2 Recommendations for further analysis

Further work needs to be carried out on the site matrix, especially in conjunction with C14 dating so that more reliably phased information on the site chronology can be attained. Once phased the context record can be listed and described phase by phase to produce a more detailed site narrative report. Detailed phase plans should also be drawn up which illustrate all structural features.

Further analysis of the site record should be carried out in order to establish detailed interpretation of the site and the reasoning behind the conclusions reached.

The results of the detailed analysis of the site archive should be integrated with specialist analysis of the finds recovered and synthesised into an illustrated report prepared for publication.

8.3 Storage and curation

The written, drawn and photographic records and soil samples are currently held by NAA. The soil samples were sent to Palaeoecology Research Services and a representative proportion has been processed for this assessment. The artefacts recovered from the samples are included within the relevant specialist assessments.

The retention and disposal policy for the assemblage from Delhi will be to retain the prehistoric artefacts and dispose of the post-medieval artefacts, because the latter assemblage is not significant in regional terms. The archive will be placed in the Museum of Antiquities in Newcastle Upon Tyne after completion of specialists' studies, subject to the agreement of H. J. Banks and Company Ltd. All material would be appropriately packaged for long-term

storage in accordance with both national guidelines (SMA 1995) and to the requirements of the museum.

9.0 SPECIALIST FINDS ASSESSMENTS

9.1 Processing and quantification

Washing of the bulk finds, including animal bone, was completed following the excavation. All finds recovered have been recorded, marked where appropriate, packed in labelled bags and placed in labelled museum storage boxes. A finds database was produced in order of context number. This database tabulates the artefact type, quantity and includes a brief description. The finds assemblage from Delhi is summarised below.

Table 3: Finds assemblage

Type	**Quantity**
Flint	9
Pottery	20
Clay tobacco pipe	3
Cu alloy	1
Iron	4
Glass	9
Glass bead	1
Worked stone	2
Ceramic building materials	10
Fired clay	1
Animal bone	5
Wood	2
Environmental samples	32

Flint (Appendix B)

Peter Rowe

Summary

9.2 The assemblage consisted of nine flints, seven unstratified pieces (75), one from a pit fill (157) and one from a ditch fill (834). The flint is good quality with the vast majority being red/brown items. The other two items (from context 75 and 834) are both small natural pebbles with no evidence for knapping and are of quite different material. There is no patina development on any of the knapped pieces and cortex is present on two of the knapped items. The flint is in keeping with a pebble-derived source such as beach pebbles or glacial gravels and there is no evidence for post-depositional damage. A single flake from context 75 is burnt and had been lightly fired. The flints from context 75 are largely from tertiary stages of core reduction. They consist of six flakes and

a small angular fragment. Only one of the flakes is a primary example with its outer face being largely cortical. Three of the six pieces from this context demonstrate utilisation or retouch. Two of the larger flakes have edge damage consistent with light modification caused by use. The largest flake has a deliberately modified edge with scaled retouch forming a knife-like edge. The single flint from this context is a small tertiary flake (18mm x 11mm x 3mm) with abrupt retouch along its end. This small collection, largely from an unstratified context is not particularly period diagnostic although certain trends can be recognised. The knapped pieces from context 75 generally form small flakes knapped with hard hammer stones. The technology employed is expedient using local raw materials to create suitable flakes. Where worked into tools ad hoc retouch or light edge trimming has been used to create suitable cutting implements. These features are consistent with the characteristic of later Bronze Age and Iron Age assemblages set out by Humphrey and Young (Humphrey, J & Young, R, 1999). The single retouched flake from context 157 has a more diffuse bulb of percussion and was probably knapped with a soft hammer. The flake is thin and knapped with a greater degree of control. Although the artifact type itself is not period diagnostic it might be suggested that the flake dates from earlier prehistory, perhaps the Neolithic or early Bronze Age.

Recommendations

9.3 The archaeological potential of the assemblage is limited and no further work is recommended.

Glass bead (Appendix C)

Jennifer Jones and Catrin Jenkins

Summary

9.4 A complete glass bead (13.5mm - diameter, 5mm - diameter, perforation). The bead was made from water white glass, which now appears rather opaque, due to wear and weathering of the surface. It is decorated with three almost contiguous spiral trails of yellow opaque glass. The trails were probably applied by hand to the surface of the plastic bead, which was then lightly rolled to set the yellow glass flush with the water white surface. The bead is an example of a "Meare spiral" glass bead. The design is thought to date from 400-100BC, possibly as late as 100AD.

Recommendations

9.5 It is recommended that the bead be drawn for inclusion in any publication.

Prehistoric Pottery (Appendix D)

Blaise Vyner

Summary

9.6 A single small sherd (5g) was recovered from the excavation. It has a brown-grey interior surface that had been removed through spalling. The fabric is dark grey with many small, medium and large angular quartzitic grits. The fabric is hard fired and somewhat laminated. The sherd has few distinctive chronological traits, the vessel form is indistinguishable and the surviving surface area has no decoration. The hard-fired nature of the fabric suggests it is likely to be pre-Roman Iron Age. Hand-made vessels are also a feature of the early medieval period, but the use of quantities of medium-sized quartzitic grits is in the north-east also more likely to be a characteristic of the pre-Roman Iron Age.

Recommendations

9.7 No further work is recommended and the sherd should be retained in the appropriate repository.

Pottery (Appendix E)

Jenny Vaughan

Summary

9.8 Nineteen fragments of pot weighing were recovered. Six of these were medieval and the rest of 18th century or later date. None of the medieval fragments were necessarily later than the mid 13th century. Two fragments from plough furrows (69 and 74) could be early 13th century. Two other medieval fragments were unstratified (75) and one was associated with later features (619). The post medieval material was all recovered from features related to later drainage activity.

Recommendations

9.9 The assemblage is too small to lend itself to any further interpretation or analysis. No further work is recommended.

Clay Tobacco Pipe (Appendix F)

Jenny Vaughan

Summary

9.10 Two fragmentary bowls and a stem were recovered from the site. One of the bowls is a Tyneside type 6 and the other possibly a type 9. Type 6 has a date

range of *c*.1650 to 1680 and type 9 *c*.1680 to 1710 so both could be contemporary. The stem was unstratified but its large bore also indicates a 17th century date.

Recommendations

9.11 No further work is recommended.

Ceramic Building Material Assessment (Appendix G)

Catrin Jenkins

Summary

9.12 An assemblage of ten pieces of ceramic building material (CBM) from five contexts, with a total assessment weight of 16371g was submitted for assessment. The assemblage included samples of three complete and three near complete bricks and two pieces of pantile. The assemblage is all post-medieval in date and the majority appears to have been used or reused for drainage likely to be associated with Blagdon Hall park.

9.13 The bricks recovered from the brick culverts (546 and 547) were all hand-clamped and dated to the 18th century. these culverts are likely to have been associated with the 18th century Blagdon Hall gardens. The residual brick recovered from ditch fill 635 was also hand-clamped and dated to between the early 18th to 19th centuries. The brick from the soakaway drain 696 was also hand-clamped and dates to the early 18th century. This brick was reused as a fill for the drain during the later garden alterations as the drain was from a later phase of activity than the brick culverts. The pantiles are likely to post-date 1666 and can probably be attributed to the earliest phase of hall construction in the middle of the 18th century.

Recommendations

9.14 The CBM is all post-medieval in date and the majority appears to have been used or reused for drainage likely to be associated with Blagdon Hall park. The material is not particularly diagnostic and may be discarded. No further work is recommended on the assemblage.

Glass Assessment (Appendix H)

Sarah Wilkinson

Summary

9.15 Nine fragments of glass weighing 52g was recovered from three contexts during excavations. Of these only one fragment was vaguely diagnostic. The pale green, bottle lip from pit 535, was from a late-17th century wine bottle originally sealed by a loose fitting wedge-shaped cork tied down to a 'string

ring', a ridged band on the neck just below the lip. The remaining pieces were probably late-18th or 19th century wine bottle fragments.

Recommendations

9.16 No further work is recommended on the assemblage.

Conservation Assessment (Appendix I)

Jennifer Jones

Summary

9.17 Five objects (four iron and one copper alloy) were received for examination, conservation assessment and X-radiography. All material was found to be moderately corroded when examined, except for a nail fragment (650AA), which was highly corroded. All objects were stable. X-radiography showed all the ironwork to be nails or fragments of nails. One piece (438AB) has possible mineralised wood covering the shank. The copper alloy buckle frame has no decoration, and the XR shows no evidence of surface plating, though much of the surface corrosion appears to be lost.

Recommendations

9.18 The material is well packed for medium to long-term storage and should continue to be stored in an airtight container at a stable temperature and below 40% RH, to inhibit further corrosion. The RH should be controlled by active silica gel, which is regularly monitored and regenerated as necessary. No further conservation work would be recommended for the artefacts.

Recorded Finds Assessment (Appendix J)

Sarah Wilkinson

Summary

9.19 The five metal objects and two stone artefacts were recovered from six contexts during the excavation. The metal objects were a copper alloy buckle and four iron nails. The objects are not unusual finds and represent objects relating to a personal and structural nature. Although the objects can be identified by form and function, only the buckle can be more closely dated to circa 1500–1600. The nails are of a long-lived form and could have been used for a variety of purposes. Two worked stones were also recovered which were a hammer stone and a sandstone block with a sub-circular depression on one face, reused in culvert 824. The worked stone objects, although of interest, cannot be closely dated. The original function of the re-used block is uncertain, however the size and shape of the other stone object allows a tentative identification as a possible hammer stone.

Recommendations

9.20 The assemblage of small finds from Delhi has limited potential for further analysis, however, further research and comparative analysis could be carried out on the two stone objects and if the site proceeds to full publication, a short summary should be included. The finds should be kept and deposited in the relevant museum together with the rest of the archive.

Biological Remains Assessment (Appendix K)

John Carrot and Deborah Jaques

Summary

9.21 Biological remains recovered from 31 sediment samples, three unprocessed potential radiocarbon dating samples and a very small quantity of hand-collected bone from excavations at Delhi, were submitted for an evaluation of their bioarchaeological potential. Ancient biological remains recovered from the NAA processed subsamples were largely restricted to small quantities of poorly preserved, silted and somewhat rounded fragments of charcoal, presumably from wood burnt as fuel but of no real interpretative value. Three of these samples also gave a few poorly preserved charred grains (contexts 26 and 410) or charcoal roundwood (context 409) that would provide material for radiocarbon dating. A few of the deposits (contexts 250, 520, 550 and 551) gave larger quantities and some (contexts 250, 434, 550 and 551) contained individual pieces which may be identifiable to species level. The poor preservation rendered identification difficult but context 410 appeared to contain grains of both oat and wheat. In addition, deposits 26 and 410, and also context 250, gave a few charred 'seeds'. The three unprocessed samples did not provide remains that could be recommended for submission for radiocarbon dating, although charcoal was present in two.

9.22 Modern contaminant plant remains, mostly in the form of rootlets, were present in all of the examined deposits and some also contained modern earthworm egg capsules. Given that, no other evidence of waterlogged preservation of ancient remains was recorded. Overall, the assemblages were too small and too poorly preserved to be of any interpretative value. Some of the remains would provide sufficient suitable material for radiocarbon dating to be attempted. The poor preservation of the recovered biological remains suggests that conditions within the deposits at this site are not conducive to their survival. Any future excavation in the vicinity should, perhaps, allow a small contingency for the possibility of encountering deposits in which charred plant remains and/or bone are better preserved, but the likelihood of recovering substantial assemblages of interpretatively valuable biological remains is very small

9.23 The collection of hand-collected vertebrate remains was restricted to fragments of teeth or tooth enamel (contexts 659, 732 and 863), together with two fragments of burnt bone (contexts 389 and 634). With the exception of a horse

incisor from context 863, the remains were of poor preservation and could not be identified to species. In two cases, tooth fragments and bone from contexts 659 and 389 respectively, the sediment was still adhering to the fragments and had this been removed the bone/tooth would have broken into tiny pieces. The horse incisor represented an animal that was at least 8 years of age when it died. The very small collection of hand-collected vertebrate remains showed no potential for providing zooarchaeological or archaeological information.

Recommendations

9.24 Other than any processing and preparation required to recover and submit remains for radiocarbon dating, no further study of the biological remains from this site is warranted. In general, it is recommended that charcoal recovered from these deposits is not used for radiocarbon dating; the exception to this being the roundwood fragment from Context 409.

Luminescence Dating (Appendix L)

University of Durham

Summary

9.25 Core samples of sediment from two pits (205 and 155) in pit alignment 230 were taken and submitted for optically stimulated luminescence (OSL) dating. The luminescence samples were prepared by sub-sampling the inner volume of the cores under subdued red lighting in the laboratory. The results of initial suitability tests with both samples indicated that sample 331-2 from Pit 205 contained material that had not been sufficiently exposed to daylight before burial, producing potentially unreliable dates of burial of the sediment, whereas sample 331-1 from Pit 155 was potentially suitable. After subtraction of the test year (2006) from the luminescence age, the luminescence date is given with two associated errors at the 68% level of confidence.

Results

Lab. Reference	Site Reference	Luminescence date(1)
Dur06OSLQi 331-1	DBH05 157North-west facing section through pit 155 showing secondary fill 157	735 B.C. ±75; ±220
Dur06OSLQi 331-2	DBH05 237North-west facing section through pit 205 showing secondary fill 237	Not done- suspected incomplete zeroing before burial.

10.0 PROPOSED POST-EXCAVATION ANALYSIS PROGRAMME

10.1 The aim of the post-excavation analysis programme will be to produce a final report for publication and a well ordered, clearly indexed archive for deposition in the Museum of Antiquities, Newcastle Upon Tyne.

10.2 In accordance with English Heritage guidelines (1991, 21) this work will be approached in two stages:

1. Compilation of a research archive, involving work on the stratigraphy, artefacts and environmental data and the production of catalogues, illustrative material and both narrative and artefact reports.

2. Selection of data from the research archive to produce an integrated report text for publication.

The overall sequence of the programme would be as follows:

Stage 1: stratigraphic analysis and radiocarbon dates

Stage 2: site narrative, archive illustrations and preparation of specialist reports

Stage 3: integration and synthesis of stratigraphic and artefactual records

Stage 4: preparation of publication report text and illustrations

Stage 5: archive deposition

10.3 Stratigraphic record

Stage 1

The need to finalise a secure dating framework for the sequence deposits/features at the site is of primary importance. The preliminary phasing of the excavated evidence undertaken during the process of the post-excavation assessment will be reviewed and amended in the light of additional scientific dating information obtained.

Stage 2

Once the stratigraphic sequence has been established a detailed site narrative report, based upon each phase of the site development, will be prepared. Archive illustration phase plans will also be drawn up. Further literary research of other excavated sites would be undertaken to assist with the interpretation of the excavated evidence, and to place Delhi within its local, regional and national contexts. Parallels with other prehistoric sites need to be examined, particularly the types of structures represented.

Stage 3

The stratigraphic and structural evidence will be integrated with the artefactual and environmental evidence and the function of different site areas within each phase.

Stage 4

Upon receipt of the relevant specialist report a synthesised summary text will be prepared for publication. It is proposed that the excavations at Delhi be published in an appropriate journal or as a monograph.

Stage 5

Upon completion of the publication report and associated specialist assessments the indexed site archive (paper and artefactual records) will be deposited at the museum of Antiquities, Newcastle-upon-Tyne.

10.4 Artefactual record

The further analysis of the principal finds and environmental assemblages can be summarised as follows:

The post-medieval artefactual material can be discarded as it is of little diagnostic value and analysis would not contribute to any further understanding to the site.

Pottery

The prehistoric pottery should be recorded in detail with illustration for inclusion in the site archive and publication report.

Glass bead

Further analysis and investigation of the bead is recommended with illustration for inclusion in the site archive and publication report.

Worked stone

The worked stone should be submitted for analysis and illustration for inclusion in the site archive and publication report

Animal bone

It is recommended that fragment counts and biometrical data should be recorded. Also where possible identification and additional processing of specific samples will be required to recover a larger assemblage.

Biological remains and fired clay

Specific samples should be processed and the waterlogged, charred, uncharred and mineralised plant assemblages principally from the richest contexts, together with those from other well dated and phased samples, should be identified and reported on. The spatial distribution of the assemblages will need to be re-assessed in the light of the re-phasing of some

of the contexts and the post-excavation results of the environmental analyses. Fired clay recovered from the site should be submitted for assessment and analysis.

11.0 CONCLUSION AND RECOMMENDATIONS

11.1 The archaeological excavations at Delhi identified significant and extensive remains dating from the prehistoric period to the modern period across all of the areas on site. Prehistoric remains were encountered in four of the five areas and provide evidence for settlement, land division, agriculture and probable small-scale industry dating from the Bronze Age onwards. The prehistoric sequence represents well-preserved and multi-phased boundaries, unenclosed and enclosed settlements occupied over a substantial period of time. It is clear from the excavations that the remains are probably part of more extensive settlements within the vicinity and that the various shifts and realignments of the structures and boundaries uncovered reveal a long history of occupation.

11.2 The North-East Regional Research Framework (NERRF) for the Historic Environment (Petts and Gerrard 2006) provides a structured approach to examining the significance of individual sites and how they can enhance our understanding of the past. The document highlights areas of study which are poorly understood or of particular interest. At Delhi the significant remains are dated to the Late Bronze Age and Iron Age, and five research themes have been addressed in the NERRF document which are of relevance to the archaeological features encountered. These are; the development of chronologies based on scientific dating techniques; the improved understanding of the later prehistoric landscapes focusing not just on individual settlements but their place within the wider landscape; increased understanding of settlement function including layout and associated networks of fields systems and enclosures; and improvement of material culture understanding with use of scientific dating techniques to achieve a more secure chronological framework for pottery. Additionally regional variation within the British Iron Age is considered to be a fundamental objective of research (Haselgrove *et al*. 2001, English Heritage 1997).

11.3 The scale of the investigation of the site at Delhi facilitates an understanding of the gradual change from the monument-dominated landscape of the Neolithic and Early Bronze Age to the settlement-dominated landscape of later prehistory, noting that such changes were neither uniform nor synchronous across Britain. The move to semi-permanent farming where communal effort was focused on control and organisation of the landscape in the Middle Bronze Age (c. 1500-1200) is reflected in the earliest remains at Delhi. Later occupation evidence is provided in both unenclosed and enclosed settlements and agricultural remains. Further analysis of the features and radiocarbon dates from the site will permit a greater understanding of settlements of Iron Age date.

11.4 The inferences suggested can only be tested by the use scientific dating and so radiocarbon dating of selected deposits would improve the data set for this region and the general site chronology. It is recommended that they are taken from appropriate deposits from Bronze Age features and several of the Phase 2 features. The results of the excavations of the site when published, will therefore contribute substantially to the regional picture and add to the study of settlement distribution and the poorly understood process of settlement change within the region. Haselgrove (2002) points out that although there is generally a paucity of artefactual material culture from late Bronze Age and Iron Age settlements such as at Delhi, they are unique and significant and where they cannot be preserved should be extensively studied within their wider landscape context. This contribution to settlement models and landscapes of the prehistoric period for the region will enable a greater understanding of how such settlements fit within the variations at a national level.

11.5 Further work is also recommended on the horticultural features identified within Area 4. Research and investigation into documentary evidence held by the Blagdon estate may provide dates and plans for these features.

APPENDIX A: CONTEXT, FINDS AND SAMPLES CATALOGUE

Sarah Wilkinson

Table A1

Context	Finds code	Material	Object type	Artefact description	Period	Quantity	Weight (g)
6	AA	Sample	Bulk			2	
9	AA	C14 sample		Small bag		1	
9	AB	Sample	Bulk			3	
17	AA	Wood	Obj?	Possibly worked from bell pit	Post-medieval	1	
22		Pottery		Tiny sherd	Medieval	1	1
26	AA	Sample	Bulk			1	
68	AA	Sample	Bulk			3	
69		Pottery		Rim sherd	Medieval	1	9
72		Stone	Natural?	Egg-shaped quartz-like pebble!		1	22
74		Pottery		Body sherd	Medieval	1	7
75		Clay pipe		Plain bowl fragments	Post-medieval	2	20
75		Flint		Miscellaneous flakes and fragment	Prehistoric	7	23
75		Pottery		Body sherds	Medieval	2	14
75	AA	Cu alloy/Ag?	Buckle	Square framed, single loop with moulded sides. Possible traces of silver plating?	1500 - 1600 AD	1	11
109	AA	Sample	Bulk			3	
148	AA	Worked stone	Hammer stone?	Sub-spherical, coarse-grained sandstone. Heat affected.	?	1	359
157		Flint		Flake	Prehistoric	1	2
157		OSL sample				1	
194	AA	Sample	Bulk + C14 ?			3	
233	AA	C14 sample		Small bag		1	
237		OSL sample				1	
238	AA	C14 sample		Small bag		1	
250	AA	Sample	Bulk			3	
310	AA	Sample	Bulk			3	
314	AA	Sample	Bulk + C14			1	
317		Wood		Small fragments		4	17
361	AA	Fe	Nail	Incomplete, hand-made		1	10
361	AB	Fe	Nail	Incomplete, hand-made		1	8
381	AA	Sample	Bulk			3	
389		Animal bone		Very small frags, burnt		1	51
389	AA	Sample	Bulk			3	
409	AA	Sample	Bulk			3	
410	AA	Sample	Bulk			3	
434	AA	Sample	Bulk			3	
438		Stone	Natural?	Ironstone?		1	278
438	AA	Sample	Bulk			2	
438	AB	Fe	Nail?	Or possible object?		1	18
445	AA	Sample	Bulk			3	

Context	Finds code	Material	Object type	Artefact description	Period	Quantity	Weight (g)
514		Fired clay		Very small piece		1	0
520	AA	Sample	Bulk			3	
522	AA	C14 sample		Small bag		1	
539		Clay pipe		Plain stem	Post-medieval	1	3
539		Glass	Bottle	Green wine bottle neck and lip	Post-medieval	1	18
546	AA	Brick sample	1 of 3	Near complete: 230 x 115 x 60mm. In 2 frags. Heat affected	Post-medieval	1	2400
546	AA	Brick sample	2 of 3	Near complete: 230 x 115 x 60mm. In 2 frags. Heat affected	Post-medieval	1	2400
546	AA	Brick sample	3 of 3	Diagnostic: -- x 110 x 65mm. 7 frags. Heat affected.	Post-medieval	1	1800
547	AA	Brick sample	1 of 3	Complete: 220 x 110 x 65mm. Heat affected	Post-medieval	1	2700
547	AA	Brick sample	2 of 3	Complete: 235 x 120 x 55mm. (2 frags). Heat affected	Post-medieval	1	2500
547	AA	Brick sample	3 of 3	Complete: 230 x 115 x 60mm. Heat affected	Post-medieval	1	2700
550	AA	Sample	Bulk			1	
551	AA	Sample	Bulk			3	
569	AA	Sample	Bulk			1	
583	AA	Sample	Bulk			1	
588	AA	Sample	Bulk			1	
608		CBM	Brick	Non diagnostic	Post-medieval	1	607
608		Pottery		Staffs slipware	Post-medieval	2	29
619		Pottery		Body sherd	Medieval	1	4
634		Animal bone		1 burnt frag		2	2
635		CBM	Brick	Diagnostic: -- x 114 x 52mm. Sooted.	Post-medieval	1	394
650	AA	Fe	Nail	Shank		1	2
654	AA	Sample	Bulk			3	
656	AA	Sample	Bulk			3	
659		Animal bone	Tooth	Small tooth frags		1	65
665	AA	Sample	Bulk			3	
669	AA	Sample	Bulk			1	
691	AA	Glass bead		Meare spiral type, yellow inlay, annular shape.		1	2
695		CBM	Brick	Diagnostic: -- x 116 x 57mm. Overfired	Post-medieval	1	575
695		CBM	Roof tile	Non diagnostic pantile	Post-medieval	2	295
695		Ceramic	Plant pot	Base fragment	Post-medieval	1	82
708	AA	C14 sample		Small bag		1	
732		Animal bone	Tooth	Tooth frags		10	2
734		Pottery		Small sherd, large ?mica inclusions	Prehistoric	1	6
738	AA	Sample	Bulk			3	

Context	Finds code	Material	Object type	Artefact description	Period	Quantity	Weight (g)
753	AA	Sample	Bulk			3	
757		Stone	Natural?	Ironstone		1	413
757	AA	Sample	Bulk			1	
758	AA	Sample	Burnt material	1 bag		1	
797	AA	Sample	Bulk			3	
817		Glass	Bottle	Small green fragments	Post-medieval	6	32
817		Pottery		6 pot sherds, 1 glazed ?tile	Post-medieval	7	111
824	AA	Worked stone	Obj	Large, rectangular, coarse-grained sandstone block. Rough chisel marks, partial perforforation	?	1	10000
834		Flint		Frag	Prehistoric	1	4
856	AA	Sample	Bulk			3	
863		Animal bone		Tooth		1	8
863		Glass	Bottle	Olive green fragments	Post-medieval	2	2
863		Pottery			Post-medieval	3	62

APPENDIX B: FLINT ASSESSMENT

Peter Rowe

Introduction

This report summaries a small assemblage of nine flints recovered during archaeological monitoring and excavation (see Fig. 1). Seven of the nine pieces are unstratified finds from Area A. The remaining pieces are from context 157, the secondary fill of pit 155 and context 834, the secondary fill of field boundary ditch 836.

The entire assemblage has been catalogued using Microsoft Excel. The following variables have been catalogued:-

- raw material type (e.g. flint, chert, agate)
- raw material colour
- percentage of cortex
- cortex type (e.g. reduced, chalky)
- percentage and patina colour
- type of artefact (e.g. flake, blade, core)
- interpretation (e.g. scraper, arrowhead)
- period
- maximum dimensions
- method of knapping (e.g. hard hammer percussion)
- whether burnt
- whether damaged

The full catalogue is available with the site archive. A summary of the material is presented in Table 1.1 below:

Table B1: Quantities of flint by context and type

Context	Flint Type	Quantity
75 (u/s)	Angular debitage	1
	Flakes	5
	Natural Pebbles	1
157	Flake	1
834	Natural Pebble	1
Total	9	

General composition

RAW MATERIAL

This small collection of lithics is very homogenous in raw material character. The only material present is flint. There are no examples of other materials such as chert, quartz, agate or jasper. The vast majority of the flints are red/brown items. This flint is good quality with little in the way of flaws or fossils and is translucent at the edges of thinner pieces. Six of the seven pieces from context 75 along with the single flake from context 157 are of this material. The other two items are both small natural pebbles with no evidence for knapping and are of quite different material. The pebble from context 75 is a shattered fragment of grey/brown flint that has fractured around a crystalline inclusion within its body. The pebble from context 834 is a small angular chunk of light brown material.

There is no patina development on any of the knapped pieces although the grey/brown pebble from context 75 has the beginnings of a mottled cortication.

Cortex is present on two of the knapped items and on both pebbles. In all cases the cortex is heavily reduced in section, through glacial or wave action, suggesting that the raw material has been procured within the region. The flint is in keeping with a pebble-derived source such as beach pebbles or glacial gravels.

DAMAGE

The material from the collection appears to have retained its integrity and there is no evidence for post-depositional damage.

A single flake from context 75 demonstrates thermal damage from burning. This piece had been lightly fired resulting in a pot-lid lifting from its dorsal surface.

Technology

CONTEXT 75

The flints from context 75 (discounting the natural pebble) are largely from tertiary stages of core reduction. They consist of six flakes and a small angular fragment. Only one of the flakes is a primary example with its outer face being largely cortical.

Three of the six pieces from this context demonstrate utilisation or retouch. Two of the larger flakes have edge damage consistent with light modification caused by use. The largest flake has a deliberately modified edge with scaled retouch forming a knife-like edge.

CONTEXT 157

The single flint from this context is a small tertiary flake (18mm x 11mm x 3mm) with abrupt retouch along its end.

Conclusion

This small collection, largely from an unstratified context is not particularly period diagnostic although certain trends can be recognised. The knapped pieces from context 75 generally form small flakes knapped with hard hammer stones. The technology employed is expedient using local raw materials to create suitable flakes. Where worked into tools ad hoc retouch or light edge trimming has been used to create suitable cutting implements. These features are consistent with the characteristic of later Bronze Age and Iron Age assemblages set out by Humphrey and Young (Humphrey, J & Young, R, 1999).

The single retouched flake from context 157 has a more diffuse bulb of percussion and was probably knapped with a soft hammer. The flake is thin and knapped with a greater degree of control. Although the artifact type itself is not period diagnostic it might be suggested that the flake dates from earlier prehistory, perhaps the Neolithic or early Bronze Age.

Recommendations

The archaeological potential of the assemblage is limited and no further work is recommended.

APPENDIX C: GLASS BEAD

Conservation: Jennifer Jones *Assessment: Catrin Jenkins*

SF No : AA Context : 691 X-radiograph No : none

Object : Bead Material : Glass

Description

Complete glass bead, 13.5mm diameter, with a 5mm diameter, slightly sub-circular perforation. The inside surface of the perforation is rough and slightly ridged along its length, probably reflecting the shape of the rod used for perforation. The bead was made from water white glass, which now appears rather opaque, due to wear and weathering of the surface. It is decorated with three almost contiguous spiral trails of yellow opaque glass. The trails were probably applied by hand to the surface of the plastic bead, which was then lightly rolled to set the yellow glass flush with the water white surface. Occasional small gaps in the continuity of the yellow trails can be seen. Both glasses, but particularly the yellow, have air bubbles in the matrix, which have led to pitting of the glass surface. The bead was received with the perforation still plugged with soil. This was carefully removed under x16 magnification, but no trace of the stringing thread was found. There are numerous slight irregularities around the edges of the perforation on both faces, either reflecting the sub-circular shape of the perforating rod, or the result of chip damage during use. One face has a more sizeable chip lost from the edge of the perforation.

Condition

Stable. Under X16 magnification, a crack can be seen running through the thickness of the glass from one face to the other.

Conservation treatment

Surface soil and grit removed mechanically using H2O/IMS/detergent mix under X16 magnification. Allowed to air dry

Analysis

Very low levels of sodium and potash were detected in the surface EDXRF analysis. Potassium particularly is easily lost from the glass matrix during burial, and the low levels confirm that quite extensive surface leaching of the glass has occurred. Low levels of manganese were found, which may have been added as a decolourizer to produce the clear glass. Iron and lead were also detected. Iron is often found as a trace element in the sand which provides the silica content of a glass, but along with lead (and many other metal oxides) it was also extensively used as a glass colourant. Surface EDXRF analysis of leached glass should be regarded as being qualitative only.

Storage

May be stored in conditions of ambient temperature and relative humidity, avoiding extremes of both.

Assessment

The bead appears to be an example of a particular type of glass bead decorated with what is known as a "Meare spiral". This distinctive style of yellow and brown or yellow and water white bead takes its name from Meare in Somerset, in south-west England an area that has yielded over 50 different types of glass bead. The design, is thought to date from 400-100BC, possibly as late as 100AD and was made by painting vitreous glass onto the surface of the glass beads. It is distinctly different from the north Scottish black and yellow spiral design beads, which are of the same date.

APPENDIX D: PREHISTORIC POTTERY ASSESSMENT

Blaise Vyner

Treatment

In the fabric description hyphenated colours indicate the variation in colour expected from poorly controlled firing conditions, the first colour being that most in evidence. Grit sizes are expressed as small (<3mm) and medium (3-6mm), grit quantity has been described in relation to the estimated average number of pieces visible per 100mm square: occasional (1 or less), few (2), many (3 to 4) and numerous (5 or more). Sherd weight has been rounded to the nearest 5 g. No thin section analysis has been done and identification has been made using a 10× magnifying glass.

Context 734

Single small sherd, interior surface brown-grey, interior surface removed through spalling, fabric dark grey, many small, medium and large angular quartzitic grits. The fabric is hard fired and somewhat laminated, weight 5g.

This sherd has few distinctive chronological traits: vessel form is indistinguishable and the limited surviving surface area has no decoration. However, the hard-fired nature of the fabric would suggest that this is more likely to belong to the pre-Roman Iron Age than to any earlier period. Hand-made vessels are also a feature of the early medieval period, but the use of quantities of medium-sized quartzitic grits is in the north-east also more likely to be a characteristic of the pre-Roman Iron Age. A similar vessel fabric is seen in Fabric 5 at Middleton-on-Leven, North Yorkshire (Vyner, 2005) and on other sites in the lower Tees valley area.

Recommendations

It is recommended that the sherd is retained and illustrated within the analysis report.

APPENDIX E: POTTERY ASSESSMENT

Jenny Vaughan

Quantity, Date and Provenance

Nineteen fragments of pot weighing just over 300g were recovered during the monitoring. Six of these were medieval and the rest of 18th century or later date. None of the medieval fragments were necessarily later than the mid 13th century. Two fragments from plough furrows (69 and 74) could be early 13th century. Two other medieval fragments were unstratified (75) and one was associated with later features (619). The post medieval material was all recovered from features related to later drainage activity.

Range and variety (see table below)

Table E1

Context	Type	No.	Wgt.	Date	Comments
22	Early glazed ware	1	<1	M	Tiny
69	Pink sandy ware	1	10	M	Thin clubbed jar rim. Pinkish surfaces with darker orange margins and thin grey core
74	Buff gritty ware	1	8	M	
75	Early glazed ware	1	7	M	With splashed glaze
75	Green glazed gritty	1	4	M	Light grey with buff internal surface, green glazed. Some large inclusions.
608	Glazed redware with slip	2	26	18th c.>	Flanged bowl rim, glazed inside with manganese (brown) mottled white slip.
619	Orange sandy ware	1	1	M	Orange with thin grey core.
695	Unglazed redware	1	74	18th c.>	Base of flower pot
817	Glazed redware with slip	1	50	18th c.>	Base with internal slip, unglazed exterior.
817	Creamware	5	44	18th c.>	Profile of plain creamware plate.
817	Refined whiteware	1	14	18th c.>	Thick flat frag with crazed glase.
863	Refined whiteware	3	65	18th c.>	Thick flat frags.

Condition

The medieval sherds were small and abraded. The later material was less fragmented. Both groups are currently stable.

Methodology

The assemblage was catalogued by context with counts and weights per type recorded.

Potential

The assemblage is too small to lend itself to any further interpretation or analysis.

Recommendations

No further work is recommended on the assemblage and it should be discarded.

APPENDIX F: CLAY TOBACCO PIPE ASSESSMENT

Jenny Vaughan

Summary

Two fragmentary bowls (context 75) and a stem (context 539) were recovered from the site. One of the bowls is a Tyneside type 6 and the other possibly a type 9. Type 6 has a date range of *c*.1650 to 1680 and type 9 *c*.1680 to 1710 so both could be contemporary. The stem was unstratified but its large bore also indicates a 17th century date.

Recommendations

No further work is recommended.

APPENDIX G: CERAMIC BUILDING MATERIAL (CBM) ASSESSMENT

Catrin Jenkins

Introduction

An assemblage of ten pieces of ceramic building material from five contexts, with a total assessment weight of 16371g was submitted for assessment. The assemblage included samples of three complete and three near complete bricks and two pieces of pantile.

Methodology

Assessment of the ceramic assemblage was undertaken with a visual scan of the retained material and a more detailed examination of the diagnostic examples. The resulting information was then compared with the known typologies and any correlation was recorded.

When comparing samples within collected assemblages and local typologies, the diversity of size and colour within the brick and tile caused during the manufacturing process must be taken into consideration. Variations in size and colour can be attributed to the differences in the clays, shrinkage during drying and firing in the kiln. The dating of ceramic building material can be highly contentious due to the reusable nature and therefore the date range given is that of the known dates where such bricks have been recorded.

Catalogue

Context 546 Brick culvert 3 bricks (11 fragments) Wt. 6600g

Fragment of near complete brick (1 of 3): 2 fragments, dimensions 230mm by 115mm by 60mm (9" x 4½" x 2¼"). Light pink (5YR/7/4). Overfired. Stock moulding impression on one surface 140mm x 20mm.

Fragment of near complete brick (2 of 3): 2 fragments, dimensions 230mm by 115mm by 60mm (9" x 4½" x 2¼"). Light red (5YR/6/6). Overfired. Stock moulding impression on one surface 140mm x 20mm.

Fragments of diagnostic brick (3 of 3): 7 fragments, dimensions ?mm by 110mm by 65mm (?" x 4½" x 2½"). Light red (2.5YR/5/6). Overfired. Stock moulding impression on one surface 120mm x 20mm.

Context 547 Brick culvert 3 bricks (4 fragments) Wt. 7900g

Complete brick (1 of 3): Dimensions 220mm by 110mm by 65mm (8½" x 4¼" x 2½"). Light red (2.5YR/5/6). Overfired. Some straw impressions on one surface obtained during drying stage of manufacture.

Complete brick (2 of 3): 2 fragments, dimensions 235mm by 120mm by 55mm (9¼" x 4¾" x 2"). Pink (5YR/7/4). Overfired. Some straw impressions on one surface obtained during drying stage of manufacture.

Complete brick (3 of 3): Dimensions 230mm by 115mm by 60mm (9"x 4½" x 2¼"). Light red (10R/6/6). Overfired. Numerous straw impressions on all surfaces.

Context 608 Fill of drain 609 1 brick fragment Wt. 607g

Fragment of non-diagnostic brick.. Light red (2.5YR/5/6). Mortar adhesions on one surface and moulding lip visible on one end.

Context 635 Fill of ditch 636 1 brick fragment Wt. 394g

Fragment of diagnostic brick: Dimensions ?mm by 114mm by 52mm (?" x 4½" x 2"). Light red (2.5YR/6/8). Sooting on one surface suggestive of refuse.

Context 695 Fill of soakaway drain 696 1 brick fragments Wt. 575g

Fragment of diagnostic brick: Dimensions ?mm by 116mm by 57mm (?" x 4½" x 2¼"). Light pink (5YR/7/4). Overfired. Straw impressions on one end obtained during drying stage of manufacture.

Context 695 Fill of soakaway drain 696 2 pantile fragments Wt. 295g

Fragments of non- diagnostic pantile: Red (10R/5/8). Curved shape in profile.

Discussion

Bricks and tiles in isolation do not provide an exact dates due to their reusable nature. However, it is possible to date types of brick and tile from their earliest occurrence within dated contexts. The presence or absence of particular bricks can suggest a variety of structural forms.

The bricks recovered from the samples taken from brick culvert 546 were all hand-clamped with the aid of a mould. The general physical size suggests a date range of between 1571 and 1725 though it is likely that they date to the latter part of this date range in the early 18th century. The brick samples from culvert 547 were largely similar to those from culvert 546 and were all hand-clamped and most likely dated to the early 18th century. These culverts can probably be attributed to the later half of the date range for this type of brick as the gardens at Blagdon Hall were laid out during the early 18th century and the culverts may have been associated with this work for drainage of the parkland.

The brick recovered from ditch fill 635 was hand-clamped and dated to between the early 18th to 19th century. The sooting on one of the surfaces suggests that the brick was refuse. Additional alterations were carried out to Blagdon Park in the late 18th century and the brick maybe associated with this activity.

The brick from the fill 695 from soakaway drain 696 was also hand-clamped and dates to the early 18th century. It is likely that the brick was reused as a fill for the drain during the later garden alterations as the drain was from a later phase of activity than the brick culverts. Pantiles were introduced into London after 1666 and the pieces from this deposit most likely post-date this period and can be attributed to the earliest phase of hall buildings in the middle of the 18th century.

Conclusions and recommendations

The ceramic building material assemblage is all post-medieval in date and the majority appears to have been used or reused for drainage likely to be associated with Blagdon Hall park. The material is not particularly diagnostic and may be discarded.

Table G1

Context	Phase	Description	Finds code	Material	Object type	Artefact description	Qty	Wt (g)
514	2A	Fill of posthole 513		Fired clay		Very small piece.	1	<1
546	3A	Brick culvert	AA	Brick sample	1 of 3	Near complete: 230 × 115 × 60mm. In 2 frags. Heat affected.	1	2400
546	3A	Brick culvert	AA	Brick sample	2 of 3	Near complete: 230 × 115 × 60mm. In 2 frags. Heat affected.	1	2400
546	3A	Brick culvert	AA	Brick sample	3 of 3	Diagnostic: -- × 110 × 65mm. 7 frags. Heat affected.	1	1800
547	3A	Brick culvert	AA	Brick sample	1 of 3	Complete: 220 × 110 × 65mm. Heat affected.	1	2700
547	3A	Brick culvert	AA	Brick sample	2 of 3	Complete: 235 × 120 × 55mm. (2 frags). Heat affected.	1	2500
547	3A	Brick culvert	AA	Brick sample	3 of 3	Complete: 230 × 115 × 60mm. Heat affected.	1	2700
608	4B	Rubble fill of drain 609		CBM	Brick	Non diagnostic.	1	607
635	3A	Fill of ditch 636		CBM	Brick	Diagnostic: -- × 114 x 52mm. Sooted.	1	394
695	3B	Lower rubble fill of soakaway drain cut 696		CBM	Roof tile	Non diagnostic pantile.	2	295
695	3B	Lower rubble fill of soakaway drain cut 696		CBM	Brick	Diagnostic: -- x 116 x 57mm. Overfired.	1	575

APPENDIX H: GLASS ASSESSMENT

Sarah Wilkinson

Summary

A small assemblage consisting of nine fragments of glass weighing 52g was recovered from three contexts during excavations at Blagdon Hall. Only three pieces were from phase 3A and the remaining six from phase 3B. Of these only one fragment was vaguely diagnostic. The pale green, bottle lip from 539, was from a late-17th century wine bottle originally sealed by a loose fitting wedge-shaped cork tied down to a 'string ring', a ridged band on the neck just below the lip. A similar example can be seen from Botolph Street, Norwich (Margeson, 1993, 113). The remaining pieces were undiagnostic wine bottle fragments, probably late-18th or 19th century in date (Table 1).

Table H1

Context	Phase	Description	Object type	Artefact description	Qty	Wt (g)
539	3A	Fill of recut 538 of pit 535	Bottle	Green wine bottle neck and lip	1	18
817	3B	Fill of soakaway drain 816	Bottle	Small green fragments	6	32
863	3A	Fill of construction cut 823 for culvert 824	Bottle	Olive green fragments	2	2

Recommendations

The assemblage is of no particular diagnostic value and is of little significance. No further work is recommended on the assemblage and it can be discarded.

APPENDIX I: CONSERVATION ASSESSMENT

Jennifer Jones

Quantification and condition

Five objects (4 iron and 1 copper alloy) were received for examination, conservation assessment and X-radiography. The objects were briefly visually examined to assess their condition, to determine the material from which they were made, and to look for surface and technological detail.

All material was found to be moderately corroded when examined, except for the nail fragment 650AA, which was highly corroded. All objects were stable.

Moderately corroded metallic material is defined as having the surface detail, but not usually the general form of the object, obscured by corrosion products, and has some metal remaining below the corrosion.

Highly corroded metallic material is defined as either having both the form and the surface detail of the object obscured by corrosion, and/or having little or no metal remaining in its core.

Details of the artefacts examined were entered into a database which includes the context and small finds number, an identification of the material and of the object, where possible, the condition of the object when examined, its XR plate number, and any technological or other observations.

X-Radiography

The objects were sorted into groups of a similar density, which were X-rayed together. Two XR plates were used.

Results and Recommendations

X-radiography showed all the ironwork to be nails or fragments of nails. One piece (438AB) has possible mineralised wood covering the shank.

The copper alloy buckle frame has no decoration, and the XR shows no evidence of surface plating, though much of the surface corrosion appears to be lost.

No further conservation work would be recommended for the artefacts.

Storage

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

Table I1

Context	SF no	Material	Object	Condition	Qty	Observations	XR No
75	AA	CuA	Buckle frame	mc/st	1		5501
361	AA	Fe	Nail	mc/st	1		5500
361	AB	Fe	Nail	mc/st	1		5500
438	AB	Fe	Nail	mc/st	1	Possible mineralised wood	5500
650	AA	Fe	Nail frag	hc/st	1		5500

APPENDIX J: RECORDED FINDS ASSESSMENT

Sarah Wilkinson

Introduction

This report is based upon the guidelines of MAP2 'assessment of potential for analysis' issued by English Heritage (1991)

The five metal objects and two stone artefacts from Delhi were recovered from six contexts during a programme of archaeological monitoring of an extension to the opencast coal mining site in Blagdon Park, Delhi, Northumberland

Methodology

All the metal finds were X-rayed and examined to assess their condition and conservation needs by Jennifer Jones at Durham University (Appendix?? Conservation Assessment)

All the finds were examined with reference to the X-rays and the conservation assessment report, in order to assess the 'potential for analysis' and to make recommendations for any further investigative work by the conservator.

All the finds are packaged appropriately for long term storage in accordance with conservation and museum guidelines.

Summary

COPPER ALLOY

1. BUCKLE. Context 75AA. Unstratified.
A square-framed, single-looped buckle, missing the tongue. The D-shaped moulded sides splay out towards the bar and the undecorated frame shows no evidence of any remaining surface plating. Buckles of this size and shape had many functions and can be attributed to the post-medieval period, approximately dating to the 16th or 17th century.
L 33mm × W 34mm × D 4mm (maximum).

IRON

2. NAIL. Context 361AA. Unstratified
An incomplete, handmade nail with a rectangular shaped shank and head.
L 46mm, shank 8mm × 7mm, head 13mm × 10mm.

3. NAIL. Context 361AB. Unstratified.
An incomplete, handmade nail with a rectangular shaped shank and square head.
L 43mm, shank 8mm × 6mm, head 14mm × 14mm.

4. NAIL. Context 438AB. Fill of linear feature 515..
An incomplete, handmade nail with a square-shaped shank and irregular shaped head.
L 62mm, shank 6mm × 6mm, head 17mm × 13mm.

5. NAIL SHANK. Context 650AA. Fill of pit 618.
The tip of a nail shank with a rounded profile.

L 22mm, diameter 8mm.

WORKED STONE

6. ?HAMMER STONE. Context 148AA. Secondary fill of curvilinear gully 146.
A sub-spherical, coarse-grained sandstone. The ?object was reddened due to exposure to extreme heat which has affected more than half the surface area. A smaller area showed damage prior to being burnt.
Approximately 75mm × 62mm × 51mm.

7. SANDSTONE BLOCK. Context 824 AA. Sandstone culvert.
A roughly-hewn, coarse-grained sandstone block. The rectangular-shaped stone displayed roughly chiselled tool marks on three faces with a roughly-carved, sub-circular depression on one face which measured 64mm × 52mm wide and 28mm deep with sloping sides. The stone block has been broken and re-used within the culvert, however it's original function is unknown.
L 380mm × W 145mm × D 105mm.

Discussion

The five metal objects from Delhi are not unusual finds and represent objects relating to a personal and structural nature. Although the objects can be identified by form and function, only the buckle can be more closely dated to circa 1500–1600. The nails are of a long-lived form and could have been used for a variety of purposes.

The worked stone objects, although of interest, cannot be closely dated. The original function of the re-used block 824 AA is uncertain, however the size and shape of 148 AA allows a tentative identification as a possible hammer stone.

Recommendations

The assemblage of small finds from Delhi has limited potential for further analysis, however, further research and comparative analysis could be carried out on the two stone objects and if the site proceeds to full publication, a short summary should be included. The finds should be kept and deposited in the relevant museum together with the rest of the archive.

APPENDIX K: BIOLOGICAL REMAINS ASSESSMENT

John Carrot and Deborah Jaques

Introduction

An archaeological evaluation excavation was undertaken by Northern Archaeological Associates (NAA) at Delhi, Blagdon Hall Estate (near Cramlington), Northumberland (centred on NGR NZ 220 764) between July and December 2005.

Five main phases of activity were identified, together with subphases. Phase 1 relates to Bronze Age encountered in one area and comprised a boundary features. Iron Age settlement activity were assigned to Phase 2. Medieval agricultural activity comprised Phase 3. Phase 4 deposits were of post-medieval date and Phase 5 was represented by modern mining activities (probably 20th century).

Biological remains recovered from thirty-one sediment samples ('GBA'/'BS' sensu Dobney et al. 1992) processed by NAA, three unprocessed potential radiocarbon dating samples and a very small quantity of hand-collected bone, were submitted to Palaeoecology Research Services Limited (PRS), County Durham, for an evaluation of their bioarchaeological potential.

Methods

SEDIMENT SAMPLES

For the sediment subsamples processed by NAA, the unsorted 'flots' (hereafter termed washovers) and biological remains recovered from the residues were submitted to PRS for evaluation. The weights and volumes of the subsamples were recorded before being placed onto 500micron nylon mesh in a sieving tank. The light organic fraction was washed over into a 500micron sieve to collect the washovers. Both the washover and residue fractions of the processed subsamples were dried. Only those components of the residues that were submitted to PRS are reported here (see the excavator's records for notes regarding any material, e.g. artefacts, removed prior to this).

The submitted remains were identified as closely as possible and their suitability for radiocarbon dating by standard radiometric technique or accelerator mass spectrometry (AMS) was also considered. The three unprocessed sediment samples were examined, as 'SPOT' samples (sensu Dobney et al. 1992), to determine their potential to provide suitable material for radiocarbon dating.

Nomenclature for plant taxa follows Stace (1997).

HAND-COLLECTED VERTEBRATE REMAINS

Records were made of the hand-collected vertebrate remains concerning the state of preservation, colour of fragments and the appearance of broken surfaces ('angularity'). Other information, such as dog gnawing, burning, butchery and fresh breakage, was noted, where applicable. Fragments were identified to species or species group using the PRS modern comparative reference collection. Those fragments which could not be identified to species were described as the 'unidentified' fraction. Within this fraction, fragments were grouped into categories: large mammal (assumed to be cattle, horse or large cervid) and completely unidentifiable.

Results

SEDIMENT SAMPLES

The washovers from 26 of the NAA processed subsamples (from Contexts 06, 09, 68, 109, 194, 310, 314, 389, 434, 438, 445, 520, 550, 551, 569, 583, 588, 654, 656, 665, 669, 738, 753, 757, 797 and 856, all of which were given the sample designation "AA", except the sample from Context 09 which was designated Sample AB) consisted of very small quantities (totalling no more than a few ml) of modern plant remains (mostly rootlets), fine charcoal and/or cinder (to 1mm or 2mm) and sand.

The results from the five slightly larger washovers are presented below in context number order. Archaeological information, provided by the excavator, is 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 designators.

CONTEXT 26 [quaternary fill of Ring Ditch 18 = 228 forming part of a roundhouse]

Sample AA (1.7kg/2l wet sieved to 500microns with washover; approximately 2l of unprocessed sediment remain)

The very small washover (~15ml) was mostly of modern plant debris (including fragments of rootlet), sand and fine charcoal (to 1mm), with an occasional poorly preserved unidentified charred grain fragment and a few other charred ?seeds.

CONTEXT 250 [fill in north terminus of Ditch 229]

Sample AA (10kg/9l wet sieved to 500microns with washover; approximately 21l of unprocessed sediment remain)

The very small washover (~25ml) was approximately half of fine charcoal (to 2mm) and half of sand, with a few fragments of charred seeds/fruits. Modern rootlets and earthworm egg capsules were also noted.

CONTEXT 381 [quaternary (upper) fill of Ring Ditch 229 segment 21/22]

Sample AA (10kg/8l wet sieved to 500microns with washover; approximately 22l of unprocessed sediment remain)

The tiny washover (~10ml) comprised four larger charcoal fragments (to 15mm), with some fine charcoal, a little sand and some modern rootlet. The larger charcoal fragments were rather poorly preserved, could not be identified and were from wood of indeterminate age.

CONTEXT 409 [fill of Gully 408, possible root bole]

Sample AA (11kg/9l wet sieved to 500microns with washover; approximately 21l of unprocessed sediment remain)

The very small washover (~15ml) was mostly of fine charcoal (to 2mm) and sand, with some modern rootlets and cereal chaff and a few larger fragments of charcoal (to 20mm). The last included a fragment of roundwood which could not be identified to species but represented only a few tens of years of growth.

CONTEXT 410 [fill of Ring Ditch 229 segment 14 forming part of a roundhouse]

Sample AA (5kg/6l wet sieved to 500microns with washover; approximately 20l of unprocessed sediment remain)

The tiny washover (~10ml) was mostly fine charcoal (to 5mm), with some charred grains and other 'seeds' (including Chenopodiaceae – goosefoot family and ?Rumex – cf. dock), a little modern rootlet and some earthworm egg capsules (also modern). The charred grains were very poorly preserved, having lost much of their surfaces, but ?oat (cf. Avena) and wheat (cf. Triticum) were tentatively identified as present.

Each of the sample residue fractions submitted was mostly of stones (to 50mm), with varying quantities of poorly preserved, often silted and somewhat rounded charcoal recovered from fifteen of them (see Table K1). The residue from Context 26 gave a few additional fragments of uncharred modern plant material (?root epidermis).

In addition, four small fragments of waterlogged wood (largest approximately 40mm x 10mm x 7mm) were recovered from Context 317 (fill of Posthole 318). These fragments were kept wet but could not be identified to species.

The three unprocessed sediment samples submitted to evaluate their potential to provide material for radiocarbon dating were described and variously examined. Context 233 (Sample AA) comprised approximately 75g of small (to 30mm), dry lumps of fused light to mid grey ash of no value for radiocarbon dating. The matrices of the samples (both designated "AA") from Contexts 238 and 522 were very similar. Both were just moist, varicoloured (light brown and light grey to mid to dark grey-brown in shades of grey, brown and grey-brown, with some patches of light to mid orange), stiff (working plastic), clay (with Context 522 also a little sandy). Context 238 contained some dark brown/grey-brown patches which appeared somewhat humic. However, on closer inspection (via sieving of a small amount of material to 300 microns and examination under a low-power, x7 to x45, microscope) these were found to be small concretions of fine sediment, ash, ?cinder and very fine ?charcoal. Context 522 was flecked with charcoal fragments and a similar examination determined that these were mostly to 2mm, with an occasional larger fragment to 6mm. No fragments that could be identified to species, or for which the age of wood growth could be determined, were recorded.

Hand-collected vertebrate remains

The very small collection of hand-collected vertebrate remains was restricted to fragments of teeth or tooth enamel (Contexts 659, 732 and 863), together with two fragments of burnt bone (Contexts 389 and 634). With the exception of a horse incisor from Context 863, the remains were of poor preservation and could not be identified to species. In two cases, tooth fragments and bone from Contexts 659 and 389 respectively, the sediment was still adhering to the fragments and had this been removed the bone/tooth would have broken into tiny pieces. The horse incisor represented an animal that was at least 8 years of age when it died.

Details of the vertebrate remains by context are given in Table K2.

Discussion and statement of potential

Ancient biological remains recovered from the NAA processed subsamples were largely restricted to small quantities of poorly preserved, silted and somewhat rounded fragments of charcoal, presumably from wood burnt as fuel. A few of the deposits (Contexts 250, 520, 550

and 551) gave larger quantities and some (Contexts 250, 434, 550 and 551) contained individual pieces which may be identifiable to species level (although this was not attempted for this evaluation). Only a single fragment for which the years of wood growth represented could be reasonably closely estimated was seen (the roundwood charcoal fragment in the washover from Context 409).

The washovers from Contexts 26 and 410 also contained small numbers of poorly preserved charred grains. The poor preservation rendered identification difficult but Context 410 appeared to contain grains of both oat and wheat (although this is only tentatively asserted). In addition, both of these deposits, and also Context 250, gave a few other charred 'seeds'.

Modern contaminant plant remains, mostly in the form of rootlets, were present in all of the examined deposits and some also contained modern earthworm egg capsules. Given that no other evidence of waterlogged preservation of ancient remains was recorded, the wood fragments recovered from Context 317 may also represent relatively modern remains.

Overall, the assemblages were too small and too poorly preserved to be of any interpretative value. Some of the remains would provide sufficient suitable material for radiocarbon dating to be attempted, however (see below).

For radiocarbon dating (if required), where possible short-lived plant structures (such as the cereal grains from Contexts 26 and 410) should be used as these are unlikely to have been stored for more than a few years, so that the date returned should be close to that of the charring event. Here, most of the samples provided at least small amounts of charcoal, but there are two possible sources of error if charcoal is used for dating. Firstly, the piece of wood may be from the centre of the trunk or a large branch of the tree ('stem wood'), and the time span between the growth of this wood (its carbon content being fixed at the point of cell formation) and the death of the tree may be several tens (sometimes hundreds, in the case of oak for example) of years. Secondly, prior to becoming burnt, the wood may have been stored or formed part of a structure, also perhaps for many years. Both of these 'old wood' problems may result in a radiocarbon date significantly earlier than the charring event being returned. If charcoal is used for dating, then pieces with the waney edge (i.e. where the terminal annual ring is preserved) should be selected—this is most likely on fragments from relatively young wood such as twigs or small branches (the only such fragment noted was the roundwood from Context 409). Some care would need to be taken in the selection of material for dating as modern rootlet fragments were present in all of the samples and if charcoal fragments are used these would need to be 'cleaned' of adhering sediment which was commonly observed.

The unprocessed sample of fused ash from Context 233 did not contain any suitable material for radiocarbon dating. Although sufficient charcoal could be recovered from Context 522, and perhaps Context 238, for dating to be attempted (at least via AMS), this material would be less than ideal for the purpose (see previous paragraph).

The vertebrate material from excavations at Delhi shows no potential for providing zooarchaeological or archaeological information.

The poor preservation of the recovered biological remains suggests that conditions within the deposits at this site are not conducive to their survival. Any future excavation in the vicinity should, perhaps, allow a small contingency for the possibility of encountering deposits in which charred plant remains and/or bone are better preserved, but the likelihood of recovering substantial assemblages of interpretatively valuable biological remains is very small.

Recommendations

Other than any processing and preparation required to recover and submit remains for radiocarbon dating, no further study of the biological remains from this site is warranted. In general, it is recommended that charcoal recovered from these deposits is not used for radiocarbon dating; the exception to this being the roundwood fragment from Context 409.

Retention and disposal

Unless required for purposes other than the study of the biological remains or for radiocarbon dating, all of the current material may be discarded.

Archive

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.

Acknowledgements

The authors are grateful to Sarah Wilkinson and Catrin Jenkins, of Northern Archaeological Associates, for providing the material and the archaeological information.

Table K1. Delhi, Blagdon Hall Estate, Northumberland (site code: DBH05): notes regarding charcoal and other remains recovered from the sample residues. All of the samples listed were given the designation "AA". Charcoal fragments were not identified to species as part of this evaluation.

Context	Total amount	Maximum dimension (mm)	Weight (g)	Notes
26	Trace	14	3	
109	Trace	15	~1	Also some cinder to 15mm
250	Quite large	35	175	Some fragments probably identifiable to species; wood age likely to be indeterminate; includes some mineral concretions
314	Trace	7	<1	
389	Trace	10	~1	
409	Small	10	17	
410	Trace	6	<1	
434	Small	20	17	Some fragments perhaps identifiable to species; wood age indeterminate
445	trace	5	<1	
520	small	17	23	
550	moderate	25	35	Some fragments probably identifiable to species; wood age indeterminate; heavily silted
551	moderate	25	54	Some fragments probably identifiable to species; wood age likely to be indeterminate; heavily silted
569	trace	2	<1	Also some cinder and one or two fragment of coal to 2mm
656	small	16	11	
797	trace	12	~1	

Table K2. Delhi, Blagdon Hall Estate, Northumberland (site code: DBH05): note regarding the hand-collected vertebrate remains.

Context	Phase	Context description	Notes
Context 389	Phase 2	Primary fill of ditch 229	One small fragment of unidentified burnt bone was recovered from this context. Of poor preservation, it was excavated with the surrounding matrix attached in an attempt to keep the bone intact. The sediment had dried and hardened and it was not possible to extricate the fragment for identification
Context 634	Phase 4	Primary fill of pit 631	One fragment of unidentified burnt bone came from this deposit. [The other 'bone' fragment was a piece of ash/clinker]
Context 659	Phase 2	Upper fill of curvilinear gully 657	Several fragments of very poorly preserved tooth enamel were recovered from this fill. These were probably large mammal, but it was not possible to remove them from the surrounding concreted sediment without breaking the tooth (or teeth) in to pieces
Context 732	Phase 2	Primary fill of curvilinear gully 707	This deposit produced ten fragments of tooth enamel, probably representing the same tooth. Fresh breakage damage was prevalent
Context 863	Phase 4	Fill of construction cut 823 for culvert 824	A single horse incisor of fairly reasonable preservation, was recovered from this deposit. This represented a horse of at least 8 years of age when it died

APPENDIX L: LUMINESCENCE DATING

University of Durham

Technical summary

Samples of sediment were taken independently and submitted for OSL dating by Northern Archaeological Associates. The laboratory references for these samples are given in table L2 below.

The luminescence samples were prepared by sub-sampling the inner volume of the cores under subdued red lighting in the laboratory; quartz in the grain size range 90-150 mm was subsequently extracted from the sediment using standard procedures for the inclusion technique (Aitken 1985).

The results of initial suitability tests with both samples indicated that sample 331-2 from Pit 205 contained material that had not been sufficiently exposed to daylight before burial, producing potentially unreliable dates of burial of the sediment, whereas sample 331-1 from Pit 155 was potentially suitable. Hence measurements with 331-2 were halted.

An optically stimulated luminescence (OSL) technique based on a single aliquot regenerative dose (SAR) procedure (Murray and Wintle 2000; 2003) was used to determine the absorbed dose accumulated since last exposure of the sediment in daylight (the palaeodose, P). Measurements were made using a Risø TL-DA-12 automated reader and laboratory doses were administered by a calibrated 90Sr/90Y beta source mounted on the reader. Optically Stimulated Luminescence (OSL) was observed under stimulation by light from blue LEDs and the luminescence was detected in the ultraviolet region using an EMI photomultiplier in combination with a Hoya U340 optical filter.

The distribution of values of P (one per aliquot tested) for sample 331-1 was consistent with a uniform pre-depositional exposure to daylight.

The average total annual dose, DT, was derived from a combination of experimental techniques and calculation. The beta dose-rate within the sampled sediment medium using the b TLD technique (Aitken 1985; Bailiff 1982) and the gamma dose-rate was calculated using the concentrations of 238U, 232Th and 40K determined by using a high resolution Ge gamma spectrometer. Adjustment of the beta and gamma dose-rates to account for the uptake of moisture in the sample medium was based on the assumption that the average water uptake in the sample medium during burial was 90±10% of the value measured in the laboratory (see also note 8). It was assumed that the measured radionuclide and water content of the sediments was typical of the surrounding matrix. The contribution to the annual dose due to cosmic rays was estimated using data published by Prescott and Hutton (1988).

The luminescence age was calculated using the age equation and the values indicated in the table below:

Table L1

Palaeodose (mGy)	Annual dose (mGy/a)	Annual dose components (%)	+cosmic	Water (%)
6920 ± 130	45	2.53±0.05	55	25±5

The uncertainty in the age was calculated by taking into account the propagation of errors associated with experimental measurements and takes into account those errors associated with the calibration and conversion factors (Aitken 1985).

After subtraction of the test year (2006) from the luminescence age, the luminescence date is given with two associated errors at the 68% level of confidence based on the specification by Aitken (1985):

Luminescence Date ± A ; ± B

The first error term, sA, is a type A standard uncertainty obtained by an analysis of repeated observations (i.e. random error) and should be used when comparing results with other luminescence dates from the same laboratory. The second error term, sB, is a type B standard uncertainty based on an assessment of uncertainty associated with all the quantities employed in the calculation of the age, including those of type A (i.e. random and systematic errors). The second error, sB, should be used when comparing luminescence dates with independent dating evidence. This method of error assessment is derived from an analysis of the propagation of errors and, providing the distribution of errors is normal, the approach appears to be sufficiently robust. The calculations assume that the zeroing of the luminescence before the last burial was fully effective.

Fluctuation is moisture content of sediments is one of the larger sources of uncertainty when dating sediments from non-arid environments. The change in luminescence date with average moisture content (expressed as a % of dry sample weight) during burial is shown in the figures below to illustrate the dependency. The arrow indicates the value of the sample moisture content measured in the laboratory.

Results

Table L2

Lab. Reference	Site Reference	Luminescence date(1)
Dur06OSLQi 331-1	DBH05 157North-west facing section through pit 155 showing secondary fill 157	735 B.C. ±75; ±220
Dur06OSLQi 331-2	DBH05 237North-west facing section through pit 205 showing secondary fill 237	Not done- suspected incomplete zeroing before burial.

The uncertainties associated with each date are given at the 68% level of confidence; the second error term should be used when comparing luminescence dates with independent dating evidence.

APPENDIX M: UPDATED PROJECT DESIGN

1.0 BACKGROUND

1.1 In the course of archaeological investigations at Delhi, Blagdon Hall, Northumberland, a desk-based assessment, geophysical survey, archaeological evaluation, two phases of monitoring and an excavation were undertaken. The resulting information from the excavation included a number of categories worthy of further study, namely the stratigraphic record of the site and selected finds.

2.0 AIMS AND OBJECTIVES OF THE ASSESSMENT

2.1 The aims and objectives of this project included the routine assessment of the stratigraphic record and artefacts recovered during the excavation. Of primary importance was the assessment of the potential for the various types of information to add to the existing regional and national archaeological records and thus fulfil current research priorities. The North-East Regional Research Framework includes areas of study which are poorly understood or of particular interest (Petts and Gerrard 2006). Five research themes (I1-I5) have been addressed in the document which are of relevance to the archaeological remains encountered at Delhi (*ibid* 136). These are; the development of chronologies based on scientific dating techniques; the improved understanding of the later prehistoric landscapes focusing not just on individual settlements but their place within the wider landscape; increased understanding of settlement function including layout and associated networks of fields systems and enclosures; and improvement of material culture understanding with the use of scientific dating techniques to achieve a more secure chronological framework for pottery(*ibid* 136-140).

2.2 A full analysis of the stratigraphic record of the excavation has the potential to gain a better understanding of the occupation and development of widespread and long-lasting prehistoric occupation, together with the settlements and other features. The excavated site comprises several distinct elements, and further study in conjunction with further limited artefact analysis will more fully establish the range of activities over time on the site.

3.0 SUMMARY OF THE RESULTS OF THE ASSESSMENT

Stratigraphic assessment

3.1 The stratigraphic assessment of the results of the excavation at Delhi has enabled a broad picture of the phases of activity present to be constructed. However the recorded features represent a more complicated sequence of events. A definitive interpretation of the chronology of the activity cannot be achieved without further analysis and full integration of the artefactual and ecofactual archive with the stratigraphic record.

Flint assessment

3.2 A small assemblage was recovered, containing few diagnostic pieces and dating from the late Neolithic to the Iron Age period.

Glass bead assessment

3.3 A distinctive glass Meare bead, dating to the Iron Age was recovered during excavations.

Prehistoric pottery assessment

3.4 A single sherd of Iron Age pottery was exposed in a roundhouse ring gully.

Pottery assessment

3.5 A small assemblage of medieval and post-medieval pottery was recovered from the site.

Ceramic building material (CBM) assessment

3.6 A small assemblage of ceramic building material was recovered from several drains and field boundaries on site.

Glass assessment

3.7 A small amount of glass dating from the 17th to the 18th/19th centuries was recovered from the site. Only one sherd within the assemblage was diagnostic.

Conservation assessment

3.8 Five objects were submitted for examination, conservation assessment and X-radiography.

Other finds assessment

3.9 A range of other artefacts were recovered during the excavation. This small assemblage included: four nails and a buckle that had been submitted for

conservation assessment; two worked stones, a hammer stone of probable prehistoric date and a stone with a hole reused in a post-medieval culvert.

Biological remains assessment

3.10 A total of 31 samples were assessed for preserved plant and animal remains. Charred grains, charred seeds and wood charcoal were recovered from several samples.

Luminescence dating

3.11 Two samples were submitted for luminescence dating one of these provided a suitable sample. It was dated to 735BC ±75; ±220 and would correspond with a late Bronze Age or early Iron Age date.

4.0 SUMMARY OF THE SIGNIFICANCE OF THE ASSESSMENT

Stratigraphic record

4.1 The stratigraphy and dating evidence relating to the features excavated at Delhi was such that it has permitted a provisional sequence of developments to be established and some phasing of the contexts to be achieved. However due to absence of stratigraphic relationships across the majority of the site and the small quantity of datable finds, an overall site chronology cannot yet be established. The phasing would be greatly enhanced by obtaining radiocarbon dates from selected excavated features.

4.2 The excavated site has the potential to enhance knowledge of later Bronze Age and Iron Age archaeology within the region, as highlighted in the Regional Research Framework (Petts and Gerrard 2006). The evidence from the excavation, when contrasted with similar sites from the Northeast and elsewhere across Britain, will allow a greater understanding of settlement type, hierarchy and socio-economic exploitation of the landscape within the region during the Late Bronze Age and Iron Age/Romano-British periods.

Artefactual and ecofactual record

4.3 The flint, prehistoric pottery and glass Meare bead provide limited dating evidence for the features they were recovered from. The remaining artefact types have limited significance but aid in dating the features from which they came. Assessment of the biological remains has shown that only the charred plant remains and wood charcoal have potential for further analysis, but that they have some potential to provide radio carbon dating and also to inform questions of agricultural regimes on the site during the major periods of activity.

5.0 AIMS AND OBJECTIVES OF THE ANALYSIS

Stratigraphic record

5.1 The aim of further analysis of the stratigraphic record is to provide a more comprehensive understanding of the site. This will involve a detailed analysis of the stratigraphic and spatial interrelationships of the features and deposits which comprise the site record. This should be undertaken in conjunction with other analyses, particularly radiocarbon dating, and comparison with published and unpublished excavations, the results of which will be incorporated in the final report. The aim of such an approach is to arrive at a more complete understanding of the types and dates of activity on the site.

Flint

5.2 The assessment report on the flint should be included in the publication. One of the pieces should be illustrated for inclusion in this report.

Glass bead

5.3 An analysis report on the bead should be produced for publication which should be illustrated for inclusion in this report.

Prehistoric pottery

5.4 A report on the pottery should be produced for publication and the sherd should be illustrated for inclusion in this report.

Pottery

5.5 A summary of the material should be produced for inclusion in the report.

Ceramic building material (CBM)

5.6 A summary of the material should be produced for inclusion in the report.

Glass

5.7 A summary of the material should be produced for inclusion in the report.

Conservation

5.8 No further work on the objects are required. A summary of the material should be produced for inclusion in the report.

Other finds

5.9 No further work on the worked stone with the hole, the nails or the buckle is required. A summary of this material should be produced for inclusion in the

report. The hammer stone requires further analysis in order to produce a more detailed description to be included in the publication report. Further analysis will establish more precisely where the stone originated. A report will be produced for publication and the item will be illustrated for inclusion in the report.

Biological remains, fired clay and fuel waste

5.10 Further analysis of the recovered material is required. Selected soil samples will be further processed to recover additional charred plant material. Selection will be based on the results of the assessment and the need to recover suitable material for radiocarbon analysis. Species identification of recovered charcoal will be undertaken. Fired clay and fuel waste will be identified. Results of the assessment and analysis stages will be synthesised, and a report detailing all classes of biological remains will be produced for publication.

Radiocarbon dating

5.11 A series of radiocarbon samples will be taken from appropriate contexts and submitted for radiocarbon analysis, in order to date settlement areas. The samples will be obtained from the most appropriate material recovered from the palaeoenvironmental soil samples.

Comparative and documentary studies

5.12 The excavations at Delhi represent an example of an extensive and long-lived prehistoric site including boundary delineation and several types settlement of probable Iron Age date in the North-east. Analysis of comparative evidence relating to similar sites in the region and beyond, integrated with the stratigraphic and other evidence will enable a fuller interpretation of the site within its chronological and socio-economic landscape.

6.0 REPORTING AND PUBLICATION

6.1 An integrated post-excavation report will be prepared on completion of the analysis works. A version of the report should be prepared to publication standard for submission to a regional or national journal.

6.2 The analysis report shall contain:

- A summary of the project background
- The site location
- A methodology

- A summary of the results including phasing
- An interpretation of the results in relation to other sites in the region
- A post-excavation analysis, integrated with radiocarbon dating evidence, of the stratigraphic and other written, drawn or photographic records
- A post-excavation analysis of the glass bead, hammer stone, and biological remains recovered during the excavation
- A catalogue of each category of artefact recovered during the excavation
- A catalogue of faunal remains recovered during the excavation
- A catalogue of the results of the soil sampling programme
- Catalogues and post-excavation analyses and/or summary reports of all scientific dating procedures or other analyses carried out
- A summary of the contents of the project archive and its location
- Appendices and figures as appropriate
- References and bibliography for all sources used

6.3 Post-excavation analysis report preparation will conform to the standards set out by MAP2, Phase 4 (appendices 6 and 7).

6.4 Following completion of the archaeological works, a copy of the report on the findings will be submitted to the County Archaeologist. A copy of the report will also be submitted to the appropriate Historic Environment Record as a public document. The analysis report will be submitted to an appropriate regional journal for publication.

7.0 METHODS STATEMENT

Stratigraphic record

7.1 Further analysis will be carried out on the dating of the artefactual record in order to provide a more comprehensive understanding of the site chronology. This will be integrated with a detailed analysis of the stratigraphic and spatial interrelationships of the features and deposits which comprise the site record.

7.2 A definitive series of phase plans will also be drawn up to illustrate the main periods of activity and stratigraphic relationships phase by phase.

7.3 Radiocarbon dating several contexts will be undertaken to further inform this process.

Artefactual and ecofactual record

7.4 Further limited analysis will be carried out on selected artefacts as described in section 5 above. Further processing and analysis of the ecofactual remains will take place as described in section 5 above. The results of both assessments and further analysis will be produced as reports with accompanying illustrations.

Comparative and documentary analysis

7.5 Archival, published report and cartographic research of all available sources related to similar sites within the region and beyond will be undertaken. This will aid the overall interpretation of the excavations at Delhi and place the site within its chronological, cultural and socio-economic landscape at both regional and national levels.

8.0 STAFF

8.1 Richard Fraser will be the Director of the firm in overall management of the project. The management of the analysis project will be the responsibility of Paul G Johnson who is a Project Manager within the firm. Catrin Jenkins will be the Project Officer responsible for the writing of the analysis report. Project Management of finds will be conducted by Gail Hama.

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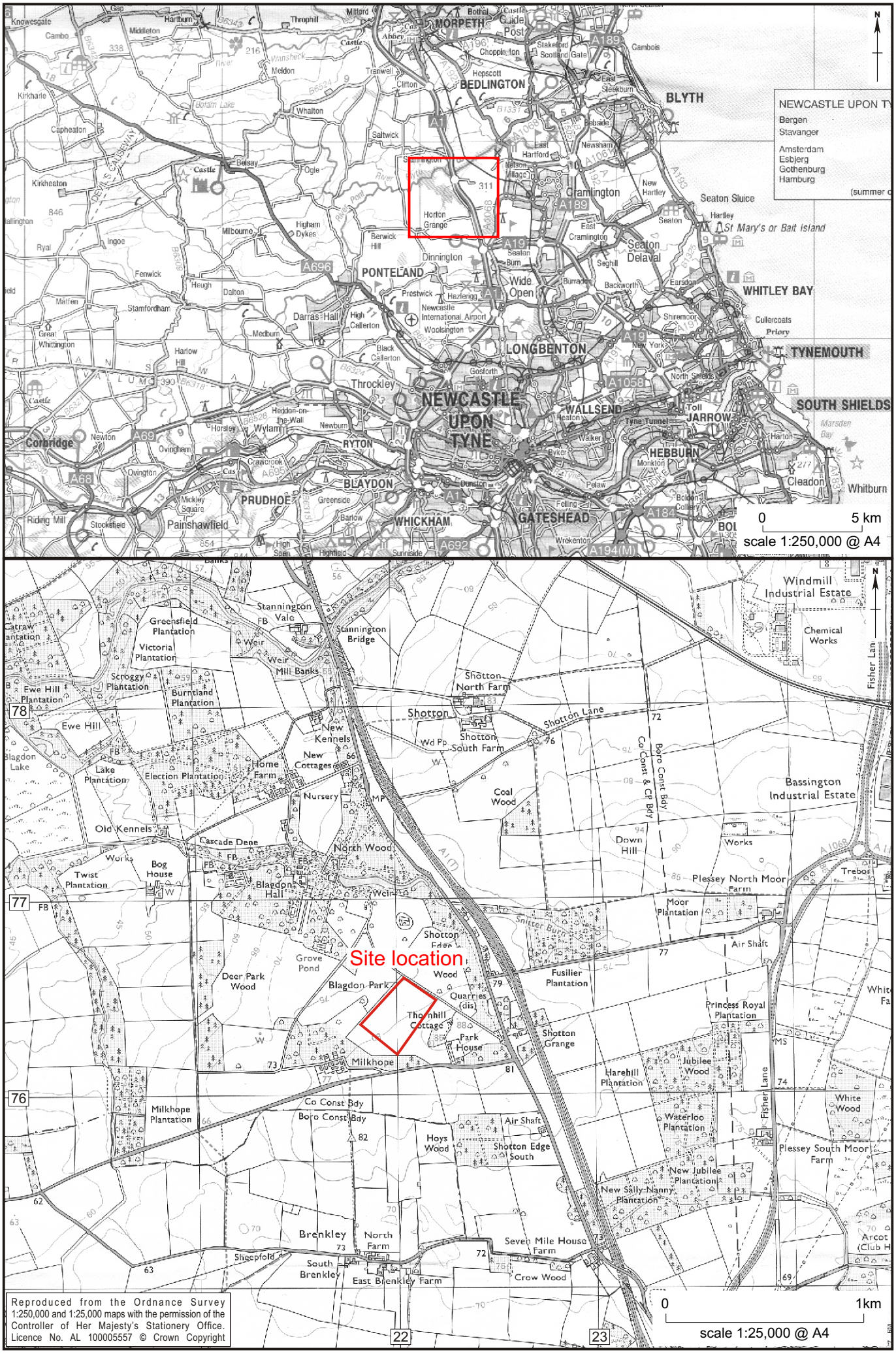


Figure 1 Delhi, Blagdon Hall, Northumberland: location plan

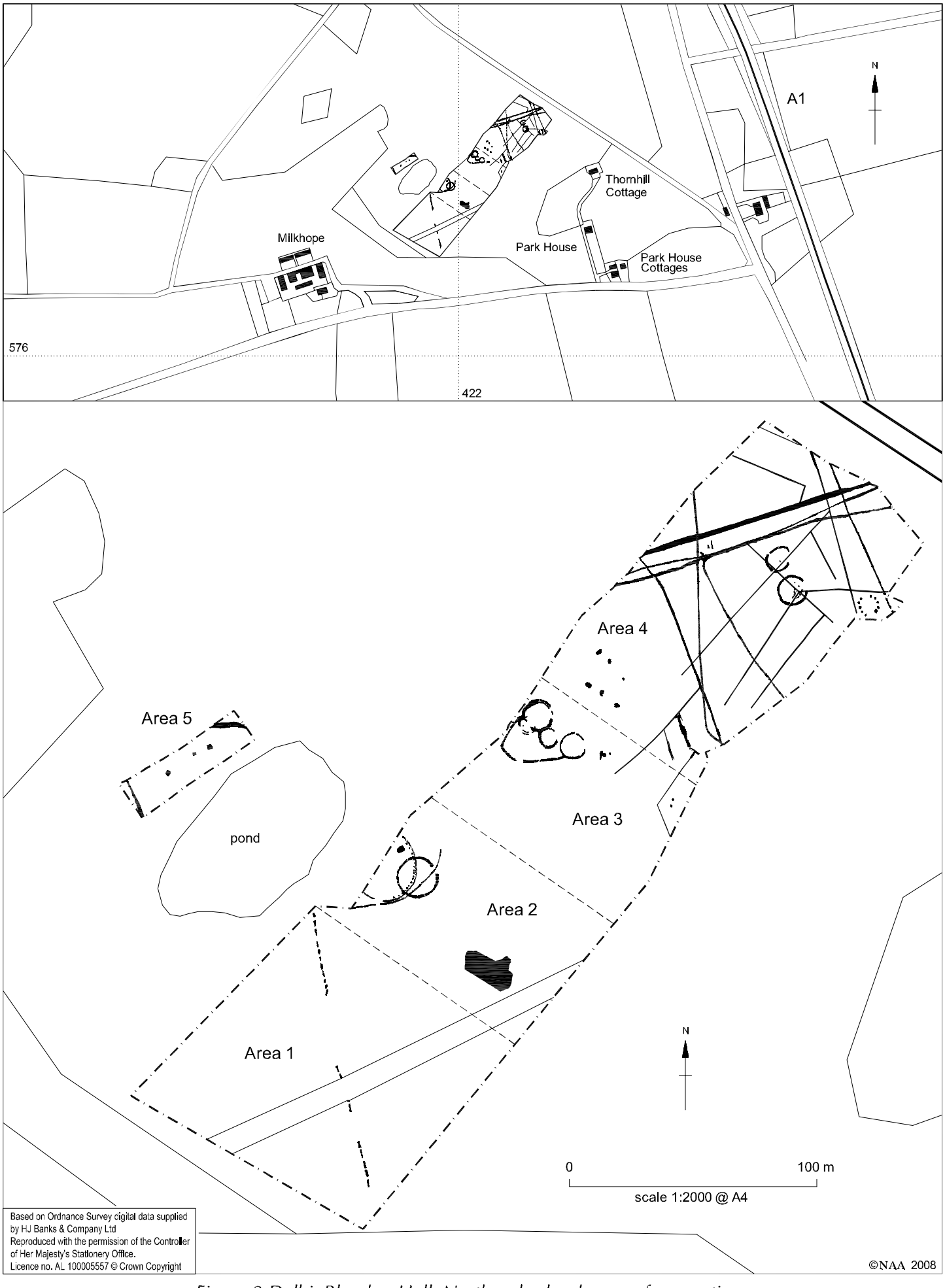


Figure 2 Delhi, Blagdon Hall, Northumberland: area of excavation

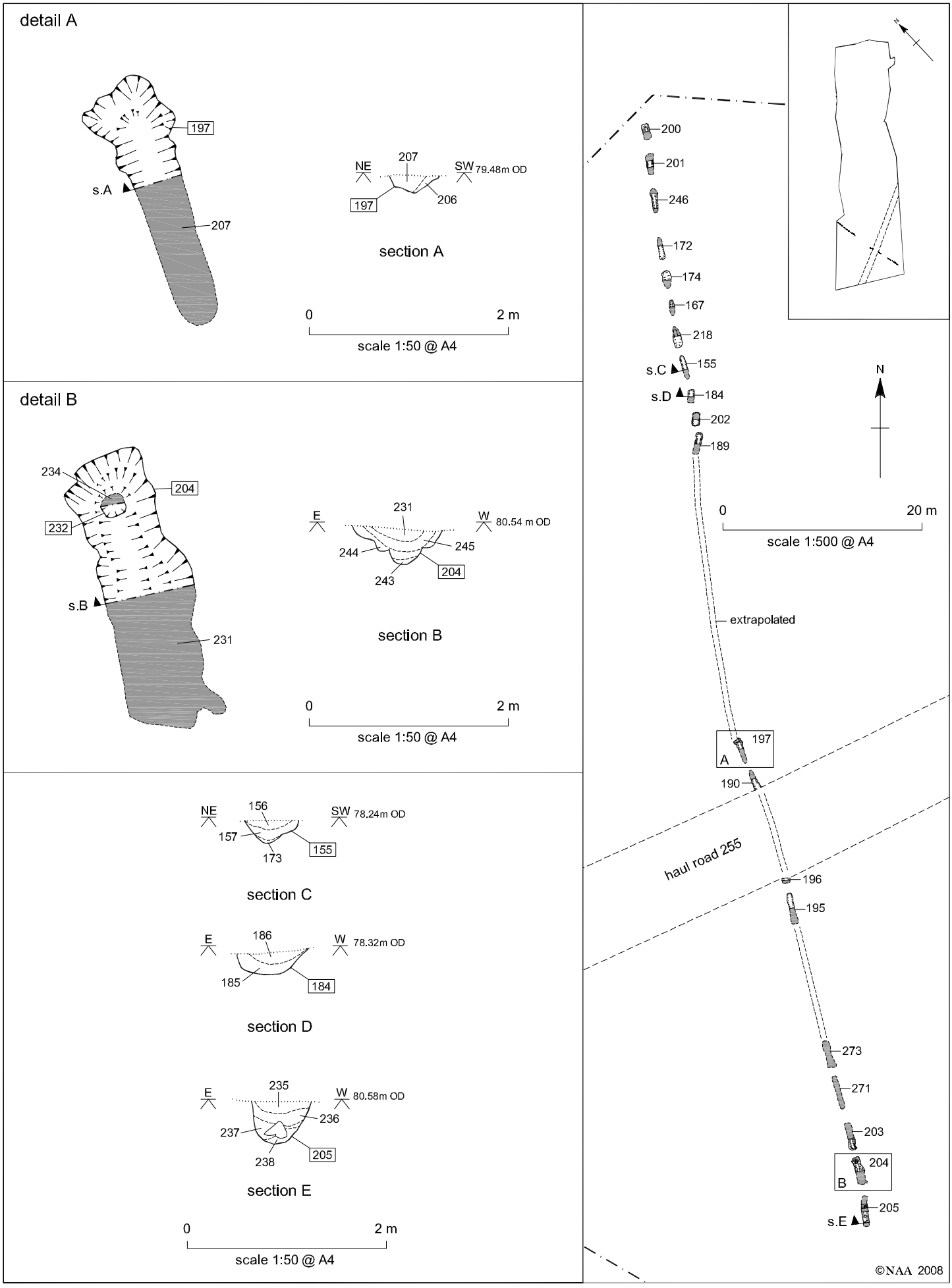


Figure 3 Delhi, Blagdon Hall, Northumberland: Area 1, Phase 1 pit alignment 230 and Phase 5 haul road

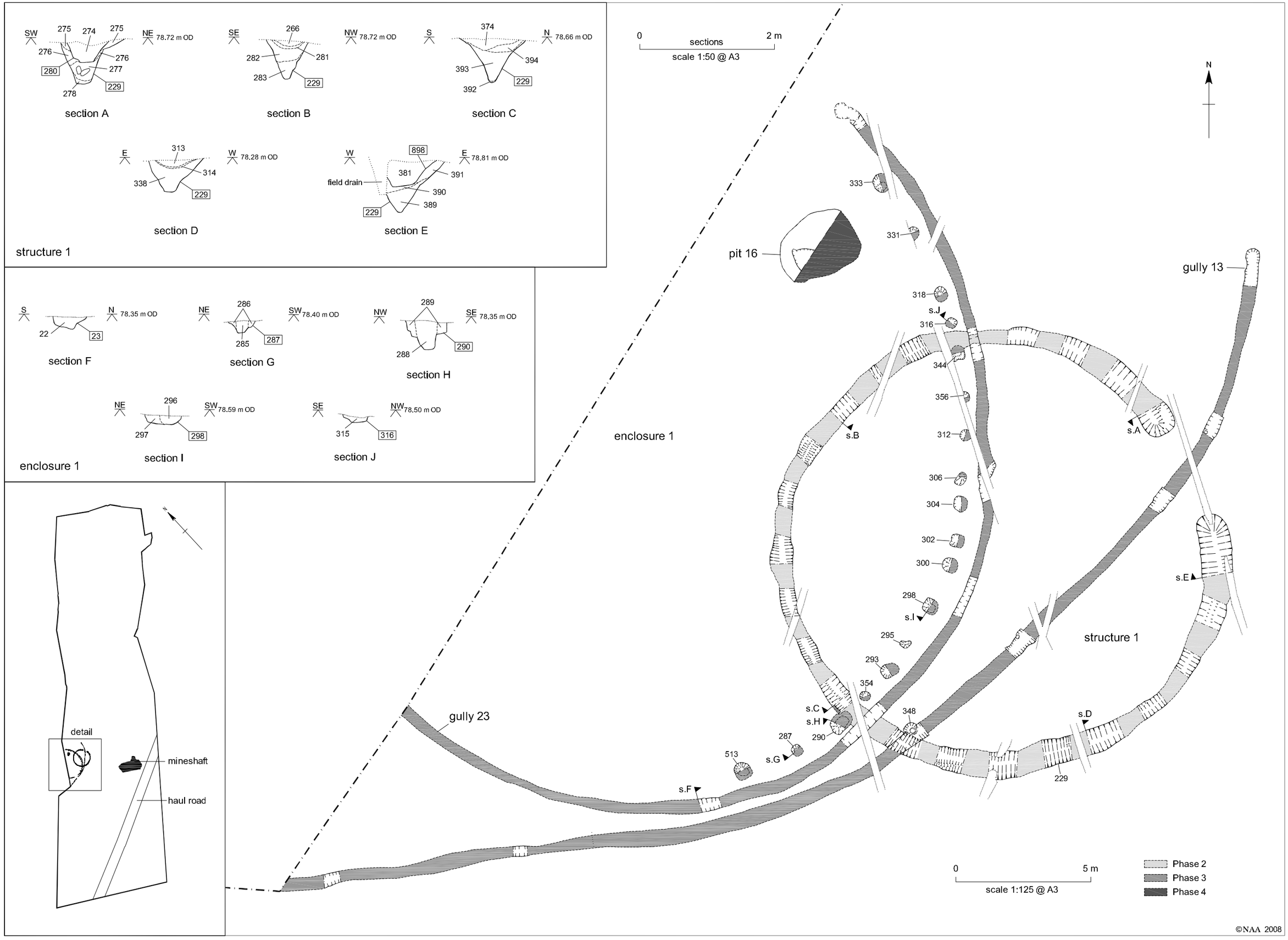


Figure 4 Delhi, Blagdon Hall, Northumberland: Area 2, Phase 2 structure 1, Phase 3 enclosure 1 with associated postholes, gully 13 and Phase 4 pit 16

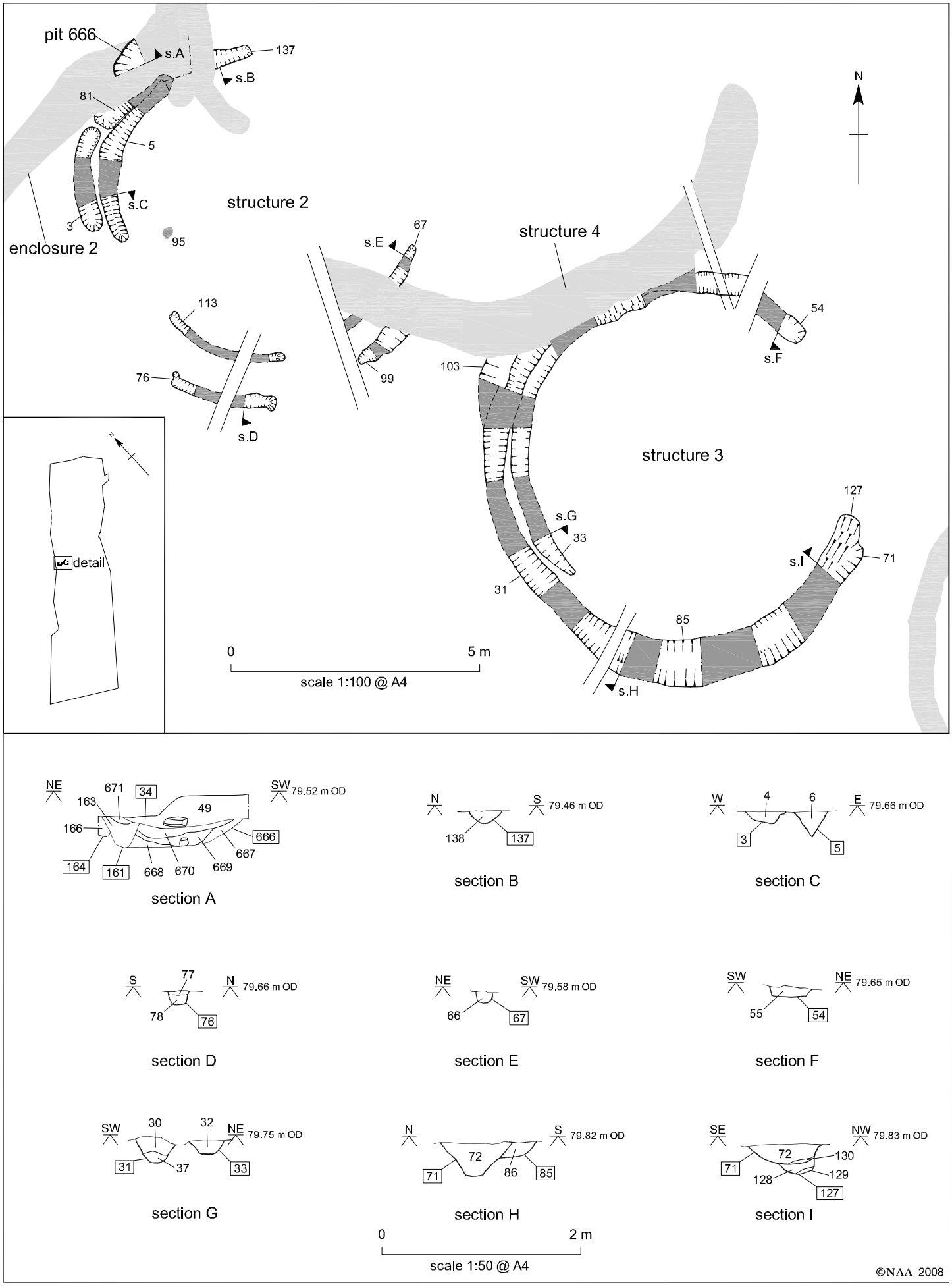


Figure 5 Delhi, Blagdon Hall, Northumberland: Area 3, Phase 2a pit 666, Phase 2b structures 2 and 3

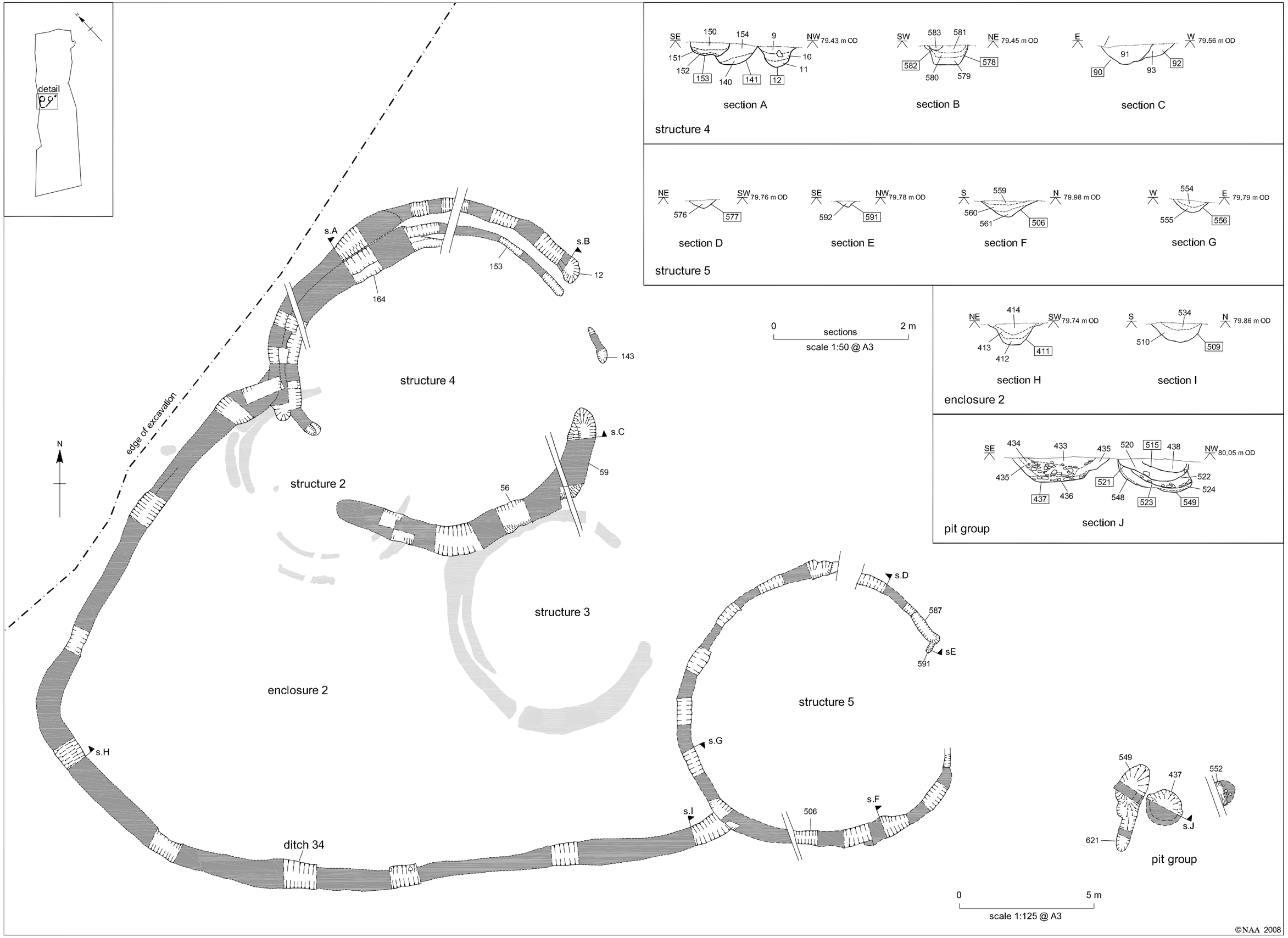
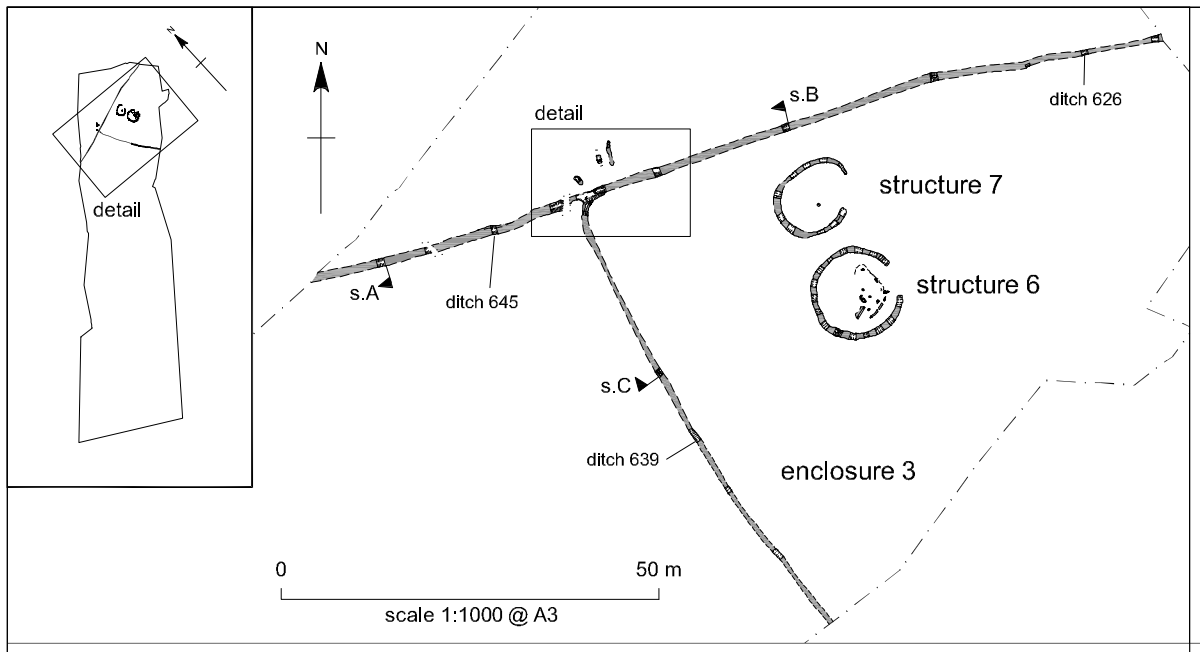
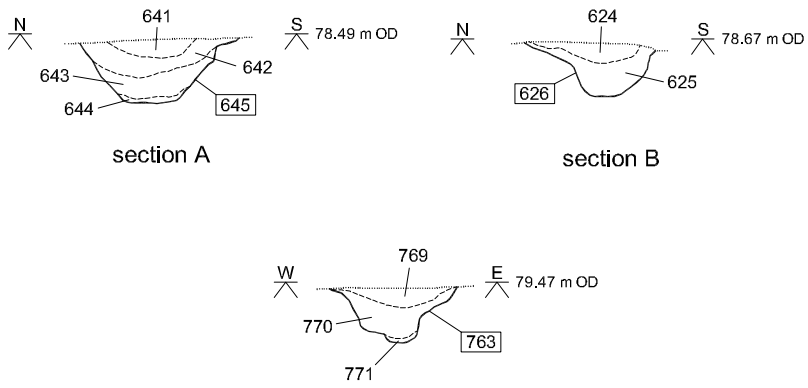
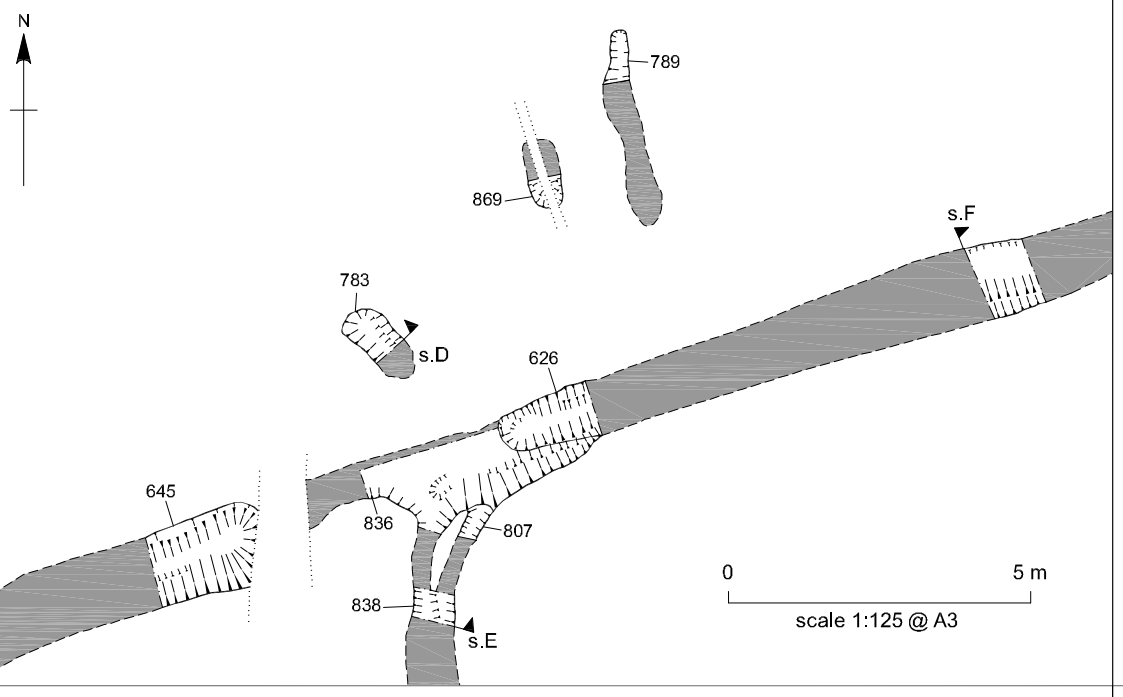


Figure 6 Delhi, Blagdon Hall, Northumberland: Area 3, Phases 2c to 2f structures 4 and 5, enclosure 2 and pit group

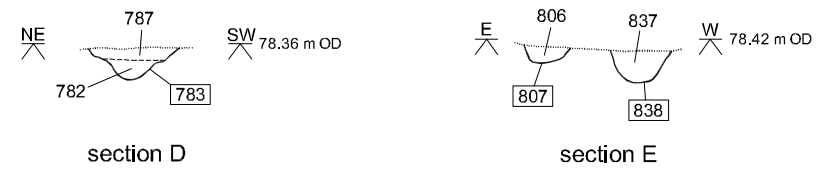


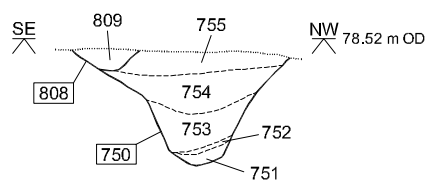
enclosure ditches

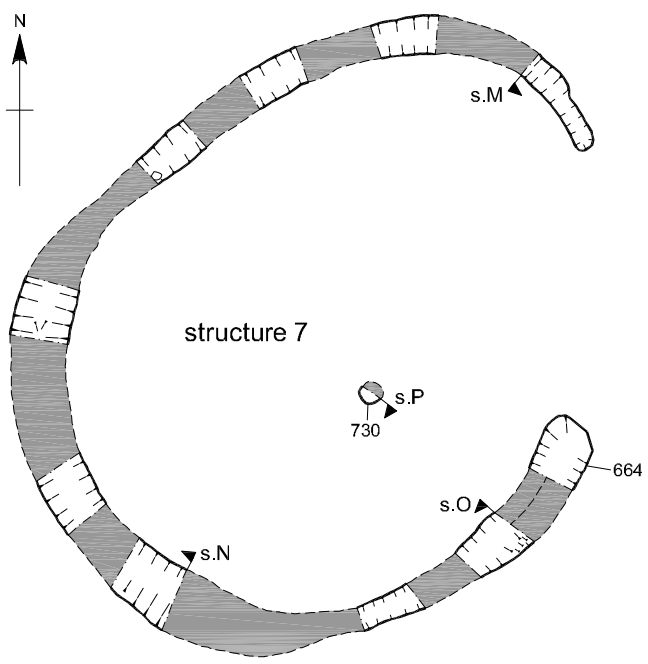




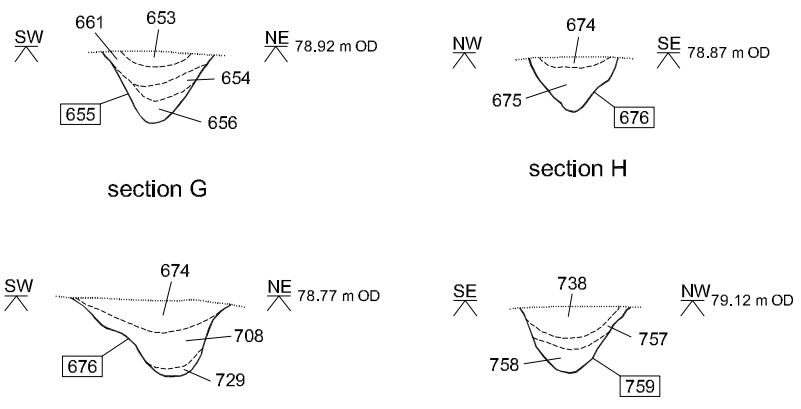
ditch intersection and associated pits

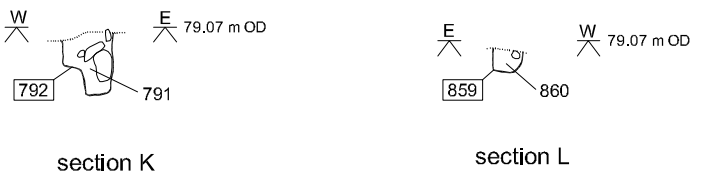




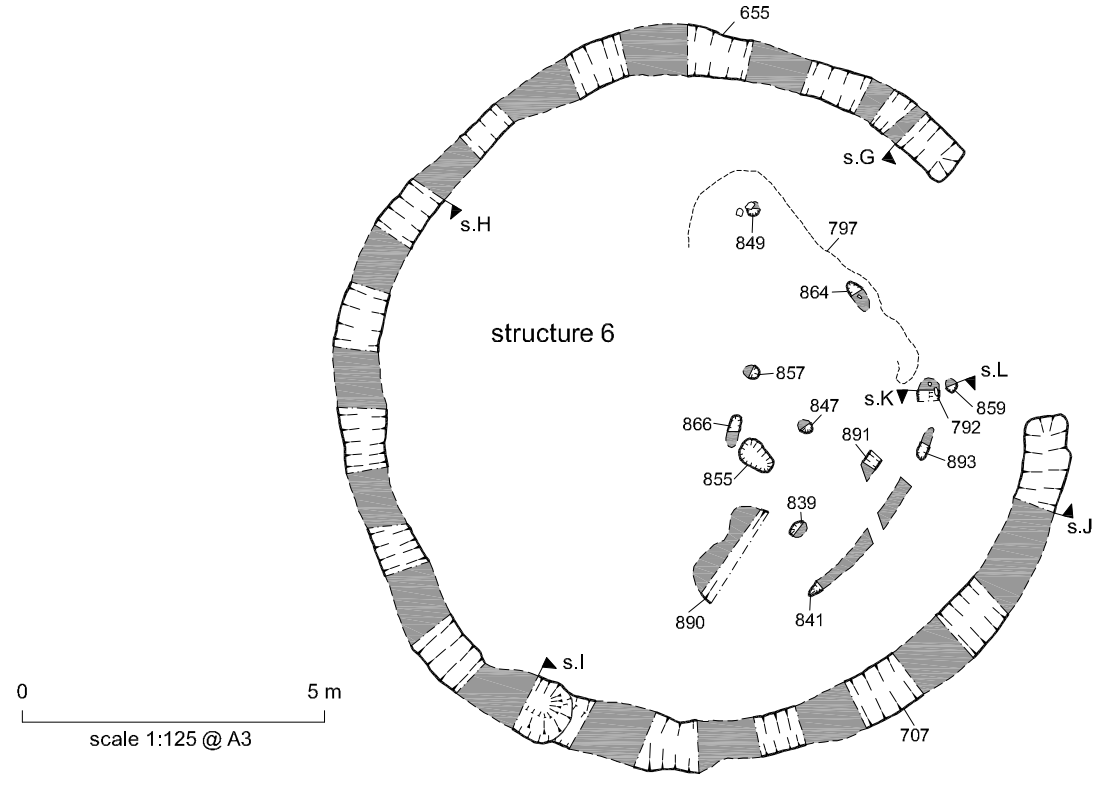


structure 6

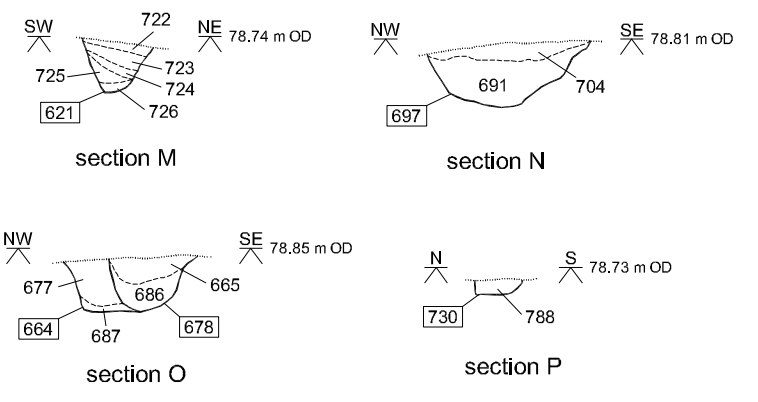




section 193- H is crossed off on sections, but marked on plan



structure 7



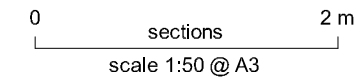


Figure 7 Delhi, Blagdon Hall, Northumberland: Area 4, Phase 2 enclosure 3 and structures 6 and 7

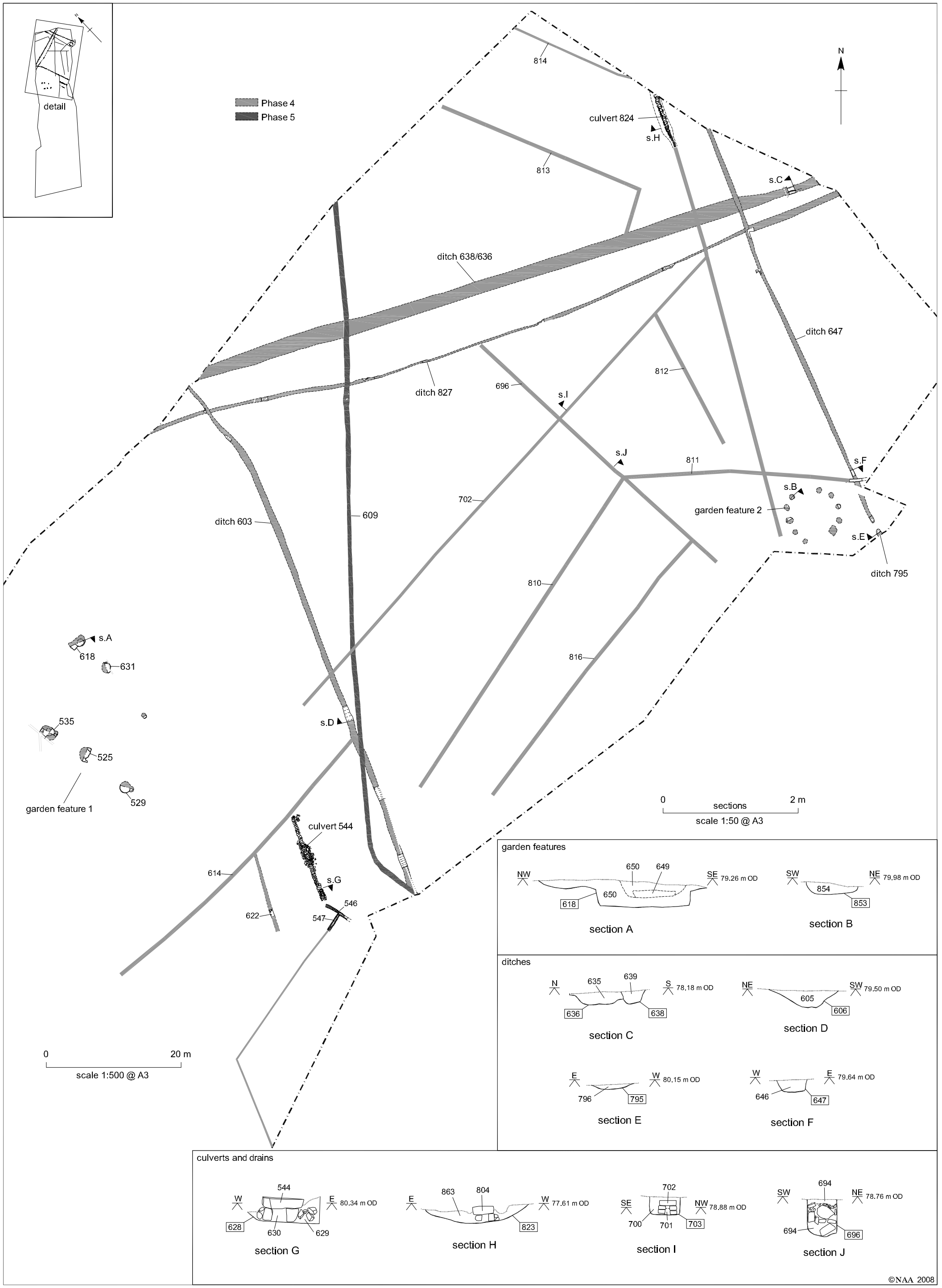


Figure 8 Delhi, Blagdon Hall, Northumberland: Area 4, Phase 4 post-medieval landscaping and field system, and Phase 5 drain

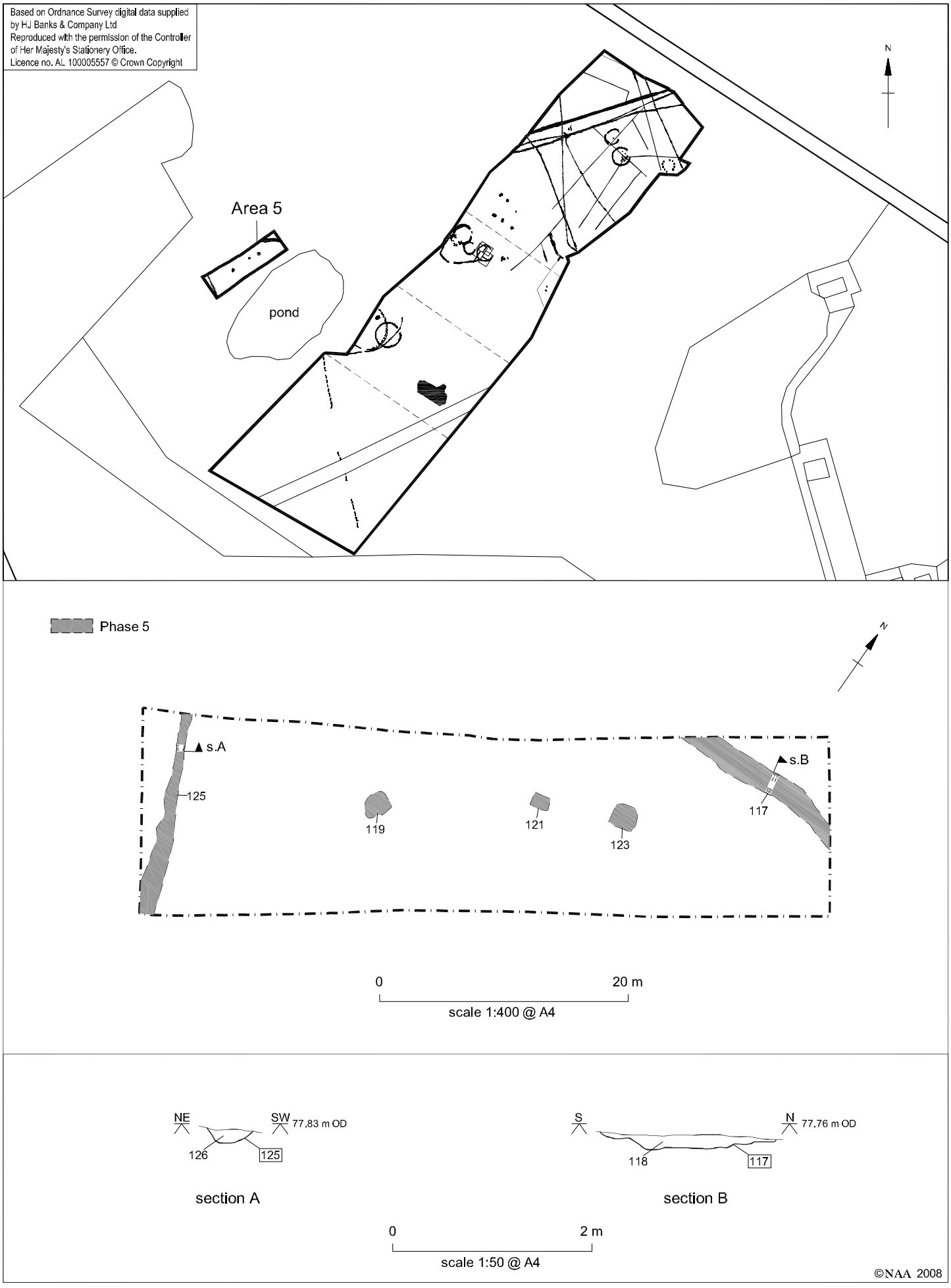


Figure 9 Delhi, Blagdon Hall, Northumberland: Area 5, Phase 5 ditches and pits

Plate 1: north facing view of pit alignment

Plate 2: south-east facing view of section through pit 204

Plate 3: south-east facing view of section through pit 205

Plate 4: view of ring-gully 229, structure 1

Plate 5: north-west facing view through segment ii of ring-gully 229

Plate 6: south-east facing view through segment xiv of ring-gully 229, showing daub deposit

Plate 7: view of Area 3 settlement complex

Plate 8: working shots of structures in Area 3

Plate 9: north-west facing section of pit 666

Plate 10: view of structure 3 within Area 3

Plate 11: south facing section through segmented gullies 3 and 5, which form structure 2

Plate 12: south-west facing view through gullies 31, 33 and 56, which form structure 3

Plate 13: view of structure 4

Plate 14: west facing view through gully 12, part of structure 4

Plate 15: view of trapezoidal enclosure 2

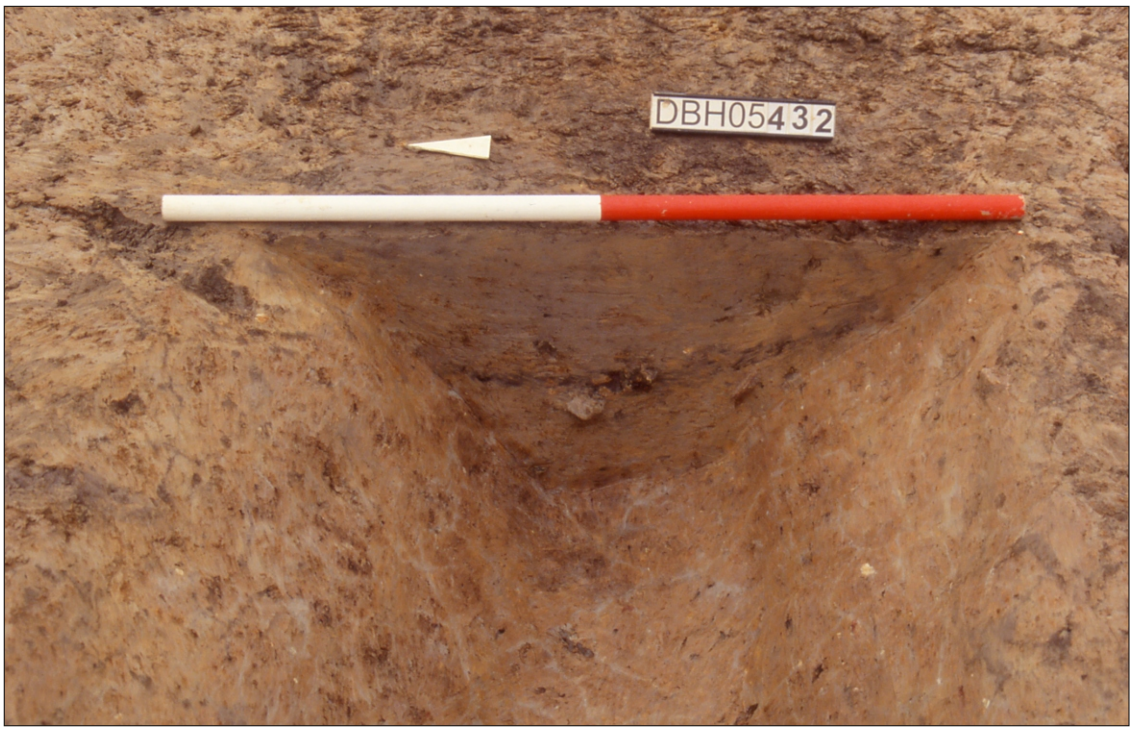


Plate 16: east facing view through enclosure ditch 432

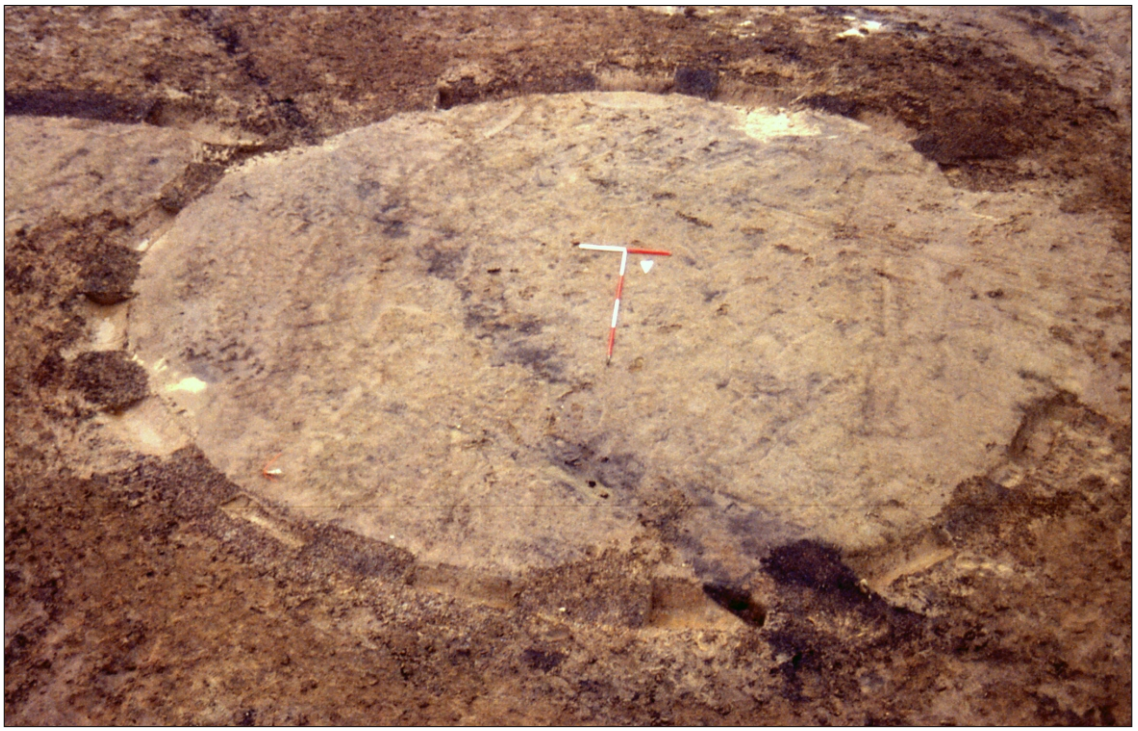


Plate 17: view of structure 5

Plate 18: west facing view through gully 506

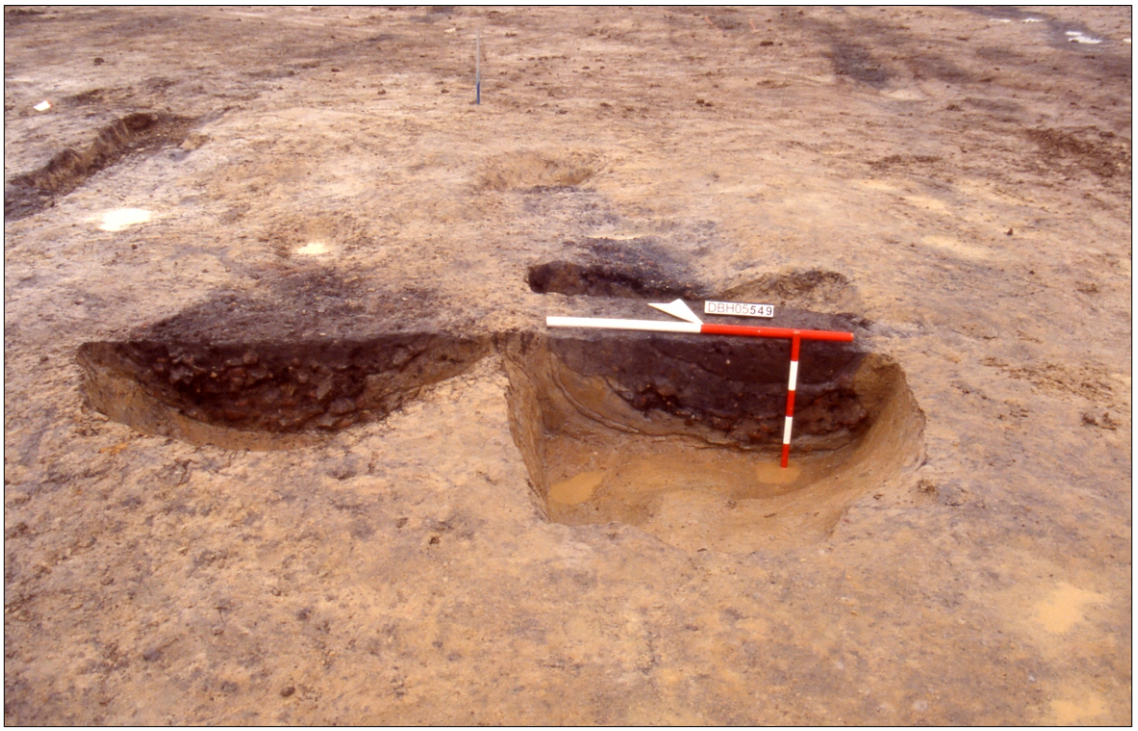


Plate 19: view of pits 437, 549 and slot 621

Plate 20: view of ditches which form enclosure 3

Plate 21: east facing section through ditch 645

Plate 22: east facing view of section through enclosure ditch 800 (=626)

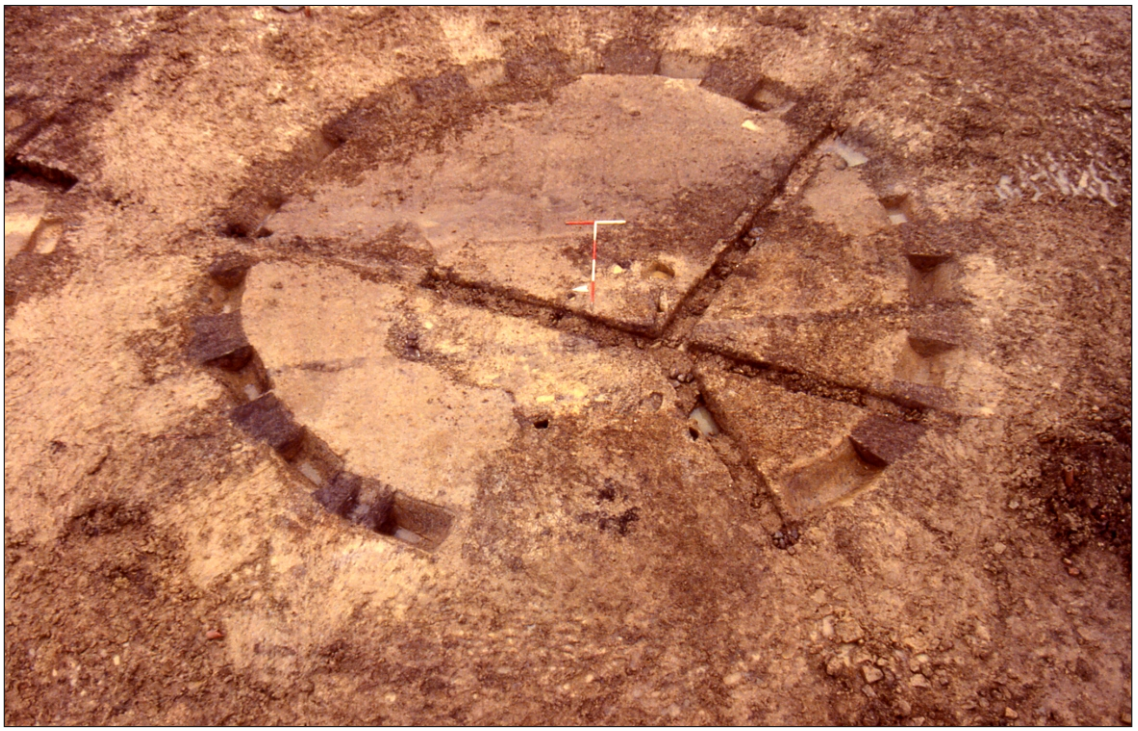


Plate 23: view of structure 6 within Area 4

Plate 24: south-east facing view through ring gully 759, part of structure 6

Plate 25: view of posthole 855 within structure 6

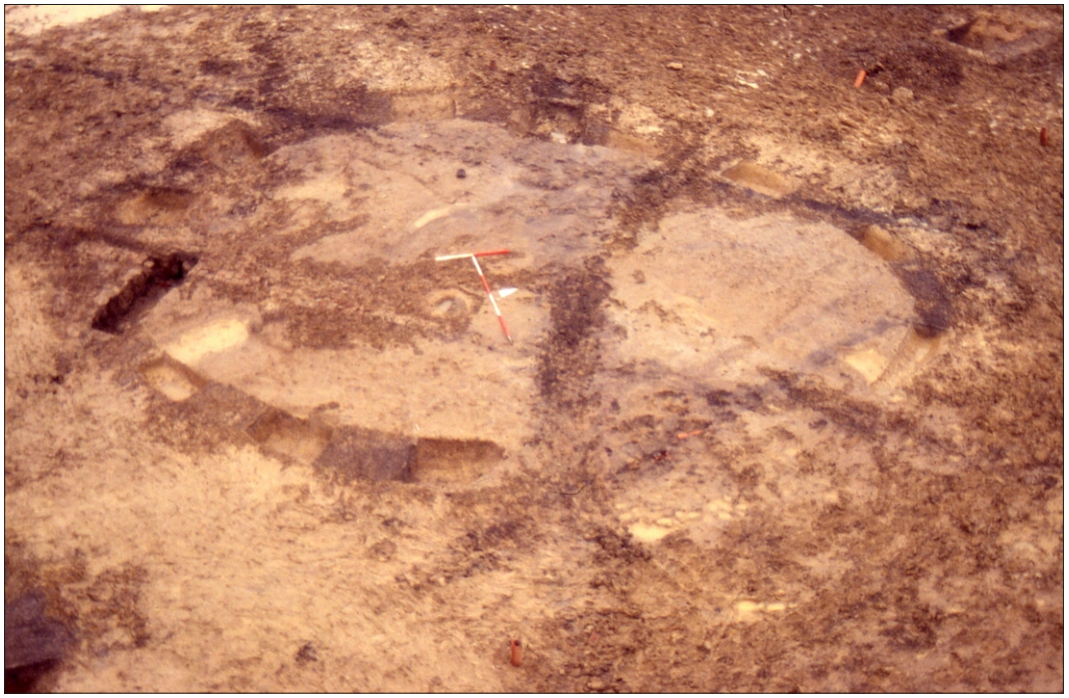


Plate 26: view of structure 7 within area 4