

Beacon Lagoons
Easington
East Riding of Yorkshire
Archaeological Strip, Map and Record

Final Report

Summary

An archaeological strip, map and record exercise on behalf of the Environment Agency was undertaken as part of the Easington Wetlands Project. The excavations revealed an earlier prehistoric camp that was probably seasonally occupied at times of the year when intermittently available resources were abundant. It was associated with predominantly later Neolithic and early Bronze Age flints, two Bronze Age radiocarbon dates and later Bronze Age pottery. A Romano-British field system and a possible short section of trackway were also identified that may have had Iron Age origins. The pottery assemblage suggests the field system was in use up to the 4th century AD. Medieval plough furrows were also identified.



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Report Information

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Report Type: Archaeological Assessment
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County: East Riding of Yorkshire
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1 Introduction

Archaeological Services WYAS (ASWYAS) was commissioned by Tim Cobb of the Environment Agency to undertake an archaeological strip, map and record excavation during the creation of new wetland lagoons to the south of Easington, close to the hamlet of Kilnsea. The new lagoons will replace habitats that are being lost to coastal erosion. The excavation was undertaken between 14th September and 16th November 2011.

Site location and topography

The site, centred at TA 410 160, is located approximately 3km south of Easington around the hamlet of Kilnsea (Fig. 1), at less than 10m above Ordnance Datum. The site comprises four adjoining parcels of land just to the north of Kilnsea and a fifth area immediately south of the hamlet where lagoons of varying size are to be created (Fig. 2). The land was under agricultural production (either arable or rough grazing) at the time of the excavations.

Soils, geology and land-use

The solid geology is recorded as chalk from the Flamborough Chalk Formation (BGS 2003). This is overlain by tidal flat deposits of clay and silt to the north and south of the area, separated by a band of glacial till (Fig. 2). The area of tidal flat deposits between Easington and Kilnsea could represent the course of the Kilnsea Fleet (Mackey 2006), a broad valley running in a north-easterly direction from the present estuary, which later became a tidal creek when sea levels rose. The soils are argillic brown earths of the Burlingham 2 association and are characterised as slowly permeable, slight seasonally waterlogged, fine loams (Soil Survey of England and Wales 1980).

2 Archaeological and Historical Background

An archaeological desk-based assessment (which included a field reconnaissance survey) was undertaken by Network Archaeology in 2006 as part of the Humber Estuary Flood Management Strategy (Bonner *et al.* 2006). This assessment covered all areas currently under evaluation for the creation of new wetland habitats and identified the presence of archaeological features either in, or adjacent to, the five proposed habitat sites. Features included potential prehistoric burial mounds, post-medieval flood defences and World War I and II structures, one of which, a concrete acoustic mirror built between 1917 and 1923, is a Scheduled Ancient Monument (SM 35482, see Fig. 2 for location).

The Kilnsea Fleet comprised a broad valley with a henge monument and several other round barrows, including a cluster at Kilnsea Grange (Mackey 2006, 527). Further barrows in the area have been lost to coastal erosion (Sheppard 1912, 120; Evans and Steedman 2001, 69). In addition, fragments of a sewn plank boat recovered from Kilnsea beach, radiocarbon dated to 1870-1670 cal BC, raises the possibility of a seafaring Bronze Age population (Van de Noort *et al.* 1999, 131). Evidence for Iron Age and Roman occupation of the area around Easington and Kilnsea was almost entirely limited to the recovery and identification of isolated finds such as coins and pottery, until excavations close to the gas terminal at

Easington, and in advance of gas pipelines, revealed a settled landscape of Iron Age and Roman date (Moore 2008, 35; Richardson 2011). The site is situated, therefore, within a landscape of high archaeological potential.

The site was the subject of a programme of trial trenching consisting of the excavation of fourteen trenches between May and June 2011 by ASWYAS (Richardson and Williams 2011). Archaeological remains were exposed in Trenches 6, 7 and 8, which were subsequently incorporated into wider open areas (Fig. 3). Archaeological remains were also identified within Trenches 10, 12 and 13, but at a depth where they would not be impacted upon by the excavation of the lagoons (Fig. 2). These latter trenches will not be considered in subsequent reporting given their distance from the open-area excavations.

Trench 6 contained what was interpreted as a possible (undated) fire pit. Within Trench 7 a ditch intersection and a post-hole were identified. The ditches contained pottery of Iron Age provenance (see Manby below). The post-hole was undated. Trench 8 was positioned 120m to the east of Trench 7. A single, undated ditch was identified that may be related to the field system identified in Trench 7.

Following the trial trenching, five areas were excavated under archaeological supervision, of which three contained evidence of human activity. An assessment of the archaeological features and deposits, and all associated finds, identified four phases of activity: an earlier prehistoric 'camp', later Iron Age field systems, modification and re-use of the field system in the Roman period, and medieval ploughing (Weston 2012).

3 Aims and Objectives

The aims and objectives of the strip, map and record exercise were to gather sufficient information to establish the presence/absence, character, extent, state of preservation and date of any archaeological remains within the areas to be impacted upon by the creation of the lagoons and to excavate and record all identified features.

The specific aims were to:

- locate and characterise any surviving below-ground archaeological remains;
- provide an assessment of the potential significance of any identified archaeological remains in a local, regional and (if relevant) national context;
- to produce a comprehensive site archive and report.

4 Methodology

Following consultation between Dave Evans, Archaeology Manager at the Humber Archaeology Partnership (HAP) and Jen Richards, Senior Archaeologist at the Environment Agency, a programme of strip, map and record excavation was agreed for all interventions

that were to exceed 0.5m in depth. A Written Scheme of Investigation was subsequently submitted by ASWYAS (Appendix 1).

The open-area excavations were carried out in accordance with recognised professional standards, specifically *Standards and Guidance for Archaeological Excavation* (Institute for Archaeologists 2008) and *Management of Archaeological Projects* (English Heritage 2006). ASWYAS's own methodologies (ASWYAS 2011) were also adhered to.

Five discrete areas (Areas 1-5) were excavated below a depth of 0.5m totalling an area of 14337m² (Fig. 3). The areas were stripped by two 30 tonne 360° machines fitted with 2m wide toothless ditching buckets (Plate 1). The topsoil and recent overburden were removed down to the first significant archaeological horizon in successive level spits of 0.2m. The overburden was transported by dumpers and stockpiled away from the excavation area.

All the machine work was carried out under direct archaeological supervision and halted when the underlying natural or the archaeological horizon was encountered. All further investigations were carried out by hand. The archaeological remains were hand excavated in a controlled and stratigraphic manner in accordance with recognised professional standards (Institute for Archaeologists 2008).

All features were recorded in accordance with the ASWYAS site recording manual (ASWYAS 2011). The site archive contains all the information gathered during the investigations, and its contents are listed in Appendix 2. Inventories of contexts, artefacts and samples are listed in Appendix 3. The archive is currently held by ASWYAS, but will be deposited with Treasure House, Beverley in due course.

An excavation strategy was employed that allowed for a sample of 10% of all linear boundary features, such as ditches and trackways, to be excavated. Each section was at least 1m in length and where possible, sections were located and recorded adjacent to the excavation edge. All intersections were excavated to determine the relationships between the component features and all termini were investigated. Discrete features such as stake-holes, post-holes, pits, ring ditches, and potential funerary features were half sectioned in the first instance, recorded in section, and then fully excavated.

Hand drawn plans at a scale of 1:50 were made of the excavation. Section drawings were made at a scale of 1:10 including heights above Ordnance Datum and a photographic and written record was produced. The area of excavation was surveyed using a Trimble Total Station, tied into the Ordnance Survey (OS) National Grid and located on a current 1:1250 OS map base.

An assessment of the excavation archive, finds and samples was undertaken, which included tabulated descriptions for all excavated features, as well as recommendations for further reporting (Weston 2012). This was followed by an updated project design (Richardson 2012) detailing the requirements for this final grey-literature report, and a publication to be submitted to the Yorkshire Archaeological Journal.

5 Results

All excavations encountered similar deposits consisting of a dark brown topsoil overlying patchy deposits of mid-reddish-brown subsoil. Where the subsoil was absent (solely in Area 1), the topsoil overlaid alluvial clay deposits (Plate 2). Here undisturbed alluvial clay was encountered in the east and north of the area with two smaller areas of glacial drift being revealed to the west and south (Fig. 2).

Archaeological remains were encountered in three of the five areas that were excavated under archaeological supervision. No archaeological deposits or features were identified in Areas 4 and 5, although the excavations here were very narrow (Fig. 3). The identified remains indicated four phases of human activity as follows:

- Phase 1: the earlier prehistoric period
- Phase 2: the Iron Age
- Phase 3: the Romano-British period
- Phase 4: the medieval period

Phase 1: the earlier prehistoric period

The 'camp'

The focus of earlier prehistoric activity was encountered in Area 1 and was concentrated on the northernmost area of glacial drift (Fig. 3). The machining away of topsoil (1000) and the alluvium-rich subsoil (1001) revealed a dark spread of material made up of two deposits, 1043 and 1072, measuring 12m east to west by 9.5m north to south (Figs 4-5). The machining off of the subsoil produced worked flint mostly derived from the base of the subsoil, but the clay-rich nature of 1001 caused some flints to be pulled up from the underlying deposits (1043 and 1072). In order that the recovered flint should remain associated with the underlying archaeological deposit they were placed within machining context 1035 to distinguish them from other subsoil finds.

The exposed archaeological deposits 1043 and 1072 consisted of high concentrations of charcoal in a silty, sandy clay matrix with abundant fire-cracked pebbles. The distinction between the two deposits was based on 1072 having a higher sand content and lower charcoal content than 1043. Worked flint and occasional sherds of pottery were also visible in the deposits. A 12m by 10m grid with 1m square divisions was established over the deposits in order to aid the three dimensional recording of all finds and to facilitate the procurement of bulk samples from each individual 1m square (Figs 4-6). Bulk samples were taken to facilitate the recovery of environmental material and flint debitage. A running baulk was maintained in a cross arrangement across the deposits in case stratified deposits were encountered (Plates 3-4).

Excavation of deposits 1043 and 1072 was undertaken by hand and revealed that the eastern limit of 1072 lay beneath 1043. Hazel charcoal from deposit 1043 returned a radiocarbon date

in the range 1262-1050 cal BC (Table 16, SUERC-42936), consistent with the later Bronze Age date of the pottery from this deposit, as well as further sherds from 1072 and the surface of the underlying natural glacial drift (1042). In contrast, a substantial assemblage of worked flint recovered from these same deposits is predominantly Neolithic and Early Bronze Age in date, although a mid to late Mesolithic edge-blunted point microlith was also retrieved from deposit 1043. Together the flint, pottery and radiocarbon dates suggest that the area was used over a very long period, and that material was frequently re-deposited.

The reduction of the grid down to natural deposits revealed a number of stake-holes, post-holes and hearth pits that are indicative of human occupation, perhaps a seasonal camp (Fig. 7; Plates 5-7). Three hearths were identified (1049, 1183 and 1190), one of which (1183) provided convincing evidence of reuse in the form of distinct rake-out deposits 1171 and 1174 (Plate 6). It is thought likely that all the hearths were reused given the high concentration of charcoal, fire-cracked pebbles and pot boilers in the vicinity. Cherry charcoal recovered from the fill (1191) of hearth 1190 provided a radiocarbon date in the range 1884-1695 cal BC (Table 16, SUERC-42936). This confirms the longevity of activity in this area when compared to the later Bronze Age date from the overlying deposit (1043).

The flint assemblage from these discrete features is largely undiagnostic, with the exception of a Late Neolithic spall from hearth 1049 and a Late Neolithic or Early Bronze Age flake from post-hole 1044 (Fig. 7). Presumably the later Bronze Age pottery recovered from post-hole 1094 is intrusive due to later activity in the area, although the putative Iron Age pottery from stake-hole 1210 is questionable given its small size and lack of diagnostic features. Unfortunately no food waste (animal bones, marine shells, cereals or fruits) were recovered, but charcoal associated with the discrete features of the camp reveal that oak, hazel and cherry was used for fuel.

Area 1 inhumations

One confirmed inhumation (1194) and one suspected inhumation (1186) were identified during the excavation of the earlier prehistoric camp (Fig. 7). Both features were observed to cut through occupational deposit 1043, radiocarbon dated in the range 1262-1050 cal BC (Table 16, SUERC-42936), but as both fell partially within the camp baulk they were left unexcavated until the baulk was removed.

The grave cut of the confirmed inhumation (1194) was sub-oval in plan, with steep, nearly vertical sides and a flat base. It was aligned approximately north/south and measured 1.40m by 0.89m by 0.56m deep from the surface of deposit 1043 (Plate 8). Upper fill 1195 consisted of a mixed deposit of re-deposited, orangey-yellow clay-rich glacial drift and dark brown-black topsoil. Basal fill 1197, which was a maximum of 0.03m in depth, was a mid-brown-grey clay. Skeleton 1196 lay on its left side in a flexed position (Plate 9). The bone was in very poor condition and in many places was compressed to no more than 1mm thick (Plate 10). Some fragmentary teeth and the proximal right femur were in a slightly more robust condition (Plate 11). A fragment of the femur was initially submitted for radiocarbon dating at the assessment stage, but unfortunately the bone contained insufficient collagen.

Subsequently, all the remaining human bone and teeth were submitted to SUERC for dating, but again no date was forthcoming. No grave goods were identified, but five flints were recovered from the bulk sample of 1197. The flints were undiagnostic and were presumably introduced as camp deposits were disturbed, rather than being intentionally-placed pieces. The fully excavated grave is shown in Plate 12.

The possible inhumation pit 1186 was also sub-circular in plan, with steep, nearly vertical sides and a flat base. It measured 0.66m by 0.62m by 0.40m. Stratigraphically it was similar to grave 1194 as it too cut through layer 1043 (Plate 13). Its backfill, 1187, was similar to 1195 in composition consisting of re-deposited natural and topsoil. No bone was recovered, but if it was a grave, its small size suggests it may have held an infant or juvenile. The backfill was bulk sampled in an attempt to recover bone fragments, but only flint was found. Again the flints were probably derived from camp contexts and were mostly undiagnostic apart from a Late Neolithic/Early Bronze Age flake.

The fully excavated remains of the earlier prehistoric camp and the graves are shown in Plates 14 and 15.

Area 1, the eastern leg

To the south of the camp, on the southern area of glacial drift, pit 1033 was located to the south of a plough furrow and directly to the west of pit 130 first identified in Trench 6 (Fig. 8). Pit 130 is tentatively included in this phase given its proximity to pit 1033 which contained five prehistoric flints.

Further evidence of earlier prehistoric activity was found at the foot end of the eastern leg of Area 1 (Fig. 9). In this area several flints were recovered from a spread of subsoil (1064) contained in a shallow depression (1063, not shown on plan) and from the surrounding subsoil (1001), although Iron Age and Roman pottery was also found. Removal of these subsoil deposits revealed a short gully/elongated pit (1087) and seven stake or post-holes (1065, 1068, 1070, 1090, 1136, 1138 and 1140), three of which produced flint finds (1065, 1090 and 1140), including a Late Neolithic/Early Bronze Age piece from 1090. A second putative pit (1061, not shown in plan) was probably misidentified during excavation and instead formed part of the wider depression. This contained a number of undiagnostic flints, but also an Early Neolithic end scraper and an Early Bronze Age flake (1062). The flint scatter in this area indicates a prehistoric presence that may well have been truncated by the much more intensive Romano-British activity close by.

Phase 2: the Iron Age

Area 1

Only scant evidence of Iron Age activity was identified during the excavation of Area 1 consisting of Iron Age pottery recovered from post-hole 1036 (Plate 16) and 'Iron Age or Romano-British' pottery from the tertiary fill (1104) of Ditch 1 (Fig. 9; Plate 17; Didsbury, below). Given the Iron Age pottery from post-hole 1036, it is possible that the nearby post-holes 1038, 1051 and 1075 date to the same phase of activity. Stratigraphically Ditch 1 relates

to a later phase of activity and, as such, is described below. On this basis, the pottery, if indeed Iron Age, must have been intrusive in a later context.

Area 2

Area 2 covered 490m² and was located over the intersection of two ditches previously identified in Trench 7 (Fig. 10; Plates 18 and 19). Here Ditches 5 and 6 were clearly contemporary and are dated to the Iron Age based on 24 sherds of pottery from a secondary fill (1216) and an upper fill (1221) of Ditch 6 and three sherds from an upper fill (119) of Ditch 5. Further sherds were recovered from a single fill (125) of Ditch 6 at the evaluation stage. Both ditches had broad U-shaped profiles and the pattern of infilling in Ditch 5 suggest that a bank may have existed on its northern side (Fig. 12; S.48 and S.50). Ditch 5 was a maximum of 1.7m in width and 0.6m in depth, while Ditch 6 was wider at 2.38m and deeper at 0.75m.

Area 3

Area 3 covered 366m² and allowed for the further investigation of a ditch previously identified in Trench 8 (Fig. 11). Overall, a 19m section of Ditch 7 was exposed, but despite further excavation of the feature no dating evidence was recovered. Ditch 7 is included in the Iron Age phase as it was of similar form to Ditches 5 and 6 and was on a similar alignment to Ditch 5, suggesting it may have formed part of the same field system. Ditch 7 had a broad U-shape profile and revealed evidence of re-cutting (Fig. 12, S.59; Plate 20). It measured a maximum of 2m in width and 0.51m in depth.

Phase 3: the Romano-British period

Area 1

Six ditches (Ditches 1-4, 1122 and 1146) and one large post setting (1130) in Area 1 have been dated to the Romano-British period (Fig. 9; Plates 21 and 22). Sub-phases are likely as Ditches 2 and 3 produced 2nd to early 3rd-century pottery whilst ditch 1122 (Fig. 14, S.40, Plate 23) contained late 3rd to 4th-century wares (Didsbury, below). Stratigraphic evidence of sub-phasing, however, was not conclusively identified as the relationships between Ditches 2 and 1122 and Ditches 1 and 2 (Fig. 13, S.39) were indeterminate. Nevertheless, the pottery evidence suggests the ditch system was reworked and maintained until the late 3rd to 4th century or later.

Ditch 1146, a steep-side V-shaped feature (Fig. 14, S.42; Plate 24), did not produce dating evidence, but stratigraphically it was seen to be contemporary with Ditch 2 and, therefore, of Romano-British date. Ditch 4 also failed to produce dating evidence, but given the similarity in their fills, it is believed to be a continuation of Ditch 3. All of the ditches in this area were typically substantial features with steep-sided profiles (e.g. Fig. 13, S.34 and S.43), but only Ditch 3 provided clear evidence of an associated bank in the form of slumped material from the east (Fig. 14, S.24). The ditches ranged in width from 0.8m (Ditch 4) to 2.2m (Ditch 2) and in depth from 0.33m (Ditch 4) to 1.08m (Ditch 2).

Animal bones and marine shells, which were absent from earlier prehistoric features and rare from the Roman field system, suggest that cattle, sheep/goat, pig and oysters were consumed. Unfortunately charred plant material was also very scarce, and only scant cereal grains from Ditch 3 were recovered, including a single grain of hulled barley (Alldritt, below; Foster *et al.*, below). A whetstone, made from a locally-sourced beach cobble, was retrieved from a tertiary fill (1150) of Ditch 1.

Post setting 1130, located between Ditches 1 and 2 and predating them, contained a single sherd of Roman oxidised ware (Fig. 13, S.38, Plate 22).

Phase 4: the medieval period

Areas 1 and 2

The only evidence of activity on site during the medieval period was the presence of five plough furrows in Area 1 and another in Area 2. Four sherds of an orange ware fabric were recovered from furrow 1008 of probable medieval date.

Unphased features

Area 1

Pit 1112 (0.60m by 0.60m by 0.14m) was located at the foot end of the eastern leg of Area 1, just to the north-east of the gap between Ditches 2 and 3 (Fig. 9). It contained lower (1111) and upper (1110) fills, both of which were sterile.

A concentration of small pit-like features was identified at the northern limit of the glacial drift deposits in the eastern leg of Area 1 (Fig. 8). These were far from convincing as archaeological features, and it is only the inclusion of charcoal flecks in pit 1027 and a possible manuport in pit 1025 that warrant their inclusion here.

Area 2

Two fire-pits were identified in Area 2 (Fig. 10). Fire-pit 1231, measuring 1.20m by 0.95m by 0.30m in depth, contained a basal baked clay interface (1232) between the natural glacial drift and the upper fill (1233) (Fig. 15, S.51; Plate 28). Fill 1233 was a dark grey silty sand with ash, but unfortunately no finds were recovered apart from charcoal of indeterminate species.

Fire-pit 1234 (1.80m by 1.60m by 0.50m in depth) contained a sequence of three fills (Fig. 15, S.52; Plate 29). The first fill, 1237, consisted predominantly of re-deposited natural glacial drift with very occasional fragments of charcoal and fired clay. It is likely that 1237 was placed into the cut prior to its use, perhaps as a lining, while fills 1235 and 1236 were the result of use and backfill deposits. No artefacts were recovered, but oak wood charcoal was identified in deposit 1235 and may represent the fuel used.

Gully 8, measuring 4.75m by 0.53m by 0.32m, may represent the remains of a steep-sided ring ditch, although surviving to a depth of 0.32m, it is surprising that more of the putative feature did not survive (Fig. 15, S.54). The only find recovered was a fragment of fired clay

indicative of high temperatures (McDonnell, below), but it does not aid in the interpretation of the gully.

6 Artefact Record

All the specialist reports include material recovered from both the evaluation and excavation stages of work. Assessments are provided again as part of this final report, except where they have been succeeded by subsequent reporting (flint and Roman pottery). Additional analysis and reporting of the prehistoric pottery and whetstone are included here.

Prehistoric pottery by T. Manby

All the pottery is very fragmentary, and some pieces had freshly broken edges. The pieces were examined as an individual context group and compared for joins. All surfaces and fractures were searched for evidence of organic material as carbonised residues or as voids in the fabric wall. Tempering agents were identified with the aid of x 10 hand lens, and where necessary by using a binocular microscope.

The recording of the sherd assemblages was based on the recommendations of the Prehistoric Ceramic Research Group (2011). The analysis of the sherd material recorded the vessel features, decoration and fabric and wall thickness; also sherd size and condition such as abrasion and post-depositional changes. In describing the fragmentary pottery, the following designations describe the size of pieces:

- Sherd: Any pieces in excess of 25mm square;
- Small Sherd: A piece between 10mm to 25mm square;
- Flake: An angular piece split off vertically from the sherd wall;
- Crumb: An abraded and featureless piece less than 10mm square.

The wall thickness of sherds of the individual fabrics or vessels are recorded within a tolerance of 1mm. Quantity representation of temper contribution are estimated as Rare <5%, Sparse 5-10%, Common 10-20%. The maximum size of temper particles was measured to within 1mm using an electronic calliper. Mineral identifications have been entirely macroscopic.

Culturally the prehistoric ceramic finds appear to be divided chronologically into the later Bronze Age assemblage, principally from the 'camp', and secondly those attributable to an Iron Age date based on their fabric character only, and coming from several diverse contexts.

Later Bronze Age

This is a fragmentary assemblage principally recovered from two deposits (1043 and 1072) associated with occupation debris (Table 1). A total of 64 pieces from these contexts have an average sherd size of 30mm to 35mm across, with the largest sherd 50mm by 48mm and over half less than 25mm across. The only rejoins found were recently broken pieces. Without any complete or partially profiles, vessels sizes or capacities cannot be calculated. The condition

of sherds was variable, the majority had sharply fracture edges including some with partially eroded or worn surfaces, indicating breakage after some weathering. Interior charred residues or sooting traces are thin and are not a prominent element. None of the sherds appear to be re-fired.

Table 1. Later Bronze Age pottery from the 'camp'

	Sherds	Small sherds	Flakes	Crumbs
1042 natural drift	2		1	2
1043 occupation debris	24	17	4	12
1072 occupation debris	2	2	1	2
1094 post-hole under camp debris	2			
1191 pit under camp debris	7	5	5	6

Feature sherds consist of: rim = 2; cordons = 2; ledge shoulder = 1, base angle = 2

Number of vessels represented by fabric at least six to eight

Fabric are predominately sand tempered, using a fine quartz sand with some iron stone.

1. Hard, compact fabric, harsh surfaces. Oxidised exterior - surface colour varying from orange-red to red-buff over orange to a depth of 2-4mm. Dark grey interior. Common sand temper with sparse angular sedimentary rock fragments < mm. The most common fabric, comprises some 30-40% of sherd material from deposit 1043. It is possible that most of the sherds in this fabric come from the same vessel.
2. Softer than Fabric 1. Thin Oxidised exterior, orange to reddish. Dark grey core. Sand temper and angular stone fragments < 1mm.
3. Compact brown to grey surfaces, grey core. Fine sand temper and sparse angular igneous fragments.

Catalogue of illustrated pieces (Fig. 16)

1. Rim fragment, upright profile, simple rim. Hard, harsh surfaces, exterior brown to a depth of 3 mm, but mostly eroded off. Interior buff traces, but eroded down to dark grey core. Temper: sand and sparse angular igneous <5mm. 50mm by 48mm, diam. c. 19mm, wall th. 8mm. *Area 1, context 1072, small find 275*
2. Small fragment of rim, bevelled lip internal expanded. Hard, harsh dark fabric, surfaces probably eroded off. Temper: sand, rare angular stone. Fabric 1? Wall th. 8mm. *Area 1, grid D4, context 1043, sample 100*
3. Cordon sherd. On a convex wall profile a prominent well moulded cordon with a small D-shaped notch in its outer surface. Compact harsh buff-brown exterior. Interior surface eroded, traces of buff remaining in fissures into dark grey core. Temper: fine sand. Fabric 3. 43mm by 31mm, wall th. 8mm. *Area 1, grid I6, context 1043, sample 7*
4. Cordon sherd, prominent rounded cordon on a straight wall profile. Hard, harsh light brown exterior above cordon, grey under. Dark grey interior. Temper: sand, sparse

- angular stone <5mm. rare white flint. 34mm by 53mm, wall th. 12mm. *Area 1, context 1043, small find 279*
5. Rounded shoulder or cordon? Small sherd. Hard, harsh grey-brown exterior, some erupting temper, dark grey interior. Temper: sand rare angular igneous <3mm. Fabric 3. Wall th. 7mm. *Area 1, grid D6, context 1043, sample 35*
 6. Ledge shoulder sherd, slight convex wall profile. Hard, harsh surfaces, grey above the shoulder, orange-brown, below. Dark grey interior. Temper: sand, much angular igneous <12mm. 34mm by 33mm, wall th. 6mm and 11mm. *Area 1, grid F2, context 1043, sample 111*
 7. Base angle sherd, out-splayed wall, rounded turn, but badly eroded. Brown-orange exterior, dark grey interior with carbon traces. Temper: sand, sparse angular stone <5mm. Fabric 1. 40mm by 40mm, wall th. 7mm. *Area 1, context 1043, small find 292*
 8. Base angle sherd, wall broken off at turn to base. Hard, eroded orange exterior, dark grey interior, partially scaled off. Temper: sand, sparse angular stone <3mm. Fabric 2. 22mm by 22mm, wall th. 14mm. *Area 1, context 1043, small find 304*

This assemblage provides only limited profile features and no decorative techniques for comparison with other regional and wider eastern coastland site assemblages. The largest piece, the rim profile No. 1 from a simple profiled jar or bowl, has its surfaces too deeply eroded to be certain if the lip had originally borne any decoration. More diagnostic are the two cordons Nos. 3-4, and possibly a third No. 5 that alternatively may be a shoulder ridge. Unfortunately they do not have enough remaining wall to establish their positions on the vessel profile, close under the rim. A fourth vessel is represented by a ledge shoulder No. 6, but too little of the wall profile remains to recognise a jar or bowl profile.

Apart from the notch in the cordon of No. 3, possibly made by a finger nail, there is an absence of decoration. Not represented are very coarse, large stone tempered, fabrics or 'Fine Ware' burnished or dark grey reduced wares.

The cordon and ledge shoulder features can be paralleled regionally in Late Bronze Age ceramic occupation sites assemblage in eastern Yorkshire (Rigby 2004, 46, figs 4 and 8), and these are part of a wider distribution along the eastern coastlands of England (Barrett 1980, 312-3). There is for eastern Yorkshire a ceramic typology sequence determined by Rigby, providing characteristic vessel types and fabric classes, from the Middle Bronze Age into the Iron Age, down to the end of the 1st millennium BC based on closed pit associations from Wolds, and adjacent lowlands of the Vale of Pickering and northern Holderness (Rigby 2004, 9-12 and 29-48). The Cordon Bucket Jars and Cordoned Neck Jars are represented amongst other jar and bowls types in the Late Bronze Age occupation sites of Devil's Hill, Scarborough, Stable Howe, Thwing and West Heslerton; and in pit associations at Kilham and North Dalton (Rigby 2004, 46). South of the Humber is the well-dated site at Washingborough in the lower Witham valley and other occupation sites in Lincolnshire (Allen 2009). The Late Bronze Age character of the Easington assemblage is consistent with

the radiocarbon date in the range 1262-1050 cal BC (Table 16, SUERC-4293) from the hazel charcoal recovered from deposit 1043.

Iron Age

The Iron Age sherds (Table 2) were distinguished from earlier ceramic material by a greater hardness and increased use of angular stone tempering varieties, especially crushed quartzite. There are no feature pieces represented, nor any indications of profiles. Eroded surfaces and rounded edges are common. The largest sherd size present is 45mm by 37mm. They are attributed to the Iron Age by fabric characteristics only, based on comparison with other eastern Holderness pottery. Chronologically only the broadest dating might be suggested for this material: *c.* 500-100 BC period.

Table 2. Iron Age pottery

	Sherds	Small sherds	Flakes	Crumbs
101 subsoil		2		
119 Ditch 5		3		1
125 Ditch 6	1	2		3
1013 furrow	2			
1035 'camp'	3			
1037 post-hole 1036	1			
1063 depression		2		2
1211 post-hole 1210		1		1
1216 Ditch 6	1			
1221 Ditch 6	9	8	6	

The Romano-British pottery by P. Didsbury

The Romano-British pottery was the subject of a detailed assessment during the post-excavation stage. The site narrative offered above has been fully informed by this assessment, and only a short discursive summary is offered here.

The aggregated assemblage from this period amounted to 93 sherds, weighing 1806g, with an average sherd weight of 19.4g. The great majority of the material (91 sherds, 1770g) came from a series of ditches in Area 1, viz. Ditches 1, 2, 3 and 1122. The latest material was of definitive Roman date in all features except the tertiary fill (1104) of Ditch 1, which contained only two fragments of vesicular hand-made material in the indigenous potting tradition. Technically, these sherds could be of Late Iron Age date, but since such material continued to form a large proportion of ceramic assemblages in the region well into the 2nd century, especially on non-nucleated rural sites, there is no reason to regard them as anything other than broadly contemporary with the material from the other ditches. Only three of the ditches have closely datable assemblages, as follows.

The secondary fill (1048) of Ditch 3 contained 22 sherds of greyware, weighing 653g. These included the rim of an 'Antonine' carinated jar (Fig. 17, no. 1), and a wide-mouthed bowl in a

probable South Yorkshire fabric (Fig. 17, no. 2). This is probably to be compared with a vessel such as Samuels 1983, fig. 143, no. 15, from Cantley Kilns 30-43. A 2nd to early 3rd-century date-range for the assemblage would be most appropriate.

The primary fill (1125) of Ditch 2 contained several items also suggestive of a later 2nd or earlier 3rd-century date. These include a straight-sided flanged bowl with high flange, deliberately chipped off (Fig. 17, no. 3); a wide-mouthed bowl (Fig. 17, no. 4) reminiscent of forms of this date from Cantley Kilns 1-8 (Annable 1960), or from Little London (Samuels 1983, fig. 156b, no 126, redrawn from Oswald 1937); and a second bowl (Fig. 17, no. 5) reminiscent of some form H bowls from Blaxton (Buckland and Dolby 1980). A mid-2nd to mid-3rd-century date would probably accommodate all the above-mentioned forms.

The primary fill (1123) of ditch 1122 stands out from the rest of the Roman assemblages from the site in having diagnostically later material: an outbent rim calcite-gritted jar, without lid-seating, is best compared to material from the lower well deposit at Rudston Villa, (e.g. Rigby 1980, no. 254). That Rudston deposit is usually dated to *c.* AD 295-330, while similar vessels might also appear in the intermediate well deposits, *c.* AD 330-360.

In conclusion, the ditches in Area 1 have assemblages which, with a single exception, point to the later 2nd and earlier 3rd-century as the optimum period for depositional activity. A single ditch stands out as containing late 3rd to mid-4th-century material. For material which suggests an earlier, Iron Age, occupation of the site, see Manby (this report).

The Roman greyware assemblage is of some interest in that the predominantly sandy fabric(s) and form types present strongly suggest production in the Doncaster or Trent Valley area. The material may well have reached the Easington area via the Trent and Humber river system, and belong to a period before the ubiquitous later 3rd and 4th-century regional greyware, from the major kiln complexes around Holme upon Spalding Moor, had penetrated into eastern Holderness.

Catalogue of illustrated pieces (Fig. 17)

1. Greyware. Rim of 'Antonine' carinated jar. Fine, sandy, pale grey core with darker blue-grey surfaces. The exterior, and the upper *c.* 15mm of the interior, have closely set wheel-burnished bands. *Area 1, Ditch 3, fill 1048*
2. Greyware. Wide-mouthed bowl. Abundantly sandy mid-blue-grey ware. *Area 1, Ditch 3, fill 1048*
3. Greyware. Straight-sided flanged bowl, the high flange chipped off. Very dark grey sandy ware, with very pale brown core margins. *Area 1, Ditch 2, fill 1125*
4. Greyware. Wide-mouthed bowl. Hard, dense, sandy fabric, mid-blue-grey with paler margins. The exterior surface has been burnished. *Area 1, Ditch 2, fill 1125*
5. Greyware. Wide-mouthed bowl. Fabric as no. 4. *Area 1, Ditch 2, fill 1125*

6. Calcareously-tempered ware, now vesicular. Black with brown margins in places. The extant portion is wheel-thrown. There are traces of carbonised deposits on top of the rim and in the angle of the neck on the exterior. *Area 1, ditch 1122, fill 1123*

Flint report by Peter Makey

All the flint has been fully catalogued (held with the site archive) and each piece has been allocated a flint archive record number. This number is used in instances where no small finds number exists. The composition of the assemblage is given in Table 3 and its distribution is summarised by Tables 4-8.

The flint assemblage totals 897 struck pieces of flint, of which 445 have come from excavation and a further 452 came from soil samples. The ratio of intentionally retouched pieces to un-retouched pieces is low at 1 to 22. Despite this, the assemblage is missing many common elements from prehistoric assemblages.

State

Overall the material is in remarkably fresh state, with 614 pieces (68%) being in a fresh to very fresh state. Only 67 pieces (7.5%) exhibit traces of edge abrasion consistent with rolling. The rolled pieces predominately came from the camp area (deposit 1043), which also produced material in a remarkably fresh state. The micro-wear analysis of the flint suggests that some degree of post-depositional soil creep has occurred.

Traces of patination to varying degrees are present on 235 (26%) of the pieces. The assemblage contains a remarkably low number of broken pieces. Only 43 pieces are broken (4.8%). Few conjoining pieces are present in the assemblage. These examples consist of two burnt spalls (recorded find 10), three chippings and a chunk (recorded find 97, grid F8) from occupation surface (1043) and two flakes from machining over the camp area (deposit 1035). In addition, a broken blade (recorded find 242) from deposit 1043 almost fits a core rejuvenation flake (recorded find 233) from the same context.

Traces of burning are present on 54 pieces (6%). The distribution of the burnt pieces is sporadic and the degree of burning is variable, ranging from light to very heavy. Fifteen of the pieces have been calcined. Of these, ten chunks and chippings from occupation surface 1043 appear to be flint pebble fragments that have been in a fire, either a cooking fire or for the production of flint temper for pottery production. The machining layer (1035) over the camp contained three flints with a surface gloss consistent with heat pre-treatment, indicative of high-quality knapping. These pieces comprised a long end scraper (archive record 62, Fig. 18, no. 1), a double-ended scraper (archive record 63) and a double-edged knife (archive record 60, Fig. 18, no. 2).

Use-Wear/Micro-Wear

All of the material has been analysed for the presence of both microscopic and macroscopic traces of edge use. Seventy one (7.9%) pieces show macroscopic traces of edge use. Of these

fourteen pieces also retain traces of micro-wear. The trait is evenly distributed throughout all the deposits and features.

Traces of micro-wear are present on fifteen pieces (1.7%). A chunky flake (recorded find 68, archive record 87) from the natural drift deposit (context 1042) in the camp area, possesses micro-wear polish, but no apparent macroscopic wear. The micro-wear on this piece (Plate 30) is consistent with abrasion resulting from soil creep. The support flake itself looks consistent with axe manufacture. A further three possess slight traces of a macro/micro-polish. These include a notched blade (recorded find 46, archive record 288, Fig. 18, no. 6, context 1043), end- and double-side scraper (recorded find 106, archive record 511, Fig. 18, no. 3, context 1043) and a piercer (archive record 854, Fig. 19, no.9, context 1143, ditch 1146). The micro-wear on the blade (recorded find 46, Fig. 18, no. 6) from deposit 1043 is consistent with the piece having been used to scrape hard wood or bone. Three pieces had been used on hard wood and bone, (recorded finds 46, 258 and archive record 779). One piece, an end- and double-side scraper (recorded find 106, archive record 511, context 1043, Fig. 18, no. 3), had been used to whittle wood.

Raw Material and Knapping

Local prehistoric assemblages tend to be predominately manufactured on a fine-grained, olive-coloured, vitreous flint that has been obtained from local boulder clay till. The Easington assemblage is also predominately manufactured on this raw material, with an additional element of reddish-brown-coloured flint that is typically found in the local gravel exposures. The Easington flint has been worked from small *c.* 8cm-diameter smooth-skinned spherical and sub spherical pebbles, via the application of hard-hammer technique.

The reduction stage could be assessed for nearly 97% of the material (figures exclude uncorticated fragments). There are proportionally few pieces with extant cortex (8%); consistent with primary (initial) reduction debitage. Characteristics of secondary stages of core reduction are present on only 20% of the assemblage. A remarkably high proportion of the material (72%) comes from the tertiary (final) stages of core reduction, and in many instances it would appear to be consistent with the final stages of manufacturing tools.

Cores and Core Rejuvenation Flakes

The cores have been classified according to the system devised by Clark *et al.* (1960, 216) with the addition of discoidal. The flint cores are of a variety of forms with a slight proportional preference for discoidal/keeled forms. The characteristics of the cores are summarised in Table 9. A core fragment from the upper fill of ditch 1146 (fill 1142) had been used as a hammer stone.

The majority (85%) of the core rejuvenation flakes come from the camp area. Typologically the rejuvenation flakes are predominately plunging flakes or platform removal types (Saville 1972-3). The rejuvenation flakes tend to possess an average of five removal scars and are geared to the production of broad, squat flakes (<16mm, long). The rejuvenation flakes are predominately in a fresh to very fresh state. The rejuvenation flakes do not match the cores,

although a high proportion of the flaking debitage almost re-fits to the core rejuvenation flakes. It is possible that the rejuvenation flakes are from earlier phases of core reduction since the remnant cores are predominately exhausted.

Debitage

Despite the large degree of residuality, there are enough flakes for their metrical analysis to produce some useful data (Graphs 1-6). Published metrical data for East Riding lithic assemblages is scant with a few notable exceptions chiefly the work of Durden (1995) at North Dale and South Landing, Flamborough. The breadth to length ratios of the flakes, blades and bladelets have been plotted in Graphs 1-4. Spalls have been excluded from the graphs due to their small dimensions. Blades and bladelets have been defined following Tixier (1974). Three pieces (recorded finds 13, 22 and 235) have been classified as micro-bladelets since they resemble microlith manufacture.

A significant feature of the assemblage is the high incidence (35%, 315) of small flakes/spalls. Spalls are usually associated with knapping clusters and usually found on occupation sites. Most of the spalls were recovered from environmental samples and in many instances they indicate the presence of flint working in contexts that did not appear to produce lithic material. In addition to this, the spalls indicate a slightly larger variation in the colour of the flint raw material than is apparent in the rest of the flint.

Fill 1084 of Ditch 2 contained four chunky flakes (archive records 785-788). These pieces possess dihedral flake scars on their striking platforms. This is consistent with regional Bronze Age assemblages. The assemblage has a comparatively small blade to flake ratio (*c.* 1 to 31). Four blades of later Neolithic/early Bronze Age aspect were recovered from natural drift deposit 1042. The blades from camp occupation surface 1043 are of a Neolithic aspect.

Retouched Forms

Arrowhead

A sole example of an arrowhead was recovered. The piece was a barbed-and-tanged arrowhead (recorded find 196, archive record 122, Fig. 19, no. 11) of Green's (1980) type, Sutton bh. The arrowhead came from natural drift deposit 1042 in the camp area and has clearly been rolled and suffered relatively recent breakage. The example is of a form that is consistent with the regional assemblages (Makey 1989). Such forms tend to be prevalent in Beaker assemblages.

Scrapers

A wide range of diagnostic scrapers are present in the assemblage from the camp area (Table 10). Most of the scrapers are relatively broad and are predominately less than 5cm in length. A variety of platform trimming techniques are present on the scraper butts. Natural drift deposit 1042 contained an end- and double-side scraper (recorded 281, archive record 150, Fig. 19, no. 12) with fine multiple trimming on its butt. Seventy five percent (12 pieces) of the scrapers are in a fresh state. With the exception of an unclassifiable, unstratified scraper (archive record 900) and a crude end form (recorded find 135, archive record 609) from

occupation surface 1043, all the remaining examples possess clear macroscopic examples of edge use. The degree of usage is predominately heavy. A double-end scraper (archive record 63) from the machining layer over the camp (1035) possessed two small areas of gloss that may have resulted from heat pre-treatment of flint. Three of the scrapers are long end varieties (recorded find 31, 296 archive record 62, Fig. 18, no. 1) that have been manufactured on thin (8mm thick) flakes. Occupation surface 1043 contained an end- and double-side scraper (recorded find 106, archive record 511, Fig. 18, no. 3) that may have been hafted.

Scrapers on Cores

A sole example of a scraper manufactured on a discoidal flake, core was recovered from the topsoil in the west of Area 1 (archive record 1, Fig. 19, no. 14). The example has two areas of scraper retouch. The support/discoidal core is similar to examples from the Neolithic/early Bronze Age site at Beacon Hill, Flamborough (Moore 1964). Scrapers manufactured on cores are also a feature of the Neolithic site at Hurst Fen, Mildenhall, Suffolk (Clark *et al.* 1960; 217).

Serrated Edged Blade

A fine example of a serrated edged blade (archive record 901, Fig. 19, no. 13) was recovered from an unstratified context in the east of Area 1. Manufactured on a large double-crested blade, the piece has slight ancillary ventral retouch. The un-retouched (LHS) side of the piece possesses traces of micro-wear consistent with whittling wood. The piece is atypical of many of the pieces in the assemblage and perhaps represents an earlier, possibly early, Neolithic phase of activity. The selection of fine blades for serration is a known feature of early Neolithic assemblages (Healy 1993, 34). Excavations along the Caythorpe, pipeline (Abramson 1996) produced much smaller examples in association with fragments of Grooved Ware and Bronze Age biconical vessels (Makey 1996; Manby 1996). Excavations of a Neolithic occupation site at Cottage Farm, Sewerby, Bridlington (Dickson and Edmonds 2009, 111) produced similar examples from later Neolithic contexts.

Knives

The assemblage contains three knives, two of which came from occupation surface 1043. The pieces from 1043 comprise a fresh-looking, finely-flaked, semi-convex, corticated single-edged variety (recorded find 79, archive record 393, Fig. 18, no. 4) and a fragmentary knife with three areas of retouch (recorded find 258, archive record 627, Fig. 18, no. 5). Both of the examples from 1043 possess traces of macroscopic and microscopic traces of edge use. Machining layer 1035 contained a crude double-edged flake knife that retained moderate traces of edge use (archive record 60, Fig. 18, no. 2). The pieces are not of a specific diagnostic form, although the relatively large size of the support flakes used in their manufacture is more suggestive of a Neolithic rather than a Bronze Age date.

Spurred Flakes and Notched Pieces

A single spurred flake (recorded find 21, archive record 234) was recovered from the occupation surface 1043. This piece has slight bifacial flaking and is possibly the bi-product of arrowhead (barbed-and-tanged or leaf) manufacture. The notched component comprises four pieces, these being single notched pieces. The supporting forms were two blades (recorded find 46, archive record 288, context 1043, Fig. 18, no. 6; archive record 836, context 1125), one flake (archive record 684, context 1056, ditch 1055) and a broken micro-bladelet (recorded find 31, archive record 722, context 1072, Fig. 19, no. 8). The notched piece (recorded find 46, Fig. 18, no. 6) from the camp occupation surface (1043) has been manufactured on a fine, broad double-crested blade. The piece is in a fresh state and possesses macro and micro-wear and traces of surface polish. The micro-bladelet fragment (recorded find 31, Fig. 19, no. 8) came from camp occupation surface 1072. The piece has probably been broken recently and has no traces of use wear. Although the piece looks as though it is related to later Mesolithic microlith manufacture, micro-bladelets do occur in some of the regions later Neolithic, Woodlands style Grooved Ware assemblages (Makey 1996).

Piercer

A sole example of a piercer was recovered (archive record 854, Fig. 19, no. 9) from ditch 1146 (fill 1143). The piercer was manufactured on a small cortical pebble of fine grained dark olive grey-coloured till flint. The attribution is primarily based on usage, as the tool exhibits extensive macro-wear and micro-wear indicative of its usage on bone. The flint assemblage from the Phase 3 ditch 1146 is in a predominately fresh state and is of an early Bronze Age nature.

Microlith

An edge-blunted point microlith was recovered from camp surface 1043 (recorded find 326, archive record 668, Fig. 18, no. 7). The piece possesses left hand side primary retouch and ancilliary right hand side retouch. The generally accepted English microlith chronology sees a bi-partite division of typological forms (Mellars 1974, 82, fig. 10) with larger microliths and isosceles triangles in the earlier Mesolithic and smaller, narrower and scalene forms in the later Mesolithic. Edge-blunted forms are common in both periods. The Easington example falls between the two size ranges and as such probably represents the transition from the earlier to later Mesolithic.

Edge-Retouched, Miscellaneous Retouched and Utilised Pieces

The edge-retouched and miscellaneous retouched pieces take a variety of forms and all but one piece possess traces of use wear. This piece is an edge-retouched keeled, flake core (archive record 45) from machining layer 1035 over the camp. The retouch on the piece is more shallow and knife-like than scraper retouch. Three flakes had extensive use wear on otherwise un-retouched edges, and these have been classified as edge-utilised.

Camp Area

The camp occupation surfaces (1043 and 1072) produced the largest (575 pieces) proportion (64%) of the site material (Table 4). The clustering of finds on the distribution plots (Figs 4-6) would appear to represent a comparatively homogeneous group of flint, although the material from the natural drift deposit (1042) appears to be of a more Bronze Age character than that from the camp occupation surface 1043, which is of a slightly more Neolithic character. Micro-wear analysis indicates that despite its predominately fresh state, much of the material from this surface may have been moved by soil creep. A Bronze Age radiocarbon date for hazel charcoal from 1043, therefore, is not inconsistent.

The camp area also has a cluster of burnt pieces, although none were associated with the fills (1171, 1172 and 1173) of hearth 1183. Hearth 1183 did contain six spalls, one chipping and one flake, all of which were unburnt and in a fresh state. A core rejuvenation flake (recorded find 233, Plate 31) from occupation surface 1043, possesses traces of micro-use wear and almost conjoins with a broken blade (recorded find 242, archive record 619) from the same context.

Ditches

The fill of the ditches produced comparatively small flint assemblages (Tables 7 and 8). The state of the material from the ditches is variable, from very fresh to residual and rolled. Ditch 3 (Phase 3) contained very fresh-looking material from its upper (1046) and middle (1020) fills, but its lower fill (1077) contained abraded chunks and spalls. The material from Ditches 1 and 2 is in a rolled state and looks as though it was residual when the ditches were cut.

Pits

Only four pits contained flint, totalling only 23 pieces from all four pits (1033, 1040, 1061 and fire pit 1234). With the exception of an end and side (right) scraper (recorded find 160, archive record 685, Fig. 19, no. 10, context 1062) of early Neolithic character from the fill of putative pit 1061, the material from these features is debitage.

Post-hole/Stake-holes

Most of the post holes containing flint are from Phase 1. By comparison with the fills of pits, there are a surprisingly large number of flints from the fills of post-holes (43 pieces), although in all cases the material is debitage and the majority of the pieces were obtained from environmental samples. The pieces tend to be very small, undatable spalls and chippings.

Subsoil-filled depression

Depression 1063 contained only eleven flints, but this included two diagnostic cores. The cores are a discoidal-keeled, flake (recorded find 163, archive record 697) and a keeled flake variety (archive record 704). These are characteristic of the regions later Neolithic Grooved Ware assemblages (Manby 1974) and those from Beacon Hill, Flamborough (Moore 1964).

Graves

The back fill (1187) of a possible child's grave contained five pieces of struck flint (all recorded find number 77). The material comprised two spalls, two chippings and one flake (Table 6). The pieces were fresh but undiagnostic.

Date of the Material

The state of the lithic assemblage and its typological composition suggests that two main, but discrete phases of activity are present. These may be from wholly separate prehistoric archaeological periods, probably a mid-Neolithic phase and a separate Bronze Age or 'Beaker' phase. Alternatively the assemblage may represent two separate early Bronze Age phases at the same location. Some of the chronological variance may be due to be intermixing of separate clusters on the same horizon rather than differentials in vertical displacement. There is a clear parallel with the site at Beacon Hill, Flamborough Head (Moore 1964). Graph 4 shows a differentiation between the flakes from the camp occupation area and the topsoil. Flakes from machining and topsoil over the camp area have a tendency to be larger and broader. There is a small background element of material of later Mesolithic character, evidenced chiefly by the edge-blunted point (recorded find 326, archive record 668, Fig. 18, no. 7, deposit 1043). The edge-blunted point is probably a residual element. The material of Neolithic character is consistent with the region's Peterborough Ware associated assemblages (Manby 1975), the most comparable material being the scrapers. Graph 2 shows that the pieces from later Iron Age (Phase 2) features tend to be of breadth: length ratios outside of the normal range.

Discussion

Overall the typological composition of the assemblage is strikingly similar to one excavated at Melton Quarry (Makey 2006) and Beacon Hill, Flamborough Head (Moore 1964), although at Melton the ratio of retouched to un-retouched pieces was much higher at almost 1 to 10. Local unstratified surface assemblages tend to exhibit either a much larger or much smaller proportion of retouched tools.

The assemblage is domestic in nature with a high proportion of pieces exhibiting traces of usage. It is clear that there are many pieces missing from this assemblage, and there is an overall shortage of primary knapping debitage. In the camp area pre-worked tools were probably being finished off or curated then taken to be used elsewhere. It appears as though the flint assemblage from the camp area is from near to, but not the exact focus of prehistoric occupation activity.

The real value of the flint assemblage is its size. The Humber Wetlands Survey (Van de Noort and Ellis 1995) only recovered 42 flints from 24 field-walked areas in Kilnsea Parish. There is a need for more prehistoric lithic assemblages to be published in this area. This site will serve as a primary analogue for future work.

Catalogue of illustrated flint (Figs 18 and 19)

1. Long end scraper (archive record 62). Light olive grey, 7.4g, angle 85°, use-wear, burnt. *Area 1, context 1035*
2. Knife, double-edged (archive record 60). Olive grey, 4.3g, angle 50°, use-wear, burnt. *Area 1, context 1035*
3. Scraper, end- and double-side (archive record 511). Olive grey, 20g, angle 50°, micro-wear, hafting residue, use-wear. *Area 1, context 1043, small find 106*
4. Knife, single-edged LHS (archive record 393). Olive grey, 16.5g, angle 50°, micro-wear, use-wear. *Area 1, context 1043, small find 79*
5. Knife fragment with three areas of retouch (archive record 627). Olive grey, 3.2g, angle 45°, micro-wear, use-wear. *Area 1, context 1043, small find 258*
6. Notched blade, dorsal/distal RHS (archive record 288). Olive grey, 14.3g, angle 90°, micro-wear, polish, use-wear. *Area 1, context 1043, small find 46*
7. Edge-blunted point/Microlith LHS with ancillary RHS retouch (archive record 668). Olive grey, 0.8g, angle 90/80°, use-wear. *Area 1, grid J/K6, context 1043, small find 326*
8. Micro-notched bladelet fragment LHS-PX (archive record 722). Olive grey with moderate light grey patina, 0.4g, angle 90°, use-wear, post dep damage. *Area 1, grid B7, context 1072, small find 31*
9. Piercer with two areas of retouch (archive record 854). Olive grey, 11g, angle 85°, micro-wear, use-wear, polish. *Area 1, ditch 1146, context 1143*
10. Scraper end and side. RHS (archive record 685). Olive grey, 11.3g, angle 80°, use-wear. *Area 1, depression 1061, context 1062, small find 160*
11. Arrowhead, barbed-and-tanged, damaged. Class Sutton bh (Green 1980) (archive record 122). Light olive grey, 1.1g, angle 40/45°, post-depositional damage. *Area 1, context 1042, small find 196*
12. Scraper end- and double-side (archive record 150). Olive grey, 10.3g, angle 60°, micro-wear, use-wear. *Area 1, context 1042, small find 281*
13. Serrated-edged blade. RHS plus ancillary DS-VT (archive record 901). Olive grey, 9.3g, micro-wear, use-wear. *Area 1, unstratified*
14. Scraper (two areas) on a discoidal, flake core (archive record 1). Dark olive grey, 32.2g, angle 35/65°, use-wear. *Area 1, unstratified*

Table 3. Typological composition of the whole flint assemblage

ARTEFACT	Total Number	% of Total	Number Broken	Use Wear/ Micro-wear
RETOUCHED				
Arrowheads: Barbed-and-Tanged	1	0.1	1	
Scrapers	16	1.8	1	14
Scraper on a Core	1	0.1		1
Serrated Edged Blade	1	0.1		1
Knives	3	0.3	1	3
Flake With Polish	1	0.1		1
Spurred Flakes	1	0.1		1
Notched Flakes	1	0.1		1
Notched Blades	1	0.1		1
Notched Blade with Polish	1	0.1		1
Micro Notched Bladelets	1	0.1	1	
Piercers	1	0.1		1
Edge-Blunted Point/Microlith	1	0.1		1
Edge-Retouched Core	1	0.1		
Edge-Retouched Flakes	3	0.3		3
Edge-Retouched Blades	1	0.1	1	1
Miscellaneous Retouched Chunk	1	0.1		
Miscellaneous Retouched Flake	3	0.3		1
UTILISED				
Edge-Utilised Flakes	3	0.3		3
CORES and DEBITAGE				
Cores	17	1.9	3	3
Core Rejuvenation Flakes	13	1.5	1	1
Spalls	315	35		
Chunks	47	5		3
Chippings	36	4		
Flakes	402	45	21	24
Blades	13	1.5	7	6
Micro-Bladelets	3	0.3	2	
Bladelets	9	1	4	1

Table 4. Camp area flint assemblage composition

ARTEFACT	Camp occupation surface 1043 + 1072			Hearths 1183 + 1049			Machining 1035		
	N	()	%	N	()	%	N	()	%
RETOUCHED									
Arrowheads: Barbed-and-Tanged									
Scrapers	6	(0)	1				3	(0)	14
Knives	2	(1)	0.3				1	(0)	4.8
Spurred Flakes	1	(0)	0.2						
Notched Blade with Polish	1	(0)	0.2						
Micro Notched Bladelets	1	(1)	0.2						
Edge-Blunted Point/Microlith	1	(0)	0.2						
Edge-Retouched Core							1	(0)	4.8
Edge-Retouched Flakes	2	(0)	0.3						
UTILISED									
Edge-Utilised Flakes	2	(0)	0.2						
CORES and DEBITAGE									
Cores	8	(2)	1.4				1	(0)	4.8
Core Rejuvenation Flakes	5	(0)	0.9				1	(0)	4.8
Spalls	277	(0)	48	6	(0)	75			
Chunks	27	(0)	4.7						
Chippings	14	(0)	2.4	1	(0)	12.5			
Flakes	217	(8)	38	1	(0)	12.5	14	(1)	67
Blades	7	(3)	1.2						
Micro-Bladelets	1	(1)	0.2						
Bladelets	3	(1)	0.5						
Totals	575	(17)		8			21	(1)	

Key: N = Number, () = Breakage, % = % of Context

Table 5. Topsoil and unstratified flint assemblage composition

ARTEFACT	Topsoil and Unstratified			Natural Drift 1003 + 1042			Subsoil 1001		
	N	()	%	N	()	%	N	()	%
RETOUCHED									
Arrowheads: Barbed-and-Tanged				1	(0)	1			
Scrapers	1	(0)	11	2	(0)	2	2	(0)	8
Scraper on a Core	1	(0)	11						
Serrated Edged Blade	1	(0)	11						
Flake With Polish				1	(0)				
Edge-Retouched Blades							1	(1)	4
Miscellaneous Retouched Chunk				1	(0)	1			
Miscellaneous Retouched Flake							1	(0)	4
CORES and DEBITAGE									
Cores				3	(0)	3			
Core Rejuvenation Flakes				4	(0)	4			
Spalls				5	(0)	5			
Chunks	1	(0)	11	7	(0)	7	2	(0)	8
Chippings	1	(0)	11	4	(0)	4	1	(0)	4
Flakes	4	(0)	44	62	(5)	62	18	(2)	72
Blades				4	(1)	4			
Micro-Bladelets				1	(1)	1			
Bladelets				4	(2)	4			
Totals	9			99	(9)		25	(3)	

Key: N = Number, () = Breakage, % = % of Context

Table 6. Phase 1 flint assemblage composition

	Pit 1033		PH 1044		PH 1065		PH 1090		PH 1140		PH 1161		PH 1163		PH 1175		SHs		Grave 1187	
ARTEFACT	N	()	N	()	N	()	N	()	N	()	N	()	N	()	N	()	N	()	N	()
Spalls	1				4		3						1		4		3		2	
Chunks	1																1			
Chippings	2						2										1		2	
Flakes	1	1	2	1	2		4		2		1				2		5		1	
Total	5	(1)	2	(1)	6	(0)	9	(0)	2	(0)	1	(0)	1	(0)	6	(0)	10	(0)	5	(0)

Key: N = Number, () = Breakage, PH = post-hole, SHs = stake-holes

Table 7. Phase 2, 3 and 4 flint assemblage composition

PHASE 2	PH 1051		Ditch 5		Ditch 6		PHASE 3	PH 1130		Ditch 1		Ditch 2		Ditch 3		Ditch 4		Ditch 1146		PHASE 4	Pit 1234		
ARTEFACT	N	()	N	()	N	()		N	()	N	()	N	()	N	()	N	()	N	()		N	()	
Scrapers														1	1								
Notched Blade												1											
Piercers																				1			
Misc Ret Flakes					1							1											
Edge-Utilised Fl												1											
Cores												1							2	1			
Core Rejuvenation																				1			
Spalls										1		2		2									3
Chunks												5		1		1			1				
Chippings	1									4				1									

Flakes	3		2				1		1		22		7		2		8			
Blades				1													1			
Micro-Bladelets	1																			
Bladelets													1							
	5	(0)	2	(0)	2	(0)	1	(0)	6	(0)	33	(0)	13	(1)	3	(0)	14	(1)	3	(0)

Key: N = Number, () = Breakage, PH = post-hole

Table 8. Remaining features, flint assemblage composition

ARTEFACT	Pit 1040		Pit 1061		Ditch 1055		Ditch 1055		Depression 1063		Furrow 1091		Gully 1238	
	N	()	N	()	N	()	N	()	N	()	N	()	N	()
Scrapers			1											
Notched Flake					1									
Piercers														
Misc Ret Flakes														
Edge-Utilised Fl														
Edge Ret Flakes								1						
Cores								2						
Core Rejuvenation			1					1	1					
Spalls													1	
Chunks														
Chippings	1										1			
Flakes	2		9	2			2		7	1				
Blades														
Micro-Bladelets														
Bladelets			1	1										
Totals = 41	3	(0)	12	(3)	1	(0)	2	(0)	11	(2)	1	(0)	1	(0)

Key: N = Number, () = Breakage, PH = post-hole

Table 9. Core characteristics

Core Class - Number of Platforms and Number	Core Av Length (mm)	Rem Av Length (mm)	Removal Types			Contexts
			Flake	Blade	F and B	
A2 1 Plat Part Flaked 2	22-38	9-14	1		1	1043, 1125
B1 2 Plat (opposed) 1	49	22			1	1043
B2 2 Plat Oblique 1	39	7	1			1043
B3 2 Plat Right Angles 1	37	16			1	1035
C 4 Platformed 1	44	17	1			1003
D Keeled 1	38	10	1			1063
Discoidal 3	31-49	9-23	3			1042, 1043, 1063
Unclassifiable 7	26-43	11-22	7			1042, 1043x4, 1142x2

Table 10. Scraper characteristics

Form and Number	Length (mm)	Breadth (mm)	Thickness (mm)	Contexts	Notes
End 3	25-48	30-41	4-12	1035, 1043x2	Plain or linear butt.
End (Long) 3	35-51	20-32	8-9	1035, 1042, 1043	Trimmed butt.
End and Side (Left) 1	25	23	9	1001	
End and Side (Right) 3	34-35	19-35	8-14	1001, 1048, 1061	Twin platform bulbs. Trimmed butt. Asymmetric.
End Double* 1	45	44	12	1035*	Dorsal crest.
End and Double Side 2	34-47	34	8-13	1042, 1043	Dihedral plat. Trimmed plat, Sub-ovate form.
Unclassifiable 3	36-58	35-44	6-12	U/S, 1043x2	

Key: * = Gloss (two areas)

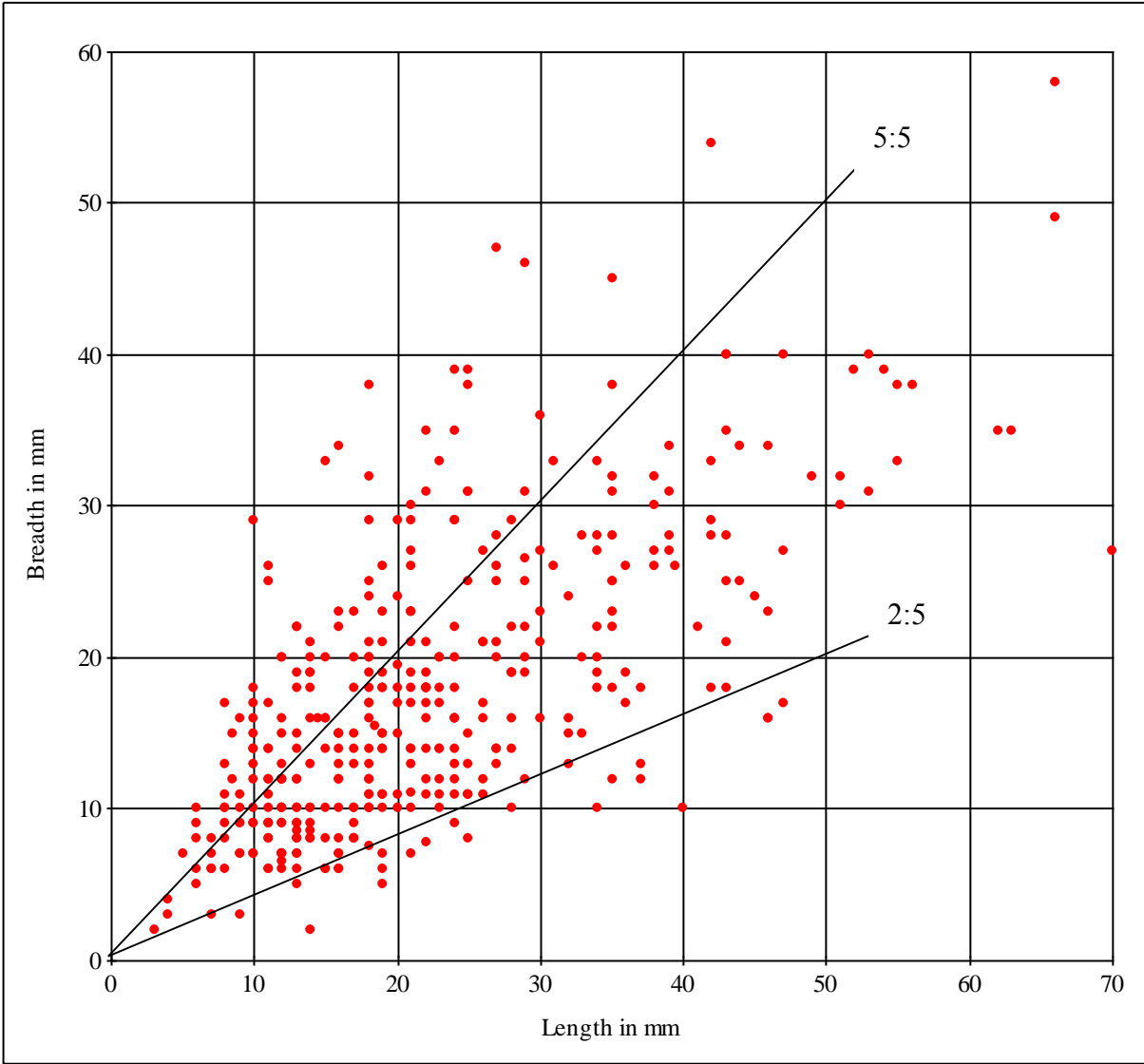
Definitions:

- Chunks defined as non-bulbar flakes over 10 mm in diameter
Chippings defined as non-bulbar flakes under <10 mm in diameter
Spalls defined as bulbar flakes <5mm in maximum length and typically with, little or no cortex
Bladelets defined as a small parallel-sided blade with a width <15mm and length <50mm

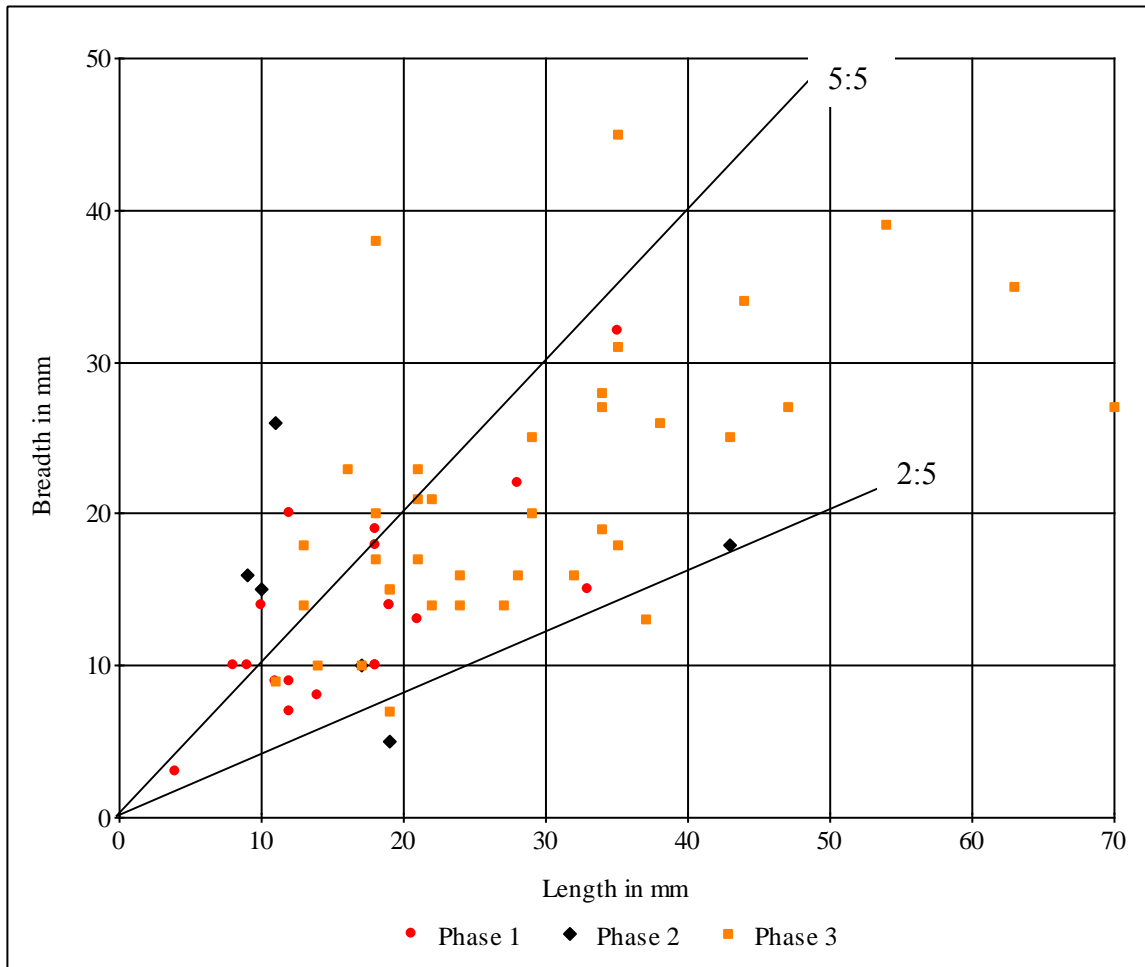
Cores have been classified according to Clark *et al.* (1960, 216) with the addition of discoidal

- Class A One platform 1) flakes removed all around
2) flakes removed part of the way around
Class B Two platforms 1) parallel platforms
2) one platform at an oblique angle
3) platforms at right angles
Class C Three or more platforms
Class D Keeled, flakes struck from two directions
Class E Keeled, but with one or more platforms

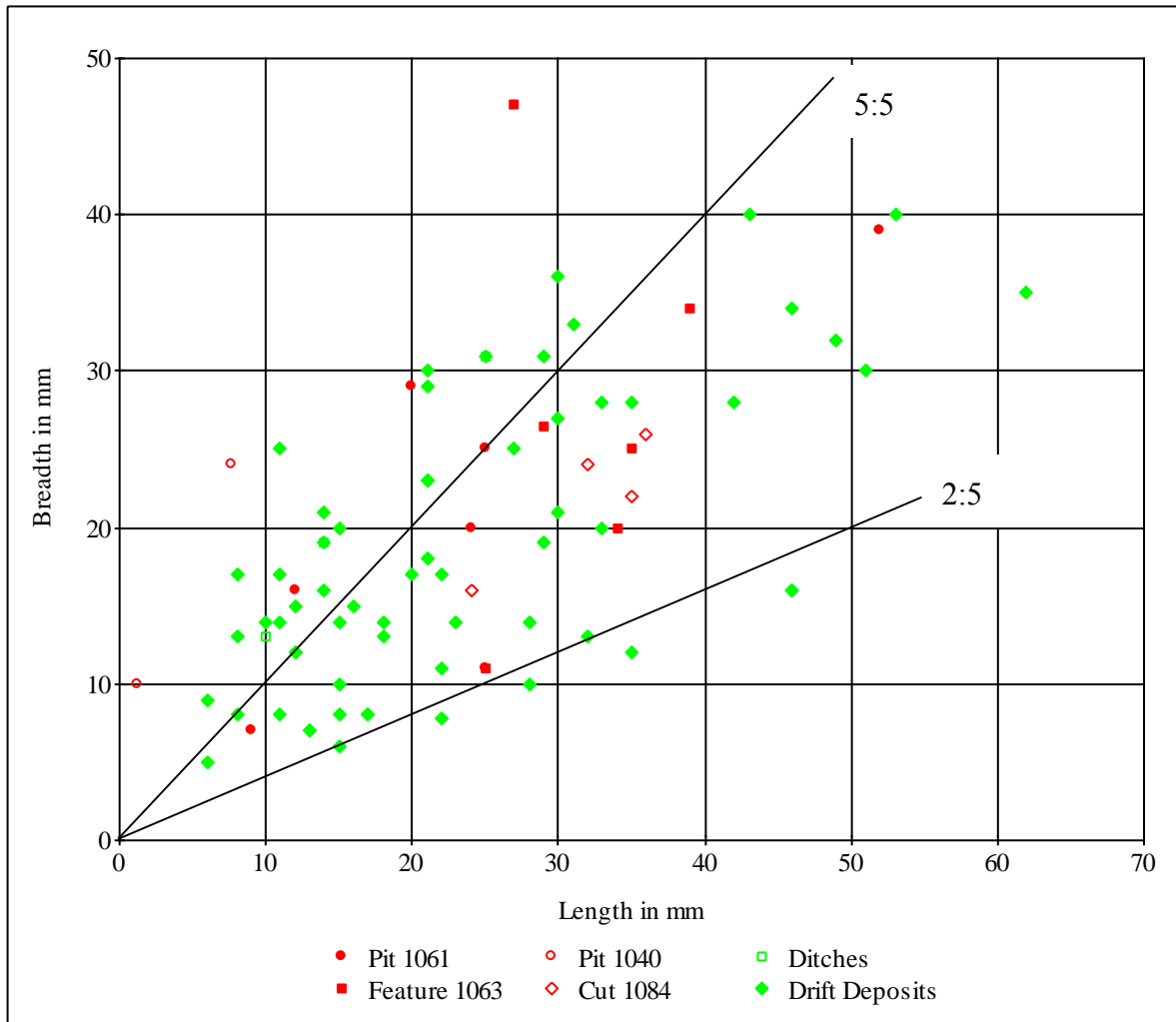
Graph 1. Flake and blade breadth to length ratios: all areas (n=392)



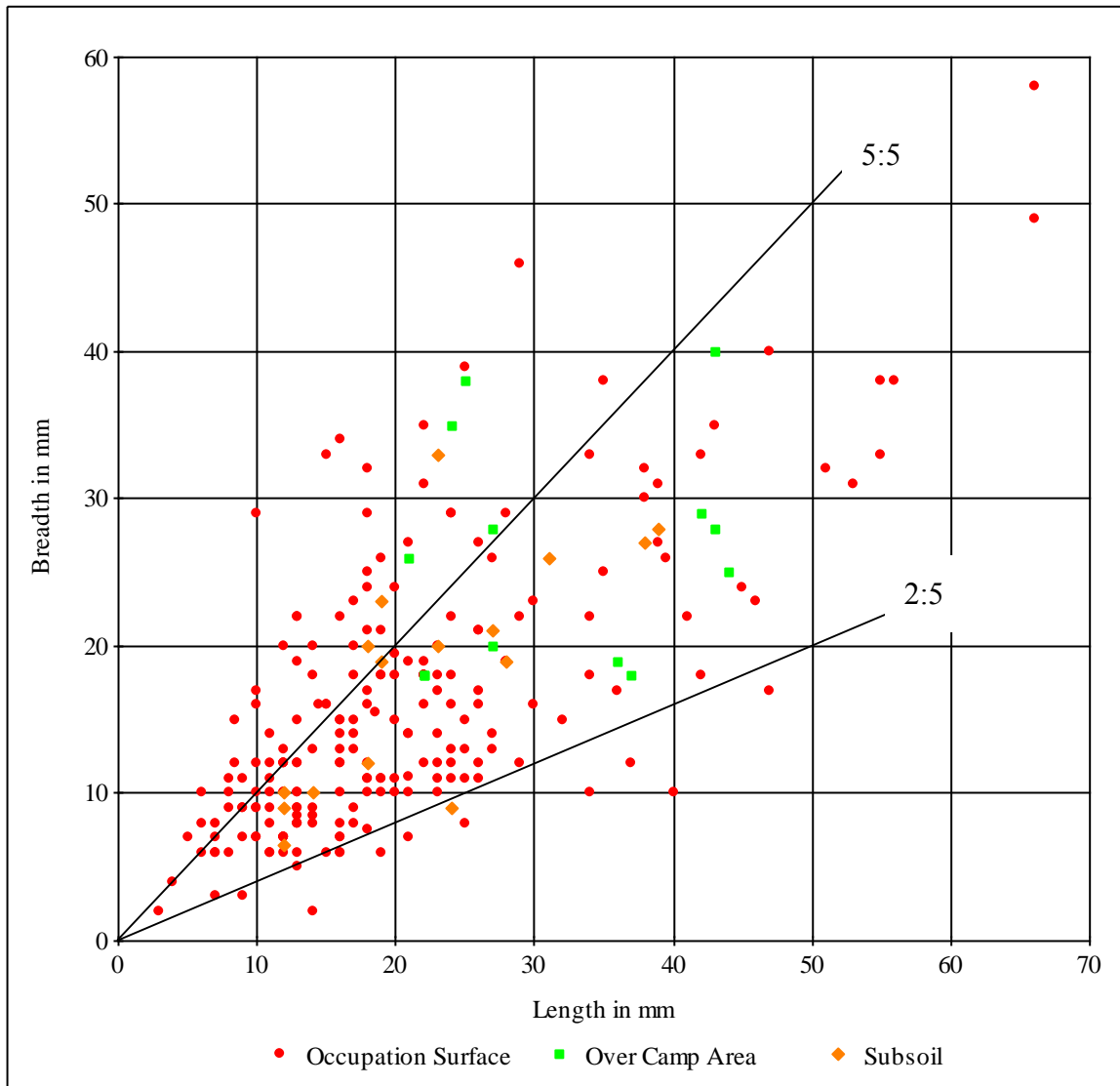
Graph 2. Flake and blade breadth to length ratios: phased flint (n=63)



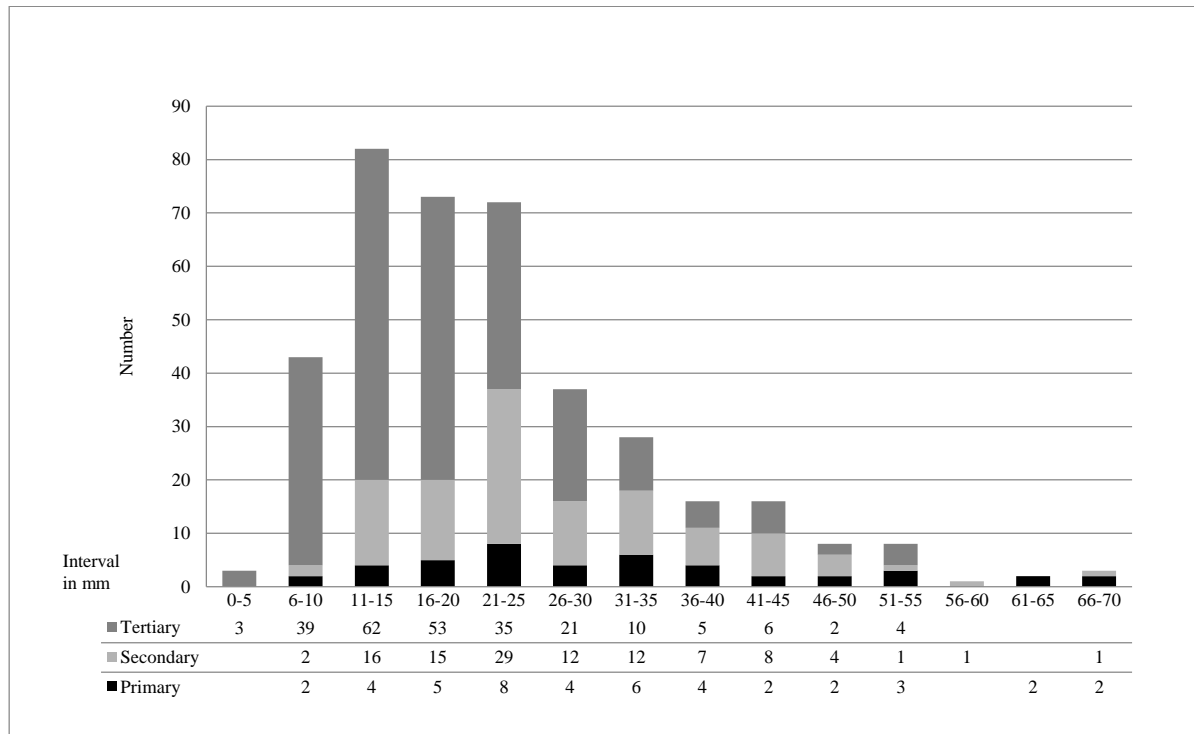
Graph 3. Flake and blade breadth to length ratios: features and deposits (n=84)



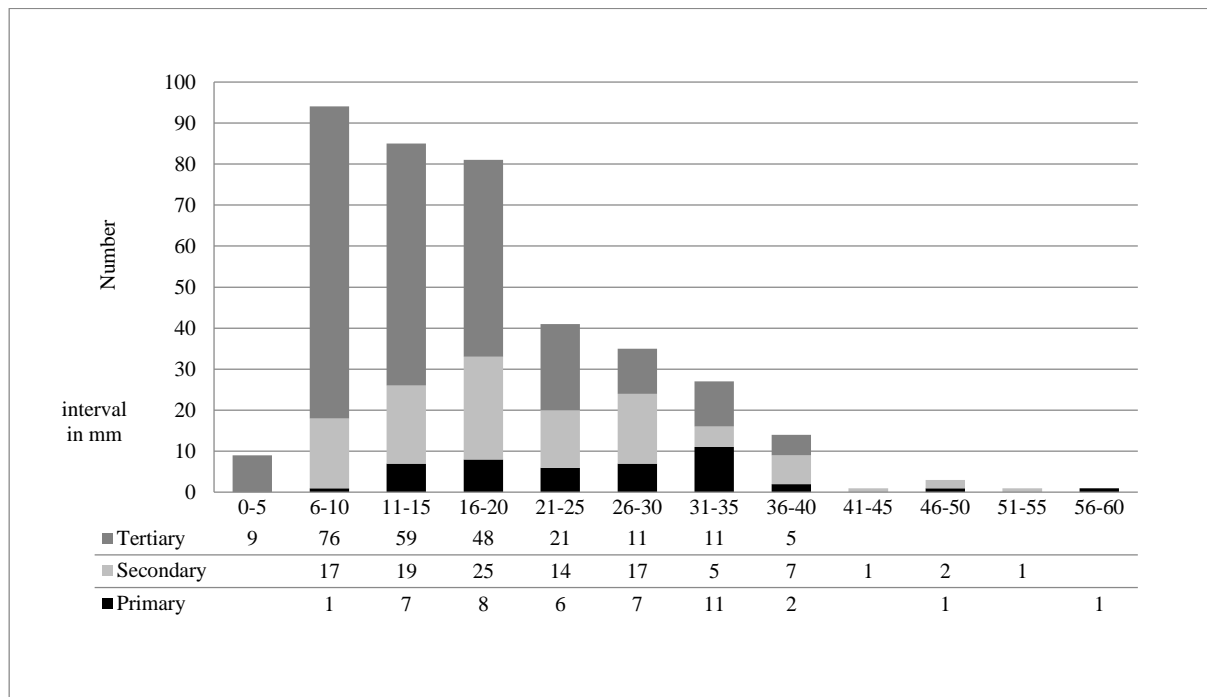
Graph 4. Flake and blade breadth to length ratios: camp area and subsoil (n=241)



Graph 5. Flake and blade lengths (n=392)



Graph 6. Flake and blade breadths (n=392)



The fired clay and ceramic building material by Sophie Tibbles

The assemblage was recovered from two features (Table 11) and included material recovered from the processing of environmental sample no. 130. Two material categories were identified: daub/fired clay and ceramic building material, (hereafter CBM).

A small quantity of ‘heat-affected’ clay was also present which has been briefly discussed. Charcoal was noted within the residue from the environmental sample (Table 12).

With regard to the CBM, it should be noted that the diversity of size and colour within the brick and tile caused during the manufacturing process, must be taken into consideration when comparing examples with other assemblages and local typologies. The varying sizes and colours can be attributed to the variation in the clays used, shrinkage during drying, firing within the kiln or clamp and the location of the brick/tile within the kiln. The dating of brick and tile can be highly contentious due to its re-useable nature and, therefore, any date range given is that of known dates where such material has been recorded.

Assessment of the submitted assemblage was based on a visual scan and examination using a x15 magnification lens. All of the material was subject to basic quantification by count and weight.

Information regarding dimensions, shape and fabric of the CBM was recorded where applicable. Diagnostic features such as the presence of rod and sail impressions and original surfaces were taken into account to aid identification of the daub/fired clay. Non-diagnostic material was determined by the lack of rod and sail impressions and original surfaces (featureless).

Table 11. Fired clay and CBM by material type

Context	Material	No. of Fragments	Weight (g)
1150	CBM	1	302
1235	Daub/Fired Clay	50	394
	‘Heat-Affected’ Clay	0	391
1235 Sample	Daub/Fired Clay	c. 1444	c. 510
130	Charcoal	c. 69	4.8
Total		c. 1564	c. 1601.8

The Daub/Fired Clay

The secondary fill 1235 of fire-pit 1234 produced an assemblage of possible daub/fired clay that consisted of approximately 1494 fragments, with a combined weight of c. 904g.

Due to the fragmentary, granular nature of the majority of the daub/fired clay from sample no.130, the quantity and weight of this material was estimated by the following method:

After the removal of the larger fragments of charcoal, 100 ‘*granules*’ were counted and weighed to ascertain an average weight per ‘*granule*’. The remainder of the material was weighed and an estimated quantity was recorded.

All the material was of a similar fabric: soft and 'crumbly', with occasional fine quartz grains and fine mica flecks (0.1mm-0.25mm).

The majority of the overall assemblage (97%) was recovered from the processing of sample no.130 (Table 12). Only 50 fragments were identified from the hand-collected material.

Table 12. The possible daub/fired clay assemblage

Context	Diagnostic/non-diagnostic	No. of fragments	Weight (g)
1235 hand-collected	Diagnostic	4	52
	Featureless (Non-diagnostic)	46	342
1235 Sample 130	Diagnostic?	1	32
	Featureless (Non-diagnostic)	c. 1443	c. 478
Total		c. 1494	c. 904

For the most part (99%), the material was featureless and comprised small rounded ‘*granules*’ and amorphous pieces with abraded surfaces. Five diagnostic fragments were recorded, four from the hand-collected material. All of the fragments were affected by exposure to direct heat/burning.

A possible rod or sail impression was evident on two fragments with diameters of 15mm and 18mm. Possible original surfaces were noted on three pieces; two fragments of a ‘*flattish*’ appearance, the other slightly concave.

The ceramic building material

The fragment of ceramic building material was recovered from 1150, the tertiary fill of Ditch 1. The tile had a weight of 302g. Remnants of a knife-cut vent were noted on the plain face, with a width of 42mm. The vent was probably rectangular in shape when complete. Despite heavily abraded surfaces, evidence of exposure to heat or high temperatures was present on the internal and vent surface. It could not be conclusively identified whether this occurred at original source or during re-use.

Other forms of cavity wall tiles have vents cut into their plain faces; such as voussoirs and ‘springers’ (Betts 1990, 167), but they are relatively rare (*ibid*; Brodrigg 1987, 83). Although no combing or scoring was evident, the fragment was identified as a box-flue tile.

The ‘heat-affected’ clay

An assemblage of amorphous fragments and numerous ‘crumbs’ of clay was included with the daub/fired clay material from the secondary fill 1235 of fire-pit 1234. The distinction between the two materials was initially unclear. This was due to the presence of daub/fired clay inclusions and flecks adhering to the surfaces of the larger fragments. A small sample was submitted to John Carrott of Palaeoecology Research Services (PRS) who kindly comments:

One of the larger pieces of material (to 60mm) that appeared to be heat-affected clay, rather than daub or a ceramic fabric, was investigated.

The material was placed in luke-warm tap water and after a period of approximately 6 hours had almost completely disaggregated into sand, some smaller lumps (to 10mm) of very soft and slightly sticky clay, small stones (to 5mm), black pieces of charcoal and a little modern rootlet.

Washing through a 300 micron sieve further reduced the sediment, the remaining soft clay lumps washing completely away. The final residue was mostly sand (largely quartz), with occasional stones (to 5mm, also including quartz) and fairly common (but small, to 6mm but mostly less than 2mm) indeterminate charcoal and other black material which appeared to be fused ash; fine fragments of modern rootlet were also common (larger pieces visible to the naked eye were few, but examination using a low-power microscope (x7) revealed far more) (J. Carrott, *pers comm.*).

The adhesion of the daub/fired clay flecks probably occurred during a single episode of the rapid deposition of the assemblage of daub/fired clay, which had previously been subject to intense heat, within the fill of the fire-pit.

Discussion

The small size and abraded condition of the majority of the daub/fired clay, does restrict the potential to ascertain use. This, with the paucity of diagnostic features such as rod or sail impressions and original surfaces, leads to an ambiguous interpretation. The heat discolouration/burning noted may have been a result of high temperature destruction, i.e. if the material was part of a wattle-and-daub structure such as a wall or partition, but it appears to be more likely that the material represents oven or hearth material.

Although the presence of box-flue tile could suggest a building with a hypocaust system within the vicinity, the noticeable lack of other forms of Romano-British ceramic building material does not substantiate this. The fragment reflects casual dumping of re-used material, possibly utilised within aspects of smaller structures for example a hearth or as post-packing.

On its own, the assemblage is of limited archaeological potential and probably represents dumping. Daub/fired clay is a multi-period material which has a broad date range from the prehistoric through to the post-medieval period. Refinement of date could be ascertained by any associated artefacts and stratigraphic phasing.

The slag by Gerry McDonnell

This report describes a sample of material from fill 1239 of Gully 8 classified as slag. The piece examined had been fractured and exposed a black-coloured vesicular crystalline fracture surface, which is slag-like. The material, however, is probably clay that has been subjected to high temperature and with organic matter as part of the clay-induced reducing conditions inside the clay block which resulted in the formation of the slag-like appearance.

It is probable that chemically it is similar to slag chemistry, but it is believed to be accidental rather than deliberate slag formation in a metalworking furnace or hearth. None of the material derives from metalworking.

Small finds assessment with lithological identifications by Zoe Horn

Pit 1025 (1026) Stone

Granite/microgranite, pale pink/cream mottled, medium to (slightly) coarsely crystalline, consisting of feldspar (probably including both pale pink orthoclase and cream plagioclase), quartz and a black mineral (probably hornblende). Probably from Cheviots, Cumbria or south-western Scotland. Shape and lithology imply erratic. No obvious evidence of use

Ditch 2 (1120) Masonry

Fragment of architectural stone, dressed on three faces, possible window sill, lintel or mullion. Sandstone, greyish-brown, medium-grained, moderately-sorted, moderately-compacted with sparse small muscovite flakes. Abundant iron on most surfaces.

Post-hole 1227 (1228) Padstone?

Sandstone, pale brown, coarse-grained, poorly-sorted, moderately-compacted, heat-reddened. Possibly worked, weathered surfaces make identification difficult.

Ditch 6 (1224) Pot Boiler

Two joining pieces of sandstone, grey, fine to medium-grained, well-sorted, well-compacted, heat-reddened and fire-blackened.

Ditch 6 (1221) Pot Boiler

Four pieces of identical geology. Sandstone, pale brown, medium-grained, moderately sorted, well-compacted, heat-reddened and fire-blackened.

The whetstone by H.E.M. Cool

The whetstone from Ditch 1 (1150) is clearly a natural beach cobble that has been utilised for sharpening. Both one edge and one face are dished through repeated use and fine transverse lines can be seen across these areas of wear. Utilised stones such as these are not intrinsically dateable, but the sharpening patterns clearly show that it has been used with iron blades so an Iron Age or later date is appropriate. Although Roman whetstones were often deliberately-made rectangular blocks, the location of the site would suggest that when a whetstone was required, the beach would be likely to supply a suitably-shaped cobble. It is likely, therefore, that the inhabitants might never have felt the need to acquire more carefully formed whetstones even when they became available.

Oval pebble with oval section, broken at one end. Sandstone, fine to medium-grained, poorly-sorted, highly compacted with sparse muscovite. Water-rounded pebble, possible erratic. Slight iron staining to one plane. One long edge slightly dished with faint transverse lines visible. One face very slightly concave with smooth central area and similar faint transverse lines. Present length 106mm, maximum section 45mm by 19mm.

7 Environmental Record

Carbonised plant macrofossils and charcoal by Diane Alldritt

A total of 62 environmental samples from the evaluation and subsequent excavations were assessed for carbonised plant macrofossils and charcoal. Charred and other material sorted from the retent portions of the samples were also examined for any identifiable carbonised remains. Samples were divided into two phases. An earlier prehistoric period of occupation was indicated by a scatter of camp occupational debris and potential hearth features and is associated with 41 samples, 22 of which produced remains from the retent portion of the sample only. Eleven samples were examined from features associated with a later Iron Age/Romano-British enclosure or field system. Seven samples came from the evaluation, as yet unphased.

Methodology

Bulk environmental samples were processed by ASWYAS using a Siraf-style water flotation system (French 1971) and a 1mm mesh and a 300 micron sieve. The flots were dried before examination under a low-powered binocular microscope. Small amounts of carbonised material were recovered from the samples, with often only the retent portion producing any charred remains. Amounts varied from <2.5ml up to 15ml of charred detritus mostly consisting of wood charcoal in pieces ranging in size from 0.2mm to 10mm, and rarely 20mm, along with very small decayed slivers of charcoal. Eight samples were sterile of any charred material. Modern root fragments were recorded in amounts from <2.5ml to 10ml together with occasional modern seeds and straw suggesting a small degree of disturbance. All identified plant remains including charcoal were removed and bagged separately by type.

Wood charcoal was examined using a high powered Vickers M10 metallurgical microscope at magnifications up to x200. The reference photographs of Schweingruber (1990) were consulted for charcoal identification. Plant nomenclature utilised in the text follows Stace (1997) for all vascular plants apart from cereals, which follow Zohary and Hopf (2000).

Results

The results were divided into four tables, earlier prehistoric camp, Iron Age/Romano-British field system, evaluation and unphased features (Appendix 4, Tables 1-4).

The environmental samples produced small amounts of carbonised material, which mostly consisted of wood charcoal, recorded primarily from the earlier prehistoric camp occupation debris and other features. Traces of cereal grain hint at arable agriculture occurring during the

later Iron Age/Romano-British phase, but the type of cereal could not be ascertained due to poor preservation. Hazel nutshell fragments recorded from one of the evaluation samples (Trench 13) could indicate some earlier prehistoric activity.

Earlier prehistoric camp and associated features

Forty-one samples were assigned to the earlier prehistoric 'camp' occupation (Appendix 4, Table 1).

The majority of samples from this phase produced wood charcoal, but often in small amounts and poorly preserved, although it was possible to identify a small range of types present, mainly consisting of oak and hazel with one sample containing *Prunoideae* (cherry) type.

Oak was identified in a number of samples taken across the camp grid from occupational deposits 1043 and 1073 and from pit 1049 and post-hole 1208. Oak was also recovered in conjunction with hazel from grid sample 34 (1072). Hazel was identified in small amounts from 17 (1043), 37 (1043), 95 (1043) and 110 (1043). The hazel in sample 110 (1043) was particularly notable for consisting of a single piece of small branch roundwood with eight growth rings across a 13mm diameter.

Two samples taken from possible hearth feature 1183 produced reasonably large amounts of charcoal. Sample 71 (1171) consisted of an all charcoal flot, with a number of fragments identified as oak. Sample 75 (1172) produced smaller amounts of charcoal with a combination of oak and hazel identified. Fragments from feature 1183 were generally in a good condition compared to other features on the site.

The fill (1191) of hearth 1190 proved slightly different from the other burnt mound samples in containing *Prunoideae* (cherry) type, as well as some indeterminate charcoal. This is possibly contemporary with the other samples, but may represent some later burning activity in the area.

The charcoal types in use during this phase appear to have been predominantly oak and hazel, suggesting some mixed deciduous woodland in the area was exploited for fuel and construction purposes. Hazel indicated some lighter more open areas of woodland in the vicinity, whilst the small amount of *Prunoideae* recorded was more indicative of scrub vegetation. The general spread of burnt waste throughout the samples in this phase probably reflects lots of burning activity, probably consisting of a number of events, resulting in a scattering of charred debris. Hearth 1183 was primarily fuelled by oak, with smaller amounts of hazel probably being used as kindling. Numerous re-uses and sweeping of debris from this feature may account for the spread of some of the burnt material.

Sample 74 (1067), taken from a post-pipe in post-hole 1065 of putative earlier prehistoric date, contained a few small fragments of roundwood, probably all originally from the same fragment of *Corylus* (hazel), with eight growth rings over a 6mm diameter, suggesting very small branch wood. These fragments were too small to indicate the *in situ* burning of a post.

Later Iron Age/Romano-British enclosure

Eleven samples were assigned to this phase (Appendix 4, Table 2).

Sample 1, taken from the basal fill (1021) of Ditch 3, contained two pieces of degraded indeterminate charcoal, affected by iron panning, together with two indeterminate cereal grains. A single rhizome from post-hole 1130 was probably a trace inclusion from nearby burning activity. Oak charcoal was also recovered from ditch 1146.

Unphased features

Two unphased features were identified in Area 2 (Appendix 4, Table 4). Fire-pit 1234 (fill 1235) produced some very degraded and knotted fragments of *Quercus* (oak) indicating fuel use. Unfortunately the charcoal from fire-pit 1231 could not be identified due to its small size and poor preservation.

Evaluation samples

Seven samples were examined from the evaluation stage (Appendix 4, Table 3), but only fill 129 from pit 130 in Trench 6 is worthy of comment. It produced a scattering of wood charcoal fragments most of which was too degraded to identify. It was possible to distinguish a small amount of *Corylus* (hazel), but most of the fragments showed heavy damage from iron panning and ground-water penetration in the soil.

Conclusion

The assessment of environmental samples produced a narrow range of carbonised material, which mostly consisted of wood charcoal, indicating some significant burning activity taking place in the earlier prehistoric period with lesser amounts of charcoal recovered from the later samples.

All charcoal was scanned in order to ascertain the range of types present. Nevertheless it was often not possible to identify the fragments due to heavy degradation from ground-water penetration, with many fragments exhibiting iron panning and other chemical intrusion visible even under low-power magnification. Little evidence for bioturbation was noted, however, and any radiocarbon dating should be reasonably secure if taken from carefully selected features such as hearth 1183.

The earlier prehistoric phase produced charcoal only, with identification indicating the use of oak with lesser amounts of hazel for fuel. There was little change in the later Iron Age/Romano-British phase, with the same types present, although recorded in much smaller amounts and from fewer samples.

Cereal grain evidence was extremely scarce, with two grains from the later Iron Age/Romano-British phase providing some tentative evidence for arable activity in the area.

Unfortunately preservation was quite poor overall and much of the charcoal was too degraded to accurately identify.

Assessment of biological remains by Alison Foster, Angela Walker and John Carrott

Introduction

Two bulk sediment samples ('GBA'/'BS' *sensu* Dobney *et al.* 1992), representing the primary fills of two Romano-British ditches, were submitted to Palaeoecology Research Services Limited for an assessment of their bioarchaeological potential.

Methods

The bulk samples were inspected and their lithologies recorded, using a standard *pro forma*. The samples were processed for the recovery of plant and invertebrate macrofossils, broadly following the techniques of Kenward *et al.* (1980), yielding a washover and residue fraction for each.

In both of the deposits the preservation of ancient organic remains appeared to have been primarily by anoxic waterlogging and the washovers were examined wet. All fractions were examined for their content of macrofossils, and the general character of the material, using low-power microscopy (x7 to x45). Plant macrofossil remains were identified to the lowest taxon necessary to achieve the aims of the project by comparison with modern reference material (where possible), and the use of published works (e.g. Cappers *et al.* 2006 and, for cereal identifications, Jacomet 2006). Insects and other invertebrates were also recorded and beetles (Coleoptera) were identified to a basic/preliminary level (where possible) by reference to published works (e.g. Harde 1984). Nomenclature for plant taxa follows Stace (1997), with cereal identifications following Jacomet (2006) where nomenclature follows van Zeist (1984).

The residues were primarily mineral in nature and were dried and weighed prior to the sorting and recording of their components. The less than 2mm fraction was scanned for magnetic material.

Microfossil 'squash' subsamples (of ~5ml) were taken from both of the deposits. These were examined using the 'squash' technique of Dainton (1992), originally designed specifically to assess the content of eggs of intestinal parasitic nematodes; however, this method routinely reveals the presence of other microfossils, such as pollen and diatoms, and, where present, these were also noted. The evaluation slides were scanned at x150 magnification and at x600 where necessary.

During recording, consideration was given to the suitability of macrofossil remains for submission for radiocarbon dating by standard radiometric technique or accelerator mass spectrometry (AMS).

Results

The results of the assessment 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 number.

Primary fill (1047) of Roman Ditch 3

Sample 18/T (1.2kg/0.8 litres sieved to 300 microns with washover and microfossil 'squash'; approximately 5ml of unprocessed sediment remains).

More or less dry, light grey to light to mid-grey-brown to light to mid grey (and occasionally mid grey), brittle and stiff to crumbly (working soft and somewhat plastic), slightly sandy clay, with occasional small stones (2 to 20mm).

The very small wet washover (~10ml) comprised partly humified vegetative matter including root material, wood and twig fragments, fragmented plant epidermis and a little indeterminate charcoal (to 2mm), with small numbers of invertebrate remains.

The charred plant remains comprised a single grain of hulled barley (*Hordeum distichon* L.), a single 2-row barley rachis internode (*Hordeum distichon* L.) and mediks (*Medicago*). The assemblage of waterlogged plant macrofossils was dominated by achenes of common nettle (*Urtica dioica* L.), with abundant remains of sedges (*Carex*; nutlets) and orache/goosefoot (*Atriplex/Chenopodium*; seeds and seed casings). There were occasional records for other plant taxa including thistles (*Carduus/Cirsium*), hairy buttercup (*Ranunculus sardous* Crantz), fool's parsley (*Aethusa cynapium* L.), fumitory (*Fumaria*) and rush (*Juncus*) capsules, as well as 'seeds' representing nightshade family (Solanaceae), pink family (Caryophyllaceae), knotweed family (Polygonaceae) and buttercup family (Ranunculaceae). A single capsule fragment of flax (*Linum usitatissimum* L.) and an indeterminate thorn were also noted. The remainder of the washover was sand.

Invertebrate remains in the washover were scarce; no more than 20 in total. Most were poorly preserved (eroded and/or fragmented) beetle sclerites, with occasional slightly better preserved remains including a single pronotum and an elytron from an indeterminate weevil or weevils (Curculionidae); there were also a few ostracod valves.

The sorted residue (dry weight 466g) was composed of sand, with abundant angular flint and pebble gravel (to 44mm) and frequent small mineralised sediment concretions (to 7mm). There was no magnetised fraction.

The microfossil 'squash' subsample was almost entirely inorganic, with a trace of organic detritus. The only possibly identifiable microfossil seen was a single relatively 'large' and approximately spherical ?pollen grain/spore (this could not be identified within the constraints of the assessment).

Primary fill (1125) of Roman Ditch 2

Sample 47/T (2kg/1.5 litres sieved to 300 microns with washover and microfossil 'squash'; approximately 5ml of unprocessed sediment remains).

Moist to wet, light to mid-brown, slightly sticky to crumbly (working soft), slightly clay sand. Occasional small stones (2 to 6mm) were present.

The tiny wet washover (~3ml) comprised humified vegetative matter including root material, wood fragments, fragmented plant epidermis and a few fragments of indeterminate charcoal

(to 1mm). Waterlogged plant macrofossils comprised a single outer seed casing from a member of the pink family (Caryophyllaceae). The remainder of the washover was sand particles, with occasional small angular stones (to 2mm).

The mineral residue (dry weight 149g) was relatively small and consisted mostly of sand, with abundant angular flint and pebble gravel (to 25mm). Mineralised sediment concretions, including large root pseudomorphs (to 30mm), were common within the coarse (over 1mm) fraction. No magnetised material was present.

The microfossil 'squash' subsample was mostly inorganic, with some organic detritus, a few pollen grains/spores (none identifiable within the constraints of the assessment) and a few fragments of fungal hyphae.

Discussion

Plant macrofossils recovered from the sediment samples had been preserved by both anoxic waterlogging and charring; charcoal was present in both deposits, but only as small indeterminate fragments and only a single waterlogged plant macrofossil was identifiable (partially) from the first fill (1125) of Ditch 2, however.

The charred plant macrofossils from the first fill (1047) of Ditch 3 included trace levels of cereal remains and possibly associated arable weeds, but too little for any detailed interpretation.

The assemblage of waterlogged plant remains was predominantly of ruderal (waste ground) taxa and others indicative of wet/waterlogged ground and perhaps standing water. The ostracods present also supported this last possibility although these, and indeed other plant and invertebrate remains, may have been transported into Ditch 3 by freshwater flooding or even marine incursion. The single flax capsule recorded provided too little evidence for cultivation of this plant to be inferred.

Invertebrate remains, other than the ostracods previously mentioned, were all of beetles, but were rather few and, in general, poorly preserved; consequently, they were of no real interpretative value.

No interpretatively valuable concentrations of microfossil remains were present.

Human bone by Malin Holst

Aims and objectives

The aim of the skeletal analysis was to determine the age, sex and stature of Skeleton 1196 (Table 13), as well as to record and diagnose any skeletal manifestations of disease and trauma.

Table 13. Summary of archaeological information

Skeleton No	Position	Orientation	Artefacts	Feature Type	Date
1196	Flexed on left side	North to south	None	Oval grave	Presumed Iron Age/Romano-British

Methodology

The skeleton was analysed in detail, assessing the preservation and completeness, as well as determining the age, sex and stature of the individual (Appendix 4, Table 5). All pathological lesions were recorded and described.

Osteological analysis

Osteological analysis is concerned with the determination of the demographic profile of the assemblage based on the assessment of sex, age and non-metric traits. This information is essential in order to determine the prevalence of disease types and age-related changes. It is also crucial for identifying sex dimorphism in occupation, lifestyle and diet, as well as the role of different age groups in society.

Preservation

Skeletal preservation depends upon a number of factors, including the age and sex of the individual as well as the size, shape and robusticity of the bone. Burial environment, post-depositional disturbance and treatment following excavation can also have a considerable impact on bone condition. Preservation of human skeletal remains is assessed subjectively, depending upon the severity of bone surface erosion and post-mortem breaks, but disregarding completeness. Preservation is important, as it can have a large impact on the quantity and quality of information that it is possible to obtain from the skeletal remains.

Surface preservation, concerning the condition of the bone cortex, was assessed using the seven-category grading system defined by McKinley (2004), ranging from 0 (excellent) to 5+ (extremely poor). Excellent preservation implied no bone surface erosion and a clear surface morphology, whereas extremely poor preservation indicated heavy and penetrating erosion of the bone surface resulting in complete loss of surface morphology and modification of the bone profile. The degree of fragmentation was recorded, using categories ranging from 'minimal' (little or no fragmentation of bones) to 'extreme' (extensive fragmentation with bones in multiple small fragments). Finally, the completeness of the skeleton was assessed and expressed as a percentage: the higher the percentage, the more complete the skeleton.

The bone condition of the skeleton was very poor (Grade 5+), with severe fragmentation of the remains and considerable surface erosion causing complete loss of detail (Table 14). The skeleton was merely 5% complete.

Table 14. Summary of osteological and palaeopathological results

Skeleton No	Preservation*			Age	Sex	Stature (cm)	Dental Pathology	Pathology
	SP	F	C					
1196	5+ (very poor)	Severe	5%+	18+	-	-	Moderate dental wear	-

* Preservation: SP = surface preservation, graded according to McKinley (2004); F = fragmentation; C = completeness

Minimum number of individuals

A count of the ‘minimum number of individuals’ (MNI) recovered from a cemetery is carried out as standard procedure in osteological reports on inhumations in order to establish how many individuals are represented by the articulated and disarticulated human bones (without taking the archaeologically defined graves into account). The MNI is calculated by counting all long bone ends, as well as other larger skeletal elements recovered. The largest number of these is then taken as the MNI. The MNI is likely to be lower than the actual number of skeletons which would have been interred on the site, but represents the minimum number of individuals which can be scientifically proven to be present.

The MNI was one, based on the teeth.

Assessment of age

Age was determined using standard ageing techniques, as specified in Scheuer and Black (2000a; 2000b) and Cox (2000). For non-adults, age estimation is based on dental development and eruption, skeletal development (epiphyseal fusion) and long bone lengths (Scheuer and Black 2000b). In adults, age estimation largely relies on the presence of the pelvis and ribs and uses different stages of bone development and degeneration in order to calculate the age of an individual. It can be supplemented through examination of dental wear (Brothwell 1981). Age is split into a number of categories, from foetus (up to 40 weeks in *utero*), neonate (around the time of birth), infant (newborn to one year), juvenile (1-12 years), adolescent (13-17 years), young adult (ya; 18-25 years), young middle adult (yma; 26-35 years), old middle adult (oma; 36-45 years), mature adult (ma; 46+) to adult (an individual whose age could not be determined more accurately than that they were eighteen or over).

It was difficult to determine age in the skeleton, as none of the ageing criteria normally used for age estimation had survived. However, four teeth were recovered, indicating that this was an adolescent, and the moderate wear on the teeth suggested that the individual was aged at least eighteen years old, and possibly older.

Sex determination

Sex determination was carried out using standard osteological techniques, such as those described by Mays and Cox (2000). Assessment of sex relies on the preservation of the skull and the pelvis, and can only be carried out once sexual characteristics have developed, during late puberty and early adulthood. For this reason it was not possible to determine the sex of Skeleton 2.

Metric analysis and non-metric traits

Stature depends on two main factors, heredity and environment; it can also fluctuate between chronological periods. Stature can only be established in skeletons if at least one complete and fully fused long bone is present, but preferably using the combined femur and tibia. The bone is measured on an osteometric board, and stature is then calculated using a regression formula developed upon individuals of known stature (Trotter 1970).

It was not possible to measure the skeleton or to calculate stature.

Non-metric traits are additional sutures, facets, bony processes, canals and foramina, which occur in a minority of skeletons and are believed to suggest hereditary affiliation between skeletons (Saunders 1989). The origins of non-metric traits have been extensively discussed in the osteological literature, and it is now thought that while most non-metric traits have genetic origins, some can be produced by factors such as mechanical stress (Kennedy 1989) or environment (Trinkhaus 1978). A total of thirty cranial (skull) and thirty post-cranial (bones of the body and limbs) non-metric traits were selected from the osteological literature (Buikstra and Ubelaker 1994, Finnegan 1978, Berry and Berry 1967) and recorded.

Non-metric traits were not observed.

Pathological analysis

Pathological conditions (disease) can manifest themselves on the skeleton, especially when these are chronic conditions or the result of trauma to the bone. The bone elements to which muscles attach can also provide information on muscle trauma and excessive use of muscles. All bones were examined macroscopically for evidence of pathological changes.

No evidence for pathology was observed.

Dental health

Analysis of the teeth from archaeological populations provides vital clues about health, diet and oral hygiene, as well as information about environmental and congenital conditions.

A total of four mandibular teeth and one maxillary incisor crown fragment were recovered. Dental pathology was not observed.

Dental wear tends to be more common and severe in archaeological populations than in modern teeth. Severity of the dental wear was assessed using a chart developed by Smith (1984). Each tooth was scored using a grading system ranging from 1 (no wear) to 8 (severe attrition of the whole tooth crown). Dental wear was moderate (4).

Discussion and summary

Osteological analysis of the skeleton showed that this individual was highly incomplete, with only 5% of the skeleton surviving. The remaining bone was very fragmented and eroded. It was possible, however, to estimate age based on four teeth that had been recovered from the skeleton. The moderate wear of the teeth suggested that the individual was aged at least eighteen years old, but possibly older. It was not possible to measure the skeleton, or to assess the sex and skeletal pathology.

Animal bone and marine shell by Jane Richardson

In total, 106 animal bones and 20 shells were recovered from the evaluation and excavation, from ditch features associated with likely later Iron Age and Roman activity (Table 15). No fragments were retrieved from earlier prehistoric features. The assemblage falls well below the minimum reliable sample size of around 500 (with reference to a number of statistical parameters after van der Veen and Fieller 1982, 296).

Bones were assigned to taxa wherever possible, although lower-order categories were also used (e.g. sheep/goat, cattle-size). Epiphyseal fusion and dental eruption and wear data were assessed.

Bone condition, erosion and fragment size were noted in order to assess bone preservation, while gnawing, burning and butchery marks were recorded to determine bone treatment. Biometrical data were not recovered due to the high levels of fragmentation. No pathological bones were noted.

Table 15. Animal bone and marine shell fragments

Phase	Feature	Context	Cattle	Horse	Sheep/goat	Pig	Cattle-size	Sheep-size	Oyster	Total
IA	Ditch 6	1224	1							1
IA	Ditch 6	1226		1						1
IA	Ditch 6	125	1							1
RB	Ditch 3	1021	15							15
RB	Ditch 3	1221							8	8
RB	Ditch 2	1116				1	6			7
RB	Ditch 2	1117							1	1
RB	Ditch 2	1118	2				60			62
RB	Ditch 2	1120	2							2
RB	Ditch 1122	1123			3			10		13
RB	Ditch 2	1125	1		1			2	11	15
Total			22	1	4	1	66	12	20	126

The assemblage is highly fragmented, and eroded surfaces are common. No burnt or gnawed bones were noted and only one butchered bone, a cattle-size long bone fragment, is present.

Despite the very small size of the assemblage, bones of cattle, horse sheep/goat and pig were noted. Loose teeth are prevalent, reflecting the level of fragmentation and the poor state of preservation. Unfortunately insufficient age data were available to allow for meaningful comment.

8 Radiocarbon Dating

Following the failure of a bone sample from skeleton 1196 to provide a radiocarbon date at the assessment stage, it was decided to submit all of the human bone from this burial to the Scottish Universities Environmental Research Centre (SUERC) in the interest of obtaining a date. Two further samples were also submitted, cherry charcoal from the fill (1191) of hearth 1190 and hazel charcoal from camp deposit 1043. These samples were selected in order to confirm the date of the earlier prehistoric camp that hitherto had only been dated by the flint assemblage and the likelihood that Bronze Age pottery was present.

The three samples were submitted to SUERC and the calibrated age ranges were determined from the University of Oxford Radiocarbon Accelerator Unit Calibration program (OxCal3). Full details of each radiocarbon measurement, including contextual information, material dated, the conventional age BP, the calibration program and the sample isotopic fractionation are presented in Table 16. Where dates are given in the text, they are cited as calibrated age ranges at the two sigma level of confidence (i.e. 95% probability).

Unfortunately the human burial again failed to provide sufficient collagen for a radiocarbon date.

Table 16. Results of the radiocarbon dating programme

Lab. code	Context	Material	Radiocarbon age BP	Calibrated age range $\sigma 1$	Calibrated age range $\sigma 2$	Delta 13C rel. PDB (‰)
SUERC-43682 (GU29021)	1191	Cherry charcoal	3471±29	1877-1745 BC	1884-1695 BC	-27.5
SUERC-42936 (GU28652)	1043	Hazel charcoal	2942±29	1256-1114 BC	1262-1050 BC	-26.4
(GU28651)	1196	Human bone	Failed: insufficient collagen			

9 Discussion

The earlier prehistoric period

Prehistoric activity on site was at its most intensive during the later Neolithic to early Bronze Age; a period when the site would have been located at least 4km inland from the east coast, but perhaps no more than 1km from the Humber estuary to the west (given the current rate of erosion suffered by the east coast of Yorkshire of between 1.5m and 2.0m a year (www.eastriding.gov.uk). The area of the earlier prehistoric camp, apparently utilised over a long period with reference to the flint assemblage, currently sits on a small island or promontory of glacial drift surrounded by deposits of alluvial clay. The clays of Holderness are post-glacial deposits laid down as sea levels rose as the ice sheets melted and tributaries of the Humber estuary became tidal (Van de Noort and Ellis 1995, 12). This suggests that the low-lying camp sat within an area of salt or brackish marshland.

The importance of the wetland resource to earlier prehistoric communities is emphasised by the presence of a cluster of four barrows immediately to the south-west of Area 1, and two

more barrows and a suspected henge at Easington (Mackey 2006, 527). The imposition of these monuments on the landscape may not only have created a visible commemoration of the dead, but they may also have served as symbols of tenure; linking a community to the landscape and its resources.

In contrast to this funerary/monumental construction, many areas of the country, including Holderness, provide little direct evidence of permanently occupied earlier prehistoric settlement. Instead it is thought that human communities led a predominantly mobile existence (Woodward 2000) supplementing cultivars with wild resources (Moffet *et al.* 1989; Entwistle and Grant 1989). Such a subsistence regime likely followed a seasonal round revisiting certain sites within a community's territory to coincide with seasonally available resources (Bruck 1999).

Although some resources such as wood, mammals and some species of bird and fish would have been available all year round, many of the marshland resources would have only been seasonally available. Such resources would have included migrating birds and eels for food and reeds and sedges for shelter, fuel and clothing. A subsistence regime that included the seasonal exploitation of such local resources is proposed, therefore, and it does appear to fit best with the archaeological evidence recovered from the camp.

The structural elements of the camp form no apparent pattern that would indicate the floor plan of a substantial structure, and so the remains more likely represent episodes of short-term occupation of the site over many seasons. Intermittent utilisation of this location may have required short-term shelter consisting of lean-tos or wind breaks, although the large, square-cut post-hole 1175 may have held a substantial central post around which structures may have been built. Neolithic occupation at Sewerby Cottage Farm, Bridlington, as indicated by structures, contemporary pits and flint-rich spread deposits (Fenton Thomas 2009, 14) has also been interpreted as repeated episodes of occupation separated by long periods of absence (Fenton Thomas 2009, 78).

The artefact assemblage recovered from the camp consists predominantly of flint, but pottery was also recovered in smaller amounts. Diagnostic flints are predominantly of Late Neolithic/Early Bronze Age date, but the later Mesolithic and Early/mid-Neolithic periods are also represented. The Mesolithic and Early/mid-Neolithic flint constitutes a very small proportion of the flintwork recovered from the prehistoric camp and presumably reflects the highly intermittent occupation of the site at this time.

The larger Late Neolithic/Early Bronze Age flint assemblage consists of diagnostic flakes, blades, cores, core rejuvenation flakes, scrapers and a barbed-and-tanged arrowhead of Sutton type. The flint assemblage was also found to contain a high proportion of secondary and tertiary pieces indicating that much of the flint-working on site was concerned with the maintenance of tools and the production of tools from rough-outs already reduced off site. This supports the hypothesis that the site was used intermittently.

The pottery assemblage, unfortunately, does not contain any decorated pieces or rim sherds that would facilitate identification and dating, but the presence of cordon and ledge shoulder pieces are indicative of a later Bronze Age date. These serve to extend the use of the camp still further.

No bone was recovered during the excavation of deposits relating to the camp, and as organic remains would be expected on a site concerned with the hunting and processing of wild resources, it must be concluded that the ground conditions were not conducive to the survival of such material. The ground conditions also hindered the survival of charcoal and plant macrofossils, rendering much of the charcoal unidentifiable to type. Where the taxa could be identified, oak, hazel and cherry wood are present.

The graves

Excavation of grave 1194 failed to provide dating evidence, and the poorly-preserved bone proved unsuitable for radiocarbon dating. The flexed attitude of the skeleton indicates a pre-Christian pagan burial rite, as does the north/south alignment of the grave. This indicates an early prehistoric or Iron Age/Roman date for this inhumation. As this grave and the putative smaller grave (1188) cut through the earlier prehistoric occupational deposit 1043, radiocarbon dated in the range 1262-1050 cal BC (Table 16, SUERC-4293), they presumably post-date the use of the camp. It is possible, however, that the inhumations were 'closing' deposits placed to mark or commemorate the abandonment of the site, but no evidence of a barrow mound with attendant ring ditch, indicative of Neolithic or more likely Bronze Age monumentality, was identified.

The Iron Age

Human communities were undoubtedly exploiting the local landscape during the Iron Age as finds-spots (Van de Noort and Ellis 1995), aerial photography (Hyland 2009, 186) and excavation (Richardson 2011) have attested. Evidence of Iron Age activity on site exists as pottery finds in Area 1 from post-hole 1036 and in Area 2 from Ditches 5 and 6. Ditch 7 in Area 3 is also tentatively assigned to this phase due to its common alignment. This suggests that during the later Iron Age the dryer parts of the site were being divided up by field boundaries, and set to arable or livestock husbandry. The resulting enclosure system was then added to and reworked during the Roman period.

The Romano-British period

The archaeological evidence suggests that during the Roman period human activity on site intensified, which follows the pattern seen at excavations 3.5km to the north (Richardson 2011). This later activity probably resulted in the truncation and destruction of the earlier Iron Age features. Function is difficult to ascribe, due to the limited size of the excavation and the location of the majority of intercutting ditches at the edge of Area 1. Nevertheless, Ditches 1 and 3 may have delineated the route of a trackway, as they were generally 7m apart and placed parallel to each other on a north-east/south-west alignment. The placement of Ditch 2 restricts the gap between Ditches 1 and 3 to 2m, and may have been constructed in order to

regulate access. The addition of a short ditch section (1113) to the south-eastern end of Ditch 2 limited movement still further.

The creation of such a bottle-neck may have facilitated the sorting of livestock. When driven up the trackway, they could be more easily counted, inspected or removed from the herd or flock. The curving form of Ditch 4, appended to the north-east end of Ditch 3, may have helped to serve such a purpose, creating a funnel into which the animals were driven southwards. Ditches 1122 and 1146, appended to the southern side of Ditch 2, may have formed a pen or corral for animals duly separated, but as so little of these features was exposed, this remains highly speculative. A similar interpretation of livestock control was also proposed for a system of Romano-British ditches at Sewerby Cottage Farm, Bridlington, (Fenton Thomas 2009, 249).

The Roman finds assemblage recovered from the ditches in Area 1 indicates that the features were in use from the 2nd century, when they likely replaced Iron Age progenitors, into the late 3rd to 4th centuries. Also included in the assemblage from this area was a fragment of box tile and a whetstone.

The medieval period

The presence of plough furrows in Areas 1 and 2 indicates that the local landscape was used for arable cultivation during the medieval period.

10 Conclusions

Human communities have exploited the resources available in Holderness since the ice sheets retreated northwards at the onset of the Holocene. The Humber Wetlands Survey (Van de Noort and Ellis 1995) identified find spots and sites from the Mesolithic onwards, and it is in this period that utilisation of the landscape within the Easington Wetlands project first comes into focus. Excavation of the prehistoric camp produced small quantities of flintwork of Mesolithic and Early and Middle Neolithic date suggesting low-level, highly intermittent use of the site during this era. More intensive utilisation of the site occurred during the Late Neolithic/Early Bronze Age, when the site sat close to the south-western mouth of the Kilnsea Fleet valley where it fed into the Humber Estuary. From *c.* 4000 cal BC sea levels started to rise, and tidal waters deposited alluvial clays in the stream valleys, creating broad valley bottoms. These inundations led to the development of freshwater and brackish wetlands at the mouth of the Fleet valley and other tributaries of the Humber Estuary. These wetlands were a richly bio-diverse landscape offering abundant wild resources for the communities who exploited them. The archaeological remains investigated here, suggest this exploitation was seasonal.

One confirmed, and one suspected, inhumation were identified, presumably dated somewhere between the later Bronze Age and the later Iron Age or Roman periods. It was disappointing

that submission of material for radiocarbon dating failed to clarify the date of this funerary activity.

Iron Age activity on and around the site was agricultural in nature, resulting in the creation of a bank-and-ditch field system. Evidence of an Iron Age origin for the field system comes in the form of scant pottery finds, but the presence of Roman pottery in greater number highlights continued occupation during this later period. A possible trackway and funnel arrangement suggest that livestock husbandry was practised, although unfortunately bone survival was so poor that this could not be confirmed.

Medieval exploitation of the local landscape was arable in nature resulting in the creation of plough furrows.

Appendix 1: Written scheme of investigation

Appendix 2: Inventory of primary archive

Phase	File/Box No	Description	Quantity
Excavation	File no.1	Context register sheets	11
		Context Cards 1000-1249	250
		Drawing register sheets	4
		Levels book	1
		Sample register sheets	5
		Photo register sheets	4
		Colour negative strips	2
		B and W negative strips	2
		Digital photo record sheets	6
		Daily record sheets	46
		Small finds record sheets	12
		Finds and samples record sheets	2
		Permatrace sheets	27
		Written scheme of investigation	1

Appendix 3: Concordance of contexts

Context	Area	Camp grid	Group	Description	Artefacts, environmental samples and notes
1000	All			Topsoil	Flint (1)
1001	All			Subsoil	Flint (25), Pot (4)
1002				Natural. Alluvial clay	
1003				Natural. Glacial drift	Flint (6), surface finds
1004	1			Cut of furrow	
1005	1			Fill of furrow 1004	
1006	1			Cut of furrow	
1007	1			Fill of furrow 1006	
1008	1			Cut of furrow	
1009	1			Fill of furrow 1008	Pot (4)
1010	1			Cut of gully/ditch	
1011	1			Fill of gully/ditch 1010	
1012	1			Cut of furrow	
1013	1			Fill of furrow 1012	Pot (2). Sample [133]
1014	1			Cut of gully/ditch	
1015	1			Fill of gully/ditch 1014	Flint (1)
1016	1			Cut of gully/ditch	
1017	1			Fill of gully/ditch 1016	
1018	1			Cut of ditch	
1019	1			Fill of ditch 1018	
1020	1		3	Cut of ditch	
1021	1		3	First fill of ditch 1020	Flint (1), bone (15). Sample [1]
1022	1		3	Second fill of ditch 1020	Flint (2)
1023	1			Cut of shallow pit	
1024	1			Fill of shallow pit 1023	
1025	1			Cut of shallow pit	
1026	1			Fill of shallow pit 1025	Stone (1)
1027	1			Cut of shallow pit	
1028	1			Fill of shallow pit 1027	
1029	1			Probable natural feature	
1030	1			Fill of probable natural feature 1029	
1031	1			Probable natural feature	
1032	1			Fill of probable natural feature 1031	
1033	1			Cut of shallow pit	
1034	1			Fill of shallow pit 1033	Flint (5)
1035	Camp	All		Machining layer over camp	Flint (21), pot (3)
1036	1			Cut of post-hole	
1037	1			Fill of post-hole 1036	Pot (1). Sample [2]
1038	1			Cut of post-hole	
1039	1			Fill of post-hole 1038	
1040	1			Cut of pit	
1041	1			Fill of pit 1040	Flint (3)
1042	Camp			Natural drift in the area of the Camp	Flint (92), pot (5)

Context	Area	Camp grid	Group	Description	Artefacts, environmental samples and notes
1043	1			Camp occupational debris	Flint (143), pot (26). Samples [3-13, 15-17, 35-37,39-41, 43-44, 52-63, 72, 79, 81, 83, 85, 87-91, 93-100, 110-114,124-126]
1044	Camp	J/K6		Fill of possible post-hole 1045	Sample [123]
1045	Camp	J/K6		Cut of possible post-hole	
1046	1		3	Cut of ditch	
1047	1		3	First fill of ditch 1046	Sample [18]
1048	1		3	Second fill of ditch 1046	Flint (4), pot (21)
1049	Camp	H9		Cut of pit	
1050	Camp	H9		Fill of pit	
1051	1			Cut of post-hole	
1052	1			Fill of post-hole 1051	Flint (1). Sample [22]
1053	1			Cut of pit/tree bole	
1054	1			Fill of pit/tree bole 1053	Sample [23]
1055	1			Cut of ditch	
1056	1			First fill of ditch 1055	Flint (1). Sample [19]
1057	1			Second fill of ditch 1055	
1058	1			Third fill of ditch 1055	
1059	1			Fourth fill of ditch 1055	
1060	1			Fifth fill of ditch 1055	
1061	1			Cut of ?pit/depression	
1062	1			Fill of ?pit/depression 1061	Flint (12), pot (1)
1063	1			Subsoil-filled depression	
1064	1			Fill of 1063	Flint (11), pot (10)
1065	1			Cut of post-hole	
1066	1			Fill of post-hole 1065	
1067	1			Post-pipe on post-hole 1065	Sample [74]
1068	1			Cut of stake-hole	
1069	1			Fill of stake-hole 1068	
1070	1			Cut of stake-hole	
1071	1			Fill of stake-hole 1070	
1072	1			Camp occupational debris	Flint (16), pot (14) Samples [30-34, 42, 86, 92, 107, 127]
1073	1			Cut of gully	
1074	1			Fill of gully 1073	
1075	1			Cut of post-hole	
1076	1			Fill of post-hole 1075	Sample [21]
1077	1		3	Cut of ditch	
1078	1		3	First fill of ditch 1077	Sample [24]
1079	1		3	Second fill of ditch 1077	
1080	1		3	Third fill of ditch 1077	
1081	1		3	Cut of ditch	
1082	1		3	First fill of ditch 1081	Sample [25]
1083	1		3	Second fill of ditch 1082	Flint (1)
1084	1		2	Cut	Same as ditch 1115

Context	Area	Camp grid	Group	Description	Artefacts, environmental samples and notes
1085	1		2	Fill of 1084	Flint (4), pot (1). Same as fill 1117 in ditch 1115. Sample [80]
1086	1			Modern intrusion	Shotgun cartridges
1087	1			Cut of feature	
1088	1			Fill of feature 1087	Sample [26]
1089	1			Fill of post-hole 1090	Flint (2). Sample [73]
1090	1			Cut of post-hole	
1091	1			Cut of furrow	Flint (1). Same as 1098
1092	1			Fill of furrow 1092	Sample [27]
1093	Camp	G3		Fill of stake-hole 1094	
1094	Camp	G3		Cut of stake-hole	Pot (2)
1095	1			Cut of ditch	
1096	1			Fill of ditch 1095	Flint (2)
1097	1			Fill of furrow 1098	
1098	1			Cut of furrow	Same as 1091
1099	1			Void	Flints (4) renumbered 1142
1100	1			Void	
1101	1			Fill of modern pit 1101	Shotgun cartridges
1102	1			Modern pit	
1103	1		1	Fourth fill of ditch 1107	
1104	1		1	Third fill of ditch 1107	Pot (2)
1105	1		1	Second fill of ditch 1107	
1106	1		1	First fill of ditch 1107	Sample [28]
1107	1		1	Cut of ditch	
1108	Camp	I2		Cut of stake/post-hole	Sample [29]
1109	Camp	I2		Fill of stake/post-hole 1108	Sample [64]
1110	1			Second fill of 1112	Cu alloy and Fe object
1111	1			First fill of 1112	
1112	1			Cut of pit	
1113	1			Cut of ditch	
1114	1			Fill of ditch 1113	
1115	1		2	Cut of ditch	Same as ditch 1121
1116	1		2	First fill of ditch 1115	Flint (11), pot (2), bone (7). Sample [45]
1117	1		2	Second fill of ditch 1115	Shell (1), pot (1)
1118	1		2	Fourth fill of ditch 1121	Flint (6), pot (21), bone (62)
1119	1		2	Third fill of ditch 1121	
1120	1		2	Second fill of ditch 1121	Flint (4), pot (6), bone (2), masonry (1)
1121	1		2	Cut of ditch	Same as ditch 1115
1122	1			Cut of ditch	
1123	1			First fill of ditch 1122	Pot (15), bone (13). Sample [46]
1124	1			Second fill of ditch 1122	Flint (2), pot (10)
1125	1		2	First fill of ditch 1121	Flint (3), pot (10), bone (4), shell (11). Sample [47]
1126	1		1	Fill of gully 1127	Sample [48]
1127	1		1	Cut of gully	

Context	Area	Camp grid	Group	Description	Artefacts, environmental samples and notes
1128	1			Second fill of post-hole 1130	Flint (1), pot (1)
1129	1			First fill of post-hole 1130	Sample [49]
1130	1			Cut of post-hole	
1131	1		2	Fifth fill of ditch 1121	Flint (1), pot (2)
1132	1		2	Fourth fill of ditch 1121	
1133				Cut of ditch	Void.
1134	1			Fill of furrow 1135	
1135	1			Cut of furrow	
1136	1			Cut of stake-hole	
1137	1			Fill of stake-hole 1136	
1138	1			Cut of stake-hole	
1139	1			Fill of stake-hole 1138	
1140	1			Cut of shallow pit	
1141	1			Fill of shallow pit 1140	Flint (2), charcoal
1142	1			Fourth fill of ditch 1146	Flint (7)
1143	1			Third fill of ditch 1146	Flint (1). Sample [50]
1144	1			Second fill of ditch 1146	
1145	1			First fill of ditch 1146	
1146	1			Cut of ditch	
1147	1		1	Cut of ditch	
1148	1		1	First fill of ditch 1147	
1149	1		1	Second fill of ditch 1147	
1150	1		1	Third fill of ditch 1147	Whet stone (1), tile (1). Sample [51]
1151	1		1	Fourth fill of ditch 1147	
1152	1		1	Fifth fill of ditch 1147	
1153	1		1	Sixth fill of ditch 1147	
1154	1		1	Seventh fill of ditch 1147	
1155	Camp	G2		Fill of post-hole 1156	
1156	Camp	G2		Cut of post-hole	
1157	Camp	G2		Fill of post-hole 1158	
1158	Camp	G2		Cut of post-hole	
1159	Camp	G2		Fill of post-hole 1160	
1160	Camp	G2		Cut of post-hole	
1161	Camp	H2		Cut of post-hole	
1162	Camp	H2		Fill of post-hole 1161	Sample [65]
1163	Camp	H2		Cut of post-hole	
1164	Camp	H2		Fill of post-hole 1163	Sample [66]
1165	Camp	G3		Fill of post-hole 1166	Sample [101]
1166	Camp	G3		Cut of post-hole	
1167	Camp	G3/4		Fill of post-hole 1168	Sample [103]
1168	Camp	G3/4		Cut of post-hole	
1169	Camp	G3		Fill of post-hole 1170	Sample [102]
1170	Camp	G3		Cut of post-hole	
1171	Camp	G/F4		Third fill of hearth 1183	Flint (1), pot (1), ochre?(1). Sample [71]
1172	Camp	G/F4		Second fill of hearth 1183	Sample [75]

Context	Area	Camp grid	Group	Description	Artefacts, environmental samples and notes
1173	Camp	G/F4		First fill of hearth 1183	Sample [76]
1174	Camp	G/H4		Raked out from hearth 1183	
1175	Camp	H2/3		Cut of post-hole	
1176	Camp	H2/3		Fill of post-hole 1175	Sample [67]
1177	Camp	H3		Cut of stake-hole	
1178	Camp	H3		Fill of stake-hole 1177	Sample [69]
1179	Camp	H3		Cut of stake-hole	
1180	Camp	H3		Fill of stake-hole 1179	Sample [68]
1181	Camp	H3		Cut of stake-hole	
1182	Camp	H3		Fill of stake-hole 1181	Sample [70]
1183	Camp	F/G4		Cut of hearth	
1184	Camp	G4		Fill of stake-hole 1185	
1185	Camp	G4		Cut of stake-hole	
1186	Camp	I5/4		Possible child grave	
1187	Camp	I5/4		Fill of possible child grave	Sample [77]
1188	Camp	C4		Cut of stake-hole	
1189	Camp	C4		Fill of stake-hole 1188	Sample [78]
1190	Camp	G5		Cut of hearth	
1191	Camp	G5		Fill of hearth 1190	Sample [84]
1192	Camp	G3		Fill of stake-hole 1193	
1193	Camp	G3		Cut of stake-hole	
1194	Camp	E/F4		Cut of grave	
1195	Camp	E/F4		Upper fill of grave	Sample [106]
1196	Camp	E/F4		Skeleton	
1197	Camp	E/F4		Lower fill of grave	Sample [105]
1198	Camp	F6		Fill of stake-hole 1199	Sample [104]
1199	Camp	F6		Cut of stake-hole	
1200	Camp	H5		Cut of stake-hole	
1201	Camp	H5		Fill of stake-hole 1200	Sample [108]
1202	Camp	I5		Cut of post-hole	
1203	Camp	I5		Fill of post-hole 1202	Sample [109]
1204	Camp	E2		Cut of stake-hole	
1205	Camp	E2		Fill of stake-hole 1204	
1206	Camp	E2		Cut of stake-hole	
1207	Camp	E2		Fill of stake-hole 1207	
1208	Camp	F2		Cut of post-hole	
1209	Camp	F2		Fill of post-hole 1208	Sample [116]
1210	Camp	F2		Cut of post-hole	
1211	Camp	F2		Fill of post-hole 1210	Sample [117]
1212	Camp	F3		Cut of post-hole	
1213	Camp	F3		Fill of post-hole 1213	Sample [118]
1214	2		5	Cut of ditch	
1215	2		5	First fill of ditch 1214	Sample [119]
1216	2		5	Second fill of ditch 1214	Flint (2), pot (1)
1217	Camp	J5		Cut of stake-hole	

Context	Area	Camp grid	Group	Description	Artefacts, environmental samples and notes
1218	Camp	J5		Fill of stake-hole 1217	Sample [115]
1219	2		6	Cut of ditch	
1220	2		6	First fill of ditch 1219	Flint (1), slag (1). Sample [129]
1221	2		6	Second fill of ditch 1219	Flint (2), pot (23), shell (8)
1222	2		6	Second fill of ditch 1225	Pot (2)
1223	2		6	Third fill of ditch 1225	
1224	2		6	First fill of ditch 1225	Bone (1). Sample [120]
1225	2		6	Cut of ditch	
1226	2		6	Fourth fill of ditch 1225	Bone (1)
1227	Camp	D8		Cut of post-hole	
1228	Camp	D8		Fill of post-hole 1227	Flint (1). Sample [121]
1229	Camp	J7		Cut of post-hole	
1230	Camp	J7		Fill of post-hole 1229	Sample [122]
1231	2			Cut of fire pit	
1232	2			First fill of fire pit 1231	
1233	2			Second fill of fire pit 1231	Sample [128]
1234	2			Cut of fire pit	
1235	2			Second cut of fire pit 1234	Burnt clay. Sample [130]
1236	2			Third fill of fire pit 1234	
1237	2			First fill of fire pit 1234	
1238	2			Cut of gully	Same as 1242 and 1244
1239	2			First fill of gully 1238	Slag (1). Sample [131]
1240	2			Second fill of gully 1238	
1241	2			First fill of gully 1242	
1242	2			Cut of gully	Same as 1238 and 1244
1243	2			Second fill of gully 1242	
1244	2			Cut of gully	Same as 1238 and 1242
1245	2			Fill of gully 1244	
1246	3			Cut of ditch	
1247	3			First fill of ditch 1246	
1248	3			Second fill of ditch 1246	[132]
1249	3			Re-cut of ditch 1246	
1249	3			Fill of ditch 1249	

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