



Archaeological Services  
University of Durham

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## **Highfield Hospital, Chester-le-Street**

### **Archaeological evaluation**

*on behalf of*

**Scott Wilson Kirkpatrick and Co Ltd**

**ASUD Report 1109**  
May 2004

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*46 The Calls, Leeds, LS2 7EY*

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## **1. Summary**

### ***The project***

- 1.1 This report presents the results of an archaeological evaluation conducted in advance of a proposed development at the former Highfield Hospital, Chester-le-Street. The evaluation comprised the excavation of 6 trial trenches.
- 1.2 The works were commissioned by Scott Wilson Kirkpatrick and Co Ltd, and conducted by Archaeological Services University of Durham in accordance with a specification provided by Scott Wilson.

### ***Results***

- 1.3 A north-south aligned palaeo-channel over 10m wide and 2m deep was sectioned by three of the trenches. This channel was entirely filled with silt deposits. A gully running north-south was present in all these trenches, and had been cut from close to the bottom of the sequence. The gully possibly continued as a slightly larger ditch that was found in two other trenches, outside of the palaeo-channel. It is thought that the anomaly detected geophysically was caused by the palaeo-channel rather than the ditch / gully.
- 1.4 A large circular pit with vertical sides over 0.9m deep was present in the join between Trenches C and D. A second pit was partly exposed within Trench C. Both are thought to be similar in date to the ditch and gully mentioned above.
- 1.5 Prehistoric flint and pottery was found within the above features and also residually within other deposits in the area. The quantity recovered is sufficient to indicate the presence of pre-historic settlement on the site. Environmental evidence gathered from the evaluation reinforces this interpretation. While the flint suggests a late Mesolithic / early Neolithic date for this occupation, the pottery suggests a Bronze Age date.
- 1.6 Three separate north-south aligned cobble surfaces were detected at a higher stratigraphic level to the pre-historic features. One of these had a gully running along its western edge which contained a large number of sherds of Roman pottery, all from a single vessel. It is interpreted as a road surface of that date, with a ditch along its western side. The other two cobble surfaces are likely to be later surfaces to this road.
- 1.7 Apart from service trenches for the former hospital and recent geo-technical test pits, there was no evidence for recent disturbance to the site. All the archaeological features discovered by the evaluation were covered by a build-up of silt, interpreted as former ploughsoil. The site is therefore in a good state of preservation.

## **2. Project background**

### ***Location (Figure 1)***

- 2.1 The site is located at the former Highfield Hospital, Chester-le-Street (NGR: NZ 273 524). In total, the site covers an area of c.1.9ha, although the area identified as being of archaeological interest is a strip measuring 170m by 35m along its eastern side. It is bounded by the buildings and car parks of the former hospital to the west, Newcastle Road to the east, Highfield Rise to the south and a housing development to the north.

### ***Development proposal***

- 2.2 The proposal is to construct 104 residential dwellings, along with associated access roads and services.

### ***Objective***

- 2.3 The objective of the scheme of works was to assess the nature, extent and potential significance of any surviving archaeological features within the proposed development area, so that an informed decision may be made regarding the nature, and scope of, any further scheme of archaeological works that may be required in advance of development.

### ***Methods statement***

- 2.4 The works have been undertaken in accordance with a Specification provided by Scott Wilson Kirkpatrick and Co Ltd and a project design provided by Archaeological Services.

### ***Dates***

- 2.5 Fieldwork was undertaken between 27<sup>th</sup> April and 5<sup>th</sup> May 2004. This report was prepared between 4<sup>th</sup> and 17<sup>th</sup> May 2004.

### ***Personnel***

- 2.6 Fieldwork was conducted by Janet Beveridge, Ed Blinkhorn, Stewart Gardiner, James Roberts and Andy Willis, and supervised by Andy Platell. This report was prepared by Andy Platell, with illustrations by Linda Bosveld. Specialist analysis was conducted by Dr Steven Willis (pre-historic and Roman ceramics), Dr Chris Cumberpatch (medieval and post-medieval ceramics), Rebecca Scott (lithics) and Dr Charlotte O'Brien (macrofossil analysis). The Project Manager was Peter Carne.

### ***Archive***

- 2.7 The project/site code is CHH 04, for **Chester-le-Street, Highfield Hospital 2004**. It is intended to deposit the site archive and finds with the Bowes Museum at the end of the project.

## **3. Landuse, topography and geology**

- 3.1 At the time of the evaluation, the proposed development area comprised disused former hospital buildings and car parks to the west and a field of





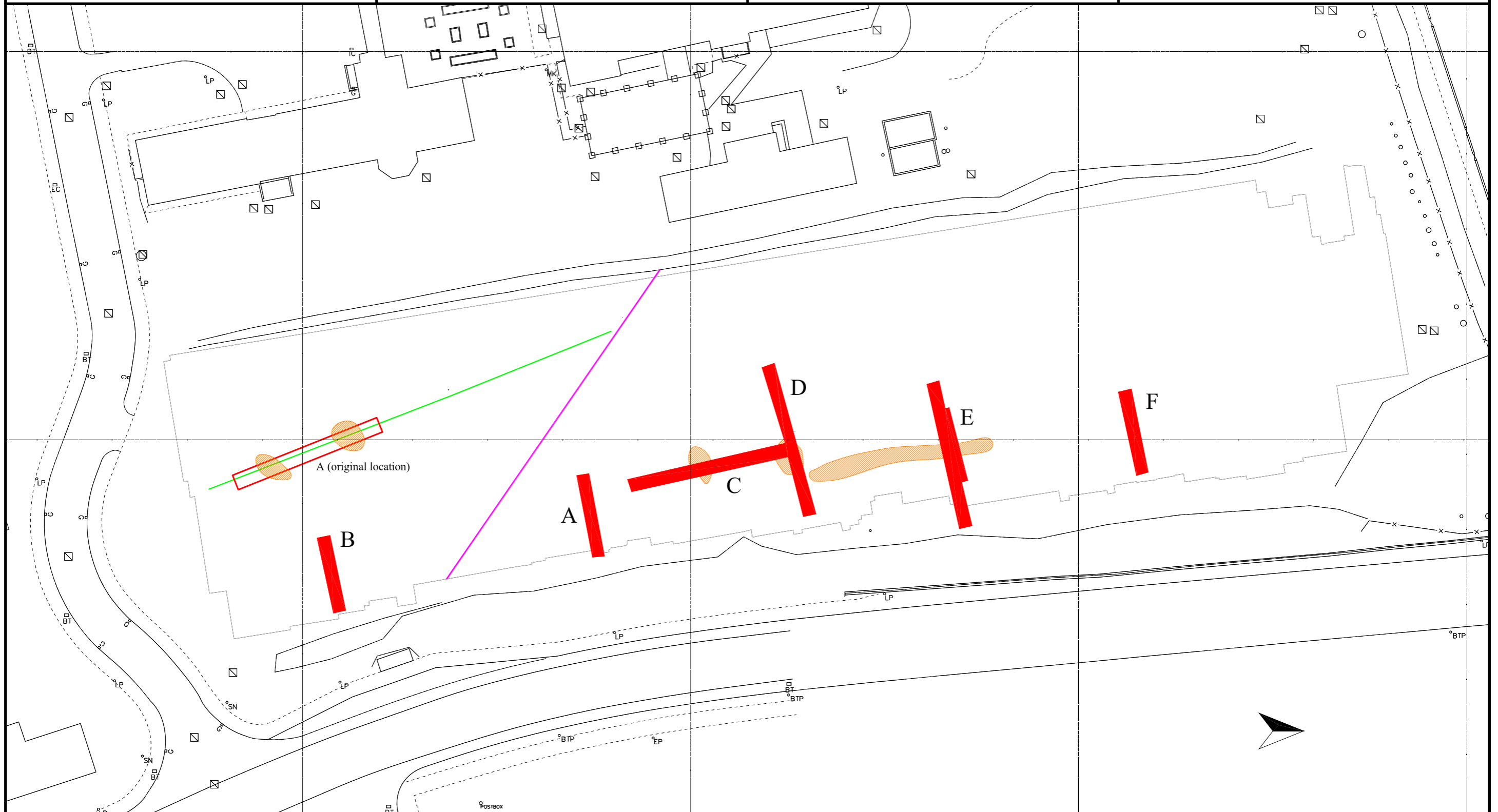
-  trench
-  probable line of electric cable
-  line of drain
-  geophysical anomalies (as shown in specification)

Figure 1  
*Location of the trenches within the proposed development area*  
*basemap courtesy of Scott Wilson*



rough grass to the east. All the evaluation trenches were located on this area of rough grass.

- 3.2 The site lies at a mean elevation of *c.*30m OD, on a flat terrace at the top of the steep rise northwards from the Cong Burn. The ground falls away to both the south and east but rises gently to the north and west. Towards the east, there is a particularly steep drop down to the Newcastle Road although at the start of the evaluation it was not known whether this was due to the road surface having been cut away or the proposed development site having been built up.
- 3.3 The solid geology of the site is mudstone, sandstone, siltstone and limestone with occasional coal seams of the Middle Coal Measures of the Upper Carboniferous. This is covered by drift deposits of glacial sands, gravels and boulder clay.

#### **4. Historical and archaeological background**

- 4.1 A Roman fort lies under the centre of Chester-le-Street and a Roman road is thought to run northwards from this fort to the one at Newcastle. This road would be likely to run along the general line of the current Newcastle Road that forms the eastern boundary of the proposed development area. However, evidence for this Roman Road is largely circumstantial, although by medieval times the route had become part of the Great North Way and it continued to be an important thoroughfare until the construction of the A1(M) Chester-le-Street bypass in recent times.
- 4.2 Cartographic evidence shows the site as open farmland until a hospital for infectious diseases was built in the 1890's. This hospital was expanded and redeveloped to its current size during the 1920's. However, there is no cartographic or documentary evidence for any development on the eastern part of the site, identified as the area of archaeological interest (Scott Wilson 2004).

##### ***Previous archaeological works***

- 4.3 A geophysical survey of the site was carried out by West Yorkshire Archaeological Service (WYAS 2004). In contrast to the cartographic evidence, this concluded that the site was heavily disturbed by modern activity and ferrous surface litter. Although a few anomalies were identified, these were interpreted as being of probable recent origin and the site was therefore regarded as being of low archaeological potential.

#### **5. The evaluation trenches**

##### ***Introduction***

- 5.1 Six evaluation trenches were proposed in locations agreed by Scott Wilson and Durham County Council Archaeology Section. However, when laid out on the ground, it became clear that the proposed Trench A was located along the line of a modern drain and the two anomalies it was intended to investigate were drain covers. Therefore this trench was re-located to the south of Trench C, in

the position shown on Figure 1. The remaining trenches were excavated in the locations specified in the brief. All trenches were excavated by machine to the top of archaeologically significant deposits and then cleaned, recorded and any visible features sampled by hand.

***Trench A (Figure 2)***

- 5.2 This trench measured 10m by 1.5m in size, and was located to the south of Trench C, in order to further investigate a linear feature part-exposed in that trench. The natural subsoil in this trench was a yellow-brown sand [30] that became darker towards the east (here context [26]). The linear feature proved to be a ditch [F29], 0.5m wide and 0.3m deep, filled with mid yellowish brown silty sand [28]. A sherd of Bronze Age pottery was recovered from this fill. Above this, and covering the whole trench, was a light yellowish brown sand [27]. At the eastern end of the trench, this was overlain by a mid yellowish brown silty sand [24] that thickened eastwards. In the extreme eastern end of the trench, a small patch of cobbling [23] 0.15m thick overlay this deposit. However, this did not extend significantly into the trench and too little was exposed to interpret the feature. It was not visible within the long section of the trench. Topsoil [1] covered the entire trench, except for a recent square cut [F22] containing yellow-brown sand mixed with turf [21]. This is thought to be the fill of a geo-technical test pit excavated as part of the ground investigations for this site. A second (residual) sherd of Bronze Age pottery was recovered from the topsoil within the trench.

***Trench B (Figure 2)***

- 5.3 This trench measured 10m by 1.5m in size, and was located at the southern end of the site in a geophysically 'blank' area. At the eastern end of the trench, the natural subsoil was a mottled yellow-brown sand, as in the other trenches. However, across the remainder of the trench, this was replaced by a yellow clay that dipped steeply under the sand. A similar clay was exposed in a service trench that was being excavated at the southeast corner of the standing buildings at the time of the archaeological evaluation and it is thought that these two deposits are continuations of each other. Plough marks, probably of medieval date, were evident running across the surface of the clay and its top was slightly raised above the level of the top of the sand. This was perhaps due to the ploughing cutting into the softer sand more than into the clay.
- 5.4 One feature was present in the western end of the trench. This was a shallow linear cut [F5] running north-south. It was 50mm deep and had a flat base, except for a slightly deeper (150mm deep) slot along each side. The cut was filled with rounded pebbles up to 100mm in diameter in a matrix of sandstone fragments less than 30mm in diameter [4]. The pebbles were slightly larger in the peripheral slots than in the middle of the feature. A thin layer of brown-grey silty clay [3] overlay this deposit. It is interpreted as a road surface, with rudimentary kerbs along each side.
- 5.5 A layer of mid brown silt [2] that was 0.4m deep, thickening to 0.5m deep over the sandy natural, overlay the whole trench and this was overlain by 0.45m of topsoil [1]. At the eastern end of the trench, some patches of yellow-

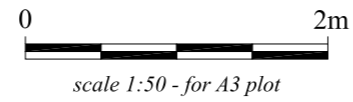
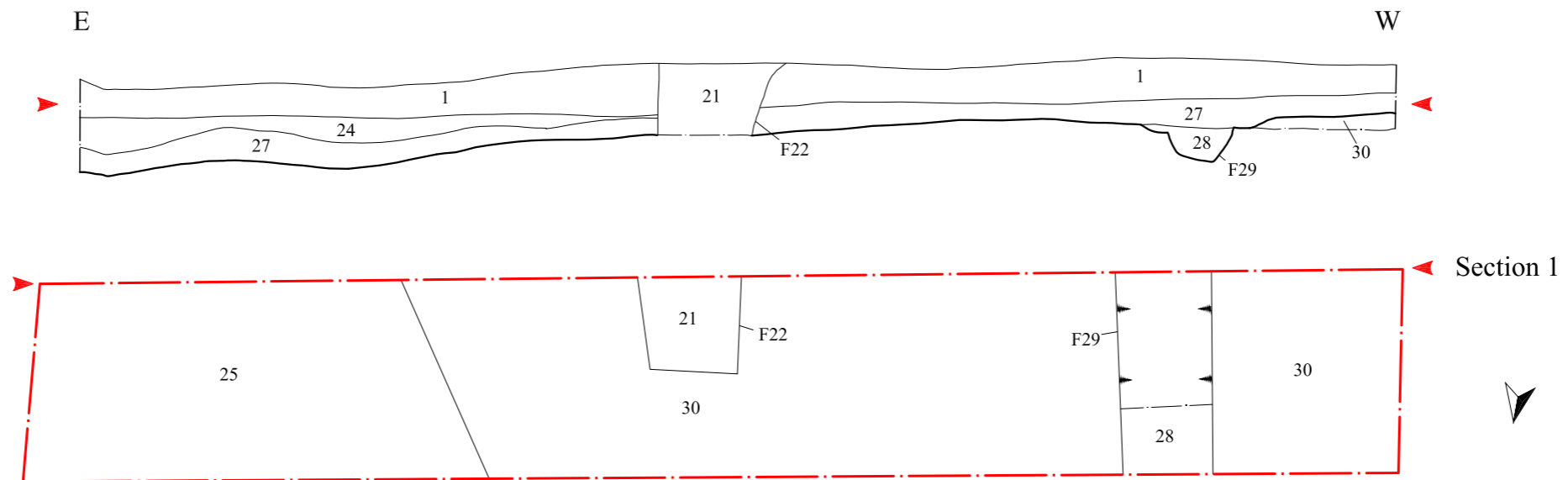


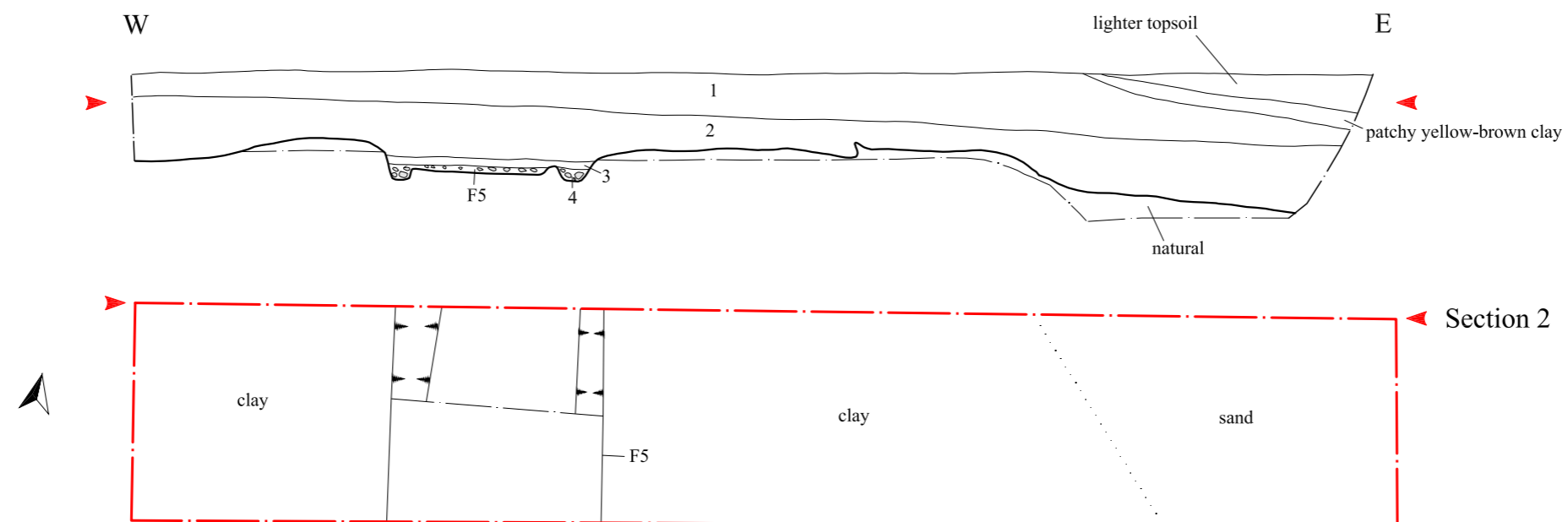
Figure 2

*Plans and sections of trenches A and B*

**Trench A, Section 1**



**Trench B, Section 2**

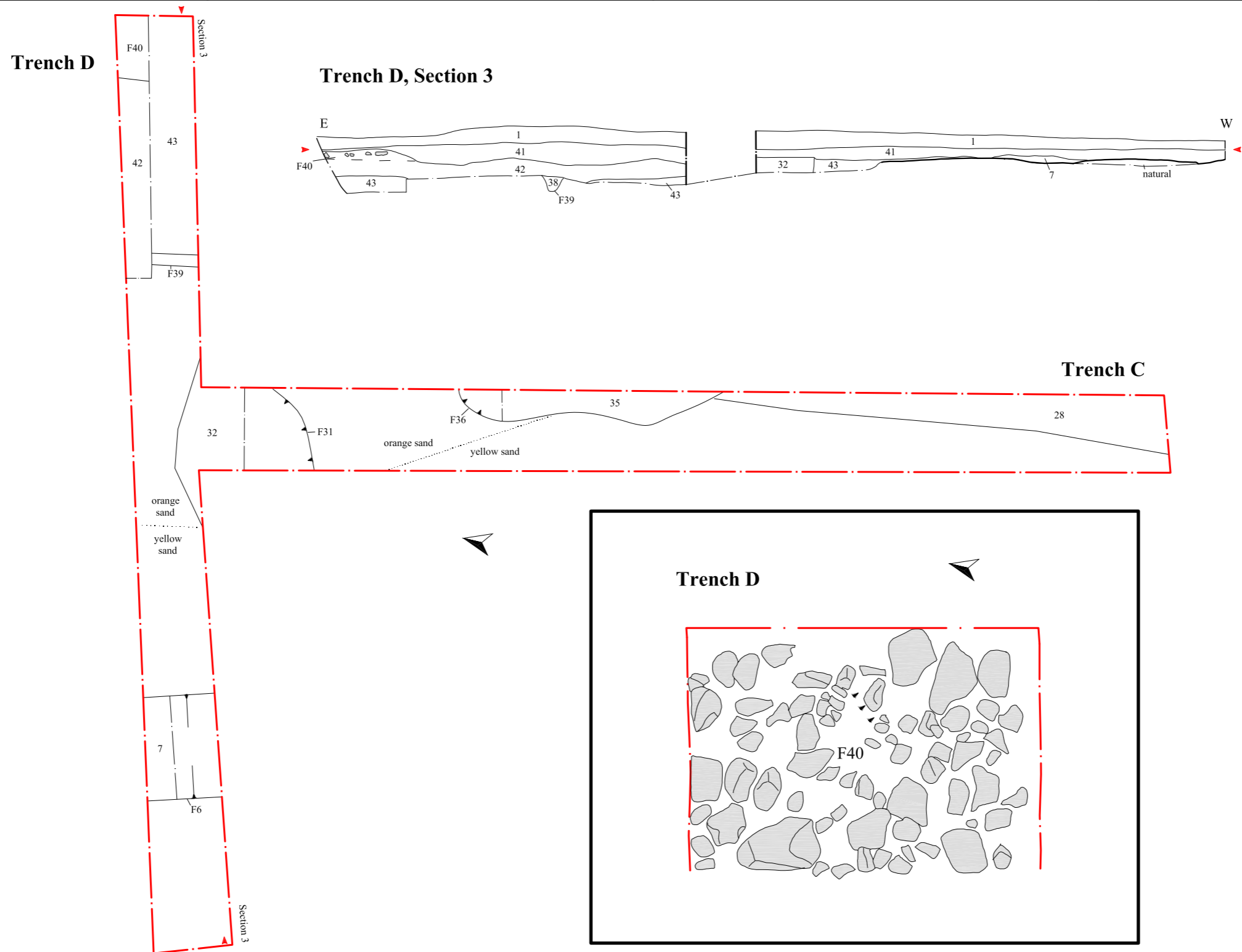




brown clay overlay the topsoil and these in turn were overlain by further topsoil.

***Trenches C and D (Figure 3)***

- 5.6 These two trenches joined each other in a T-shape. Both measured 20m long by 1.5m wide. Trench C was intended to examine a discrete anomaly while a second such anomaly was located in the junction between the two trenches.
- 5.7 A linear feature [28] ran longitudinally along the southern edge of Trench C and was only partly exposed. Trench A was repositioned to examine this feature (see above, paragraph 5.2) and therefore it was not further investigated within Trench C.
- 5.8 Further along the trench to the north, an irregularly shaped feature was partly exposed along the southern baulk. It formed a steep-sided, flat bottomed cut [F36] 0.25m deep and filled with mid to dark brown silty sand [35]. The feature may possibly have been the cause of the geophysical anomaly although its location was slightly to the south of the position recorded by the geophysical survey.
- 5.9 A feature [F31] 3m in diameter was located in the junction of the two trenches. This had vertical sides and was cut into soft sand to a depth of at least 0.9m. It was filled with a mid to dark greyish-brown silty sand [32], with lenses of sand [34] along its edges. A flint flake was found within the main fill. Since this feature could not be properly sectioned within the remit of the evaluation but was regarded as being of high archaeological potential, it was lined with geo-textile and then backfilled pending future investigation.
- 5.10 In Trench D, the natural geological deposits dipped from 0.35m below the current ground surface at the western end of the trench to in excess of 1.2m in the east. Although there was a gentle dip throughout the trench, most of this dip lay within its eastern half, to the east of the junction with Trench C. This dip in the natural geology was also present in trenches E and F and, from comparison of all three trench sections, is interpreted as a palaeo-channel.
- 5.11 There was a marked change in the underlying sand along the western edge of this palaeo-channel, from pale yellow to orange. However, both sand deposits were very pure and this colour change was thought to be a variation in the natural geology. Above it, the lowest deposit was a light brownish yellow sand [43]. This formed the base of the channel at its eastern and western edges but was not fully excavated towards its centre. One feature was cut into this sand, a north-south aligned gully [F39] that was 0.35m wide, 0.3m deep and contained a mid greyish brown sandy silt [38]. Projected southwards, this gully could be a continuation of ditch [F29], found in Trenches A and C, although the two features differ slightly in size.
- 5.12 Two layers of mid greyish brown sandy silt [42 and 41], 0.4m and 0.15m thick respectively, filled the hollow above this gully. They were indistinguishable except for at the eastern end of the trench, where they were separated by a surface of closely packed sub-angular cobbles [40], up to 0.3m in length



(Figure 3). This cobble surface was also found in Trench E (see paragraph 5.19).

- 5.13 A shallow depression [F6] running north-south crossed the western end of the trench. It was filled with a mid grey-brown sandy silt [7] that contained a clay pipe fragment, indicating its post-medieval date. It is thought to be an old plough furrow.

***Trench E (Figure 4)***

- 5.14 This trench originally measured 10m by 1.5m and was located to sample a linear geophysical anomaly. This anomaly proved to be caused by a large, deep depression that continued into Trenches D and F. Since the trench was not large enough to properly sample this feature, it was backfilled over the Bank Holiday Weekend and then reopened, with an extension to both the east and west, so that the final trench measured 16.5m in length.
- 5.15 The natural subsoil (here an orange sand) was exposed at the west and east ends of the trench, with its surface dipping gently from both ends to the centre. For health and safety reasons the depression was not fully excavated towards the centre of the trench due to the depth of deposits, although based on a projection of its edges, it would have been *c.*2m deep at its deepest point. Given its size and gentle dip of its sides, it is thought to be a palaeo-channel.
- 5.16 Directly above the natural subsoil at either end of the trench (and forming the base of excavation towards the centre) was a mid brown sand [15]. Two sherds of Bronze Age pottery were recovered from this context. A north-south aligned gully [F14] cut this sand towards the eastern end of the trench. It was filled with a mid grey-brown sandy silt [13]. The gully was similar in size, fill, orientation and stratigraphic position to the gullies found in Trenches D and F (see paragraphs 5.11 and 5.21) and all three are thought to be a continuation of the one feature.
- 5.17 A deposit of mid grey-brown silt [49] overlay this gully and filled the entire trench. Above this was a dark grey-brown silt [12]. A second gully [F11] cut through this latter deposit. This was filled with yellow-brown silty clay containing frequent large (up to 200mm diameter) cobbles [10]. A large number of unweathered sherds of Roman pottery, all from a single vessel, were recovered from a small area at the base of this gully (see paragraph 6.6). From their context, it is improbable that the pot sherds were residual and therefore the gully can be securely dated to the period AD120 - 300.
- 5.18 Although gully [F11] lay directly above gully [F14] and ran on the same alignment, they were stratigraphically separate features. The Roman date obtained for the upper gully provides further confirmation for the prehistoric date of the lower features.
- 5.19 A 2.5m wide spread of rounded cobbles up to 50mm in diameter [9] was located to the east of gully [F11] with a second cobble surface [50] 0.5m to the east. This latter surface was more than 5m wide, contained tightly packed, sub-angular cobbles up to 0.2m in longest dimension, and resembled cobble spread



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scale 1:50 - for A3 plot



stone

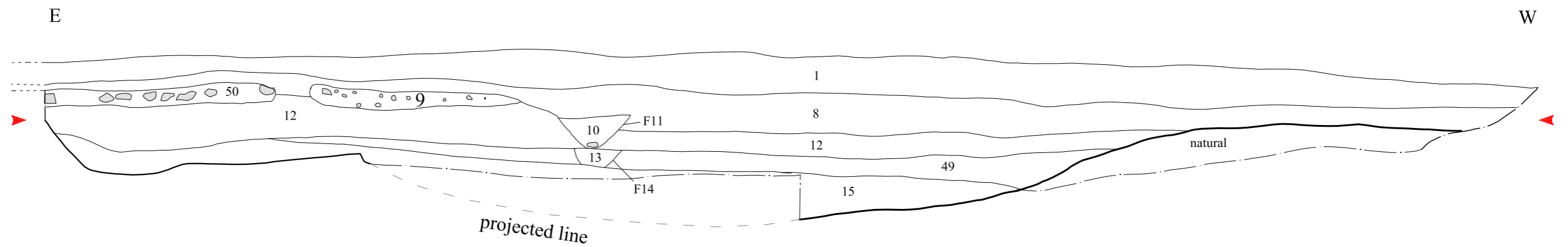
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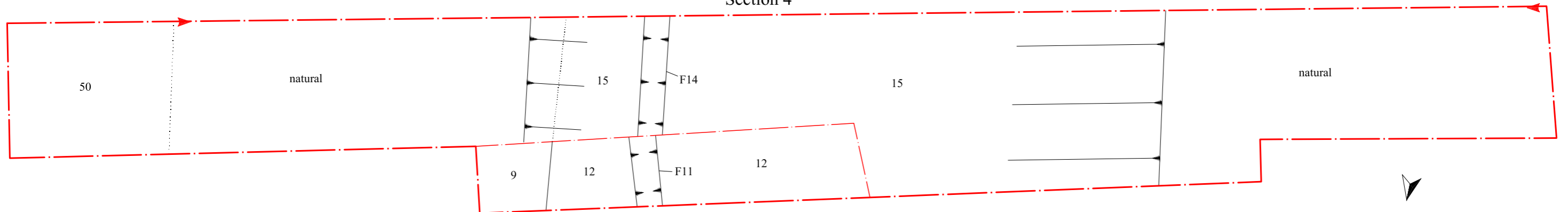
Figure 4

*Plan and section of trench E*

**Trench E, Section 4**



**Section 4**



[40] in Trench D rather than surface [9]. It is probable that both spreads are related to road surfaces, with one of them being associated with the Roman ditch [F14]. While surface [9] is closer to the ditch, surface [40/50] more closely resembles the foundation layer found in other excavated Roman Road sections (such as for example ASUD 2004) and was also found over a greater distance. It is common for the bounding ditches of Roman Roads to be some distance from the road surface itself and therefore [40/50] is more likely to represent the Roman surface, with [9] being a later repair of limited extent.

- 5.20 A layer of mid grey-brown silt [8] overlay the whole trench. This deposit was up to 0.5m thick towards the centre of the trench but thinned to just 0.1m over the two cobble surfaces. Topsoil [1] completed the sequence in this trench.

### ***Trench F (Figure 5)***

- 5.21 This trench measured 10m by 1.5m and was located towards the northern end of the site, in a geophysically 'blank' area. The natural sand was identified at a depth of 1.0m within this trench. It is thought that the depth of deposits found within this trench is due to the entire area lying within the palaeo-channel more fully investigated within Trench E. A gully [F18] was cut into this sand. This ran north-south and contained a mid-brown silt [19]. It was aligned on gullies [F14] in Trench E and [F39] in Trench D and all three gullies are thought to be continuations of the same feature. A mid brown silty sand [20] 0.5m thick overlay this and above this was 0.3m of a mid greyish-brown silty sand [16]. The topsoil [1] overlay this.

## **6. The finds**

### ***Prehistoric pottery***

#### *Context 1*

- 6.1 2 conjoining sherds (weighing 5 grams, with a probable fresh break) were recovered from this context. The sherds come from the body of a vessel with a wall thickness, as represented by these sherds, of 11mm. The exterior is a pale red colour and the core and interior surface are unoxidised and are dark grey. The fabric is moderately hard. Fractures to the pottery are irregular; both interior and exterior surfaces have been smoothed. The clay paste used was quite dense and clean, suggesting it was a prepared clay. There are sparse fragments of crushed rock which appear to be from hard igneous rock. These are well sorted and appear to have been added to the clay. An impression is visible on the exterior surface, of 'herring-bone' type. However as it survives, this is not fully distinct. Overall the typology of this item and the impression firmly suggest an early to middle Bronze Age date.

#### *Context 15*

- 6.2 1 body sherd (20 grams) in a rather abraded condition. The sherd comes from the shoulder of a vessel with a collar. At its thickest, the sherd is 15mm across suggesting a fairly large vessel. The exterior is a greyish brown colour, the core and interior surface are unoxidised and a dark grey colour. The fabric is fairly soft, the fractures are irregular. The original surface on the exterior survives and has been smoothed and a wiping mark of finger width is visible

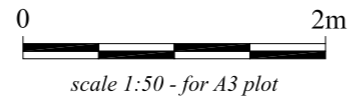
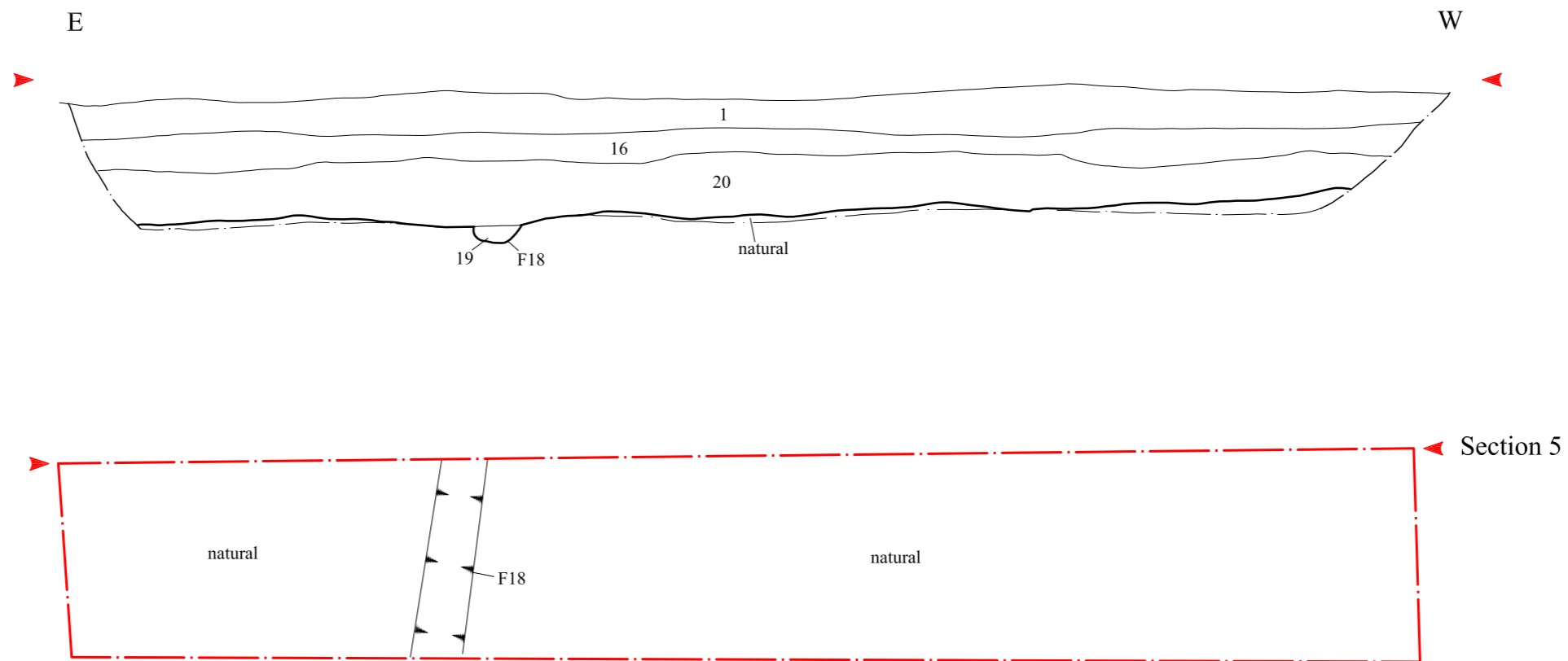


Figure 5

*Plan and section of trench F*

**Trench F, Section 5**



underneath the ledge of the collar. The fabric is fairly dense and rather waxy. Some fragments of crushed rock are present which, as in the sherds from context 1, are probably of hard igneous rock. They are well-sorted with some at *c.*5mm across and others at *c.*1mm. Some of these fragments are degraded. They would have been added as temper. The upper side of the collar of the sherd has evidently broken along a construction plane, suggesting its manufacture via the coil method. On the exterior surface of the collar there are consistently spaced fine diagonal impressions. Overall the fabric, form and decoration of this sherd indicate a Bronze Age collared vessel of a generic type well-precedented in the North East of England.

- 6.3 1 body sherd *c.*2 grams from a relatively fine vessel (wall thickness *c.*5.5mm). The exterior surface is red with a red interior margin. The core and interior surface are unoxidised and are a grey colour. The fabric is fairly soft; the fractures are abraded but rather irregular. There is a soapy feel to this item. Both interior and exterior surfaces have been smoothed. The clay paste is virtually free of inclusions, suggesting a prepared clay. However, a number of voids are visible, suggesting the former presence of some organic matter which has combusted away. The exterior surface appears to be decorated with light, regularly-spaced fine linear impressions (grooves). The typology of this item strongly suggests a Bronze Age vessel.

*Context 28*

- 6.4 Rim sherd 4 grams, wall thickness *c.*10mm. The sherd is rather weathered; the surfaces of the sherd are pale brown with the core being unoxidised and grey. It has a soft fabric with hackly fractures; there is a rough feel to the fabric at the breaks. The vessel surfaces however have been smoothed. Well-sorted igneous rock fragments are present, *c.*8mm in longest dimension. These will have been added to the pottery. Very fine quartz grains are present in the clay and may be indigenous. This rim fragment comes from a vessel with an upstanding rim which is rather rounded in profile. It appears that it was decorated with light thumb or finger impressions around the circumference, and the overall appearance would have been of unpronounced 'pie-crust' type. This rim sherd is insufficiently large to establish the diameter of the vessel. The features of this sherd indicate a vessel of Bronze Age type.

***Roman Pottery***

*Context 10*

- 6.5 24 body sherds with a total weight of 77 grams, all from the same vessel (wall thickness *c.*3mm). These sherds are in a good state of preservation (they are neither abraded nor weathered and therefore do not appear to be residual); the fragmentation into smaller sherds is due largely to the comparative thinness of the vessel walls and the breaks are not fresh. The fabric has mid to dark grey surfaces, reddish brown margins and core; it is fairly hard and has regular fractures and a rough feel. The interior surface is smoother than the exterior in most cases. This may be because the exterior has been exposed to weathering or some other attritional process, although in fact this appears more likely to be a function of the typology of the vessel (see below). The clay has been tempered with abundant fine quartz grains, often characteristic of Roman fabrics. The sherds clearly come from a jar form which will be similar to

familiar Roman Black Burnished Ware types. Although the surviving sherds are all of modest size, sufficient survives to indicate a hatched exterior surface with fine burnished lines of the type seen on a wide decorated band around Black Burnished Ware jar types. Some of the thicker sherds which do not have any of these lines, probably come from the lower wall of the vessel and they have a markedly smoother exterior surface where they have been carefully finished. The sherds with hatching have this feature incised on a rough surface, just in the way that BB1 type wares display such a feature. In sum, these sherds come from a Roman Grey-Ware jar which can be considered a copy of the Black Burnished types commonly supplied to the Roman northern frontier. This particular vessel may be a local or regional product rather than an import. Insufficient detail survives to allow close dating but a date of AD 120 to 300 seems entirely appropriate, with a suggestion from the typology that this could be Hadrianic - Antonine.

### ***Medieval and later pottery***

- 6.6 The medieval and later pottery assemblage consisted of seven sherds weighing 83 grams and represented a maximum of seven vessels. It is in many ways typical of an assemblage from a site which has seen activity throughout the medieval and more recent periods. The range of wares is typical of local pottery types and no regional or European imports were noted. The data are summarised in Table 1.

#### *Context 1*

- 6.7 Context 1 produced a varied collection of pottery ranging in date from the medieval period to the 19<sup>th</sup> century. The range of material is typical of a ploughsoil assemblage and indicates activity on or close to the site over a long period of time.

#### *Context 2*

- 6.8 Only one sherd of pottery was recovered from Context 2. This was a sherd of an unidentified medieval sandy ware, most probably of local origin and heavily abraded.

#### *Context 23*

- 6.9 Context 23 produced a single flake of a green glazed Reduced Sandy ware dating to the later medieval period. The type is one which has a very wide distribution in the north-east of England and is to be expected from any site which was occupied in the later medieval period.

#### *Context 44*

- 6.10 One sherd of pottery was recovered from Context 44. This was of later medieval or early post-medieval date and represented the rim of an open bowl or small pancheon, glazed internally.

### ***Lithics***

- 6.11 Six flint flakes were recovered during the evaluation, three of which were undiagnostic. A late Mesolithic / early Neolithic date is indicated for the remainder. Since all come from contexts contemporary with or post-dating Bronze Age finds, it is possible that all are residual.



*Context 3*

Flake displaying slight traces of platform trimming, possibly late Mesolithic / early Neolithic

*Context 12*

Blade with a trimmed platform, late Mesolithic / early Neolithic

*Context 13*

1 flake, undiagnostic debitage

*Context 32*

Mesial blade fragment, possibly late Mesolithic / early Neolithic

*Context 42*

2 flakes, both undiagnostic debitage

***Animal bone***

6.12 *Context 9*

1 long bone fragment, not identified to species.

***Clay pipe***

6.13 *Context 1*

1 partial bowl fragment without decoration.

1 stem fragment 48mm long, 10mm diameter.

*Context 7*

1 stem fragment 33mm long, 8mm diameter

***Building materials***

6.14 *Context 1*

2 fragments of red brick

1 fragment of roof tile

*Context 7*

1 fragment of mortar

***Industrial residues***

6.15 *Context 7*

1 piece of slag

## **7. The environmental evidence**

***Methods statement***

- 7.1 Sediment from 8 contexts was assessed. Five litres of each sample were manually floated and sieved through a 500 µ mesh. The residues were retained, described and scanned using a magnet for ferrous fragments. The flots were dried slowly and scanned at x 40 magnification for waterlogged and charred botanical remains. Identification of these was undertaken by comparison with modern reference material held in the Environmental Laboratory at Archaeological Services University of Durham. Total numbers of remains per species were logged and the results were interpreted in their archaeological and palaeoecological contexts. Plant taxonomic nomenclature follows Stace (1997).

### **Results**

- 7.2 The contexts produced low volumes of flot ranging between 10-50 ml. The samples contained small amounts of hammer scale, charcoal and coal and modern roots were present in all of the flots. Low numbers of plant macrofossils were preserved. A few grains of oat species, a grain of an indeterminate cereal, seeds of ribwort plantain, a hazelnut fragment, tubers of onion couch, sclerotia of a soil fungus and mint seeds occurred charred. Uncharred seeds included fat-hen, clover and elder. The contents of the residues and flots are listed in Appendix 2, Table 2.

### **Discussion**

- 7.3 Plant remains are absent from contexts [3] and [38] and are in very low numbers in the other contexts. Context [32] contains the most macrofossils, with charred remains of oats, indeterminate cereal, ribwort plantain, onion couch and a soil fungus present. As oat chaff did not occur, it is not possible to identify with certainty whether the oats were wild or cultivated. However, the large size of the oat grains makes it more likely that they were cultivated. The presence of charred tubers of onion couch in contexts [32] and [19] would suggest a late Neolithic or Bronze Age date as these are frequently found in cremations from the Bronze Age and occasionally earlier (Robinson, 1988). It has been suggested that in the context of a cremation, this grass may have been used as kindling for the funeral pyre. The tubers have also been infrequently found from other Neolithic and Bronze Age contexts where it has been suggested that the tubers were collected for food (Godwin, 1975). Onion couch would have grown in areas of ungrazed grassland which would have needed to be maintained by cutting to prevent its succession to scrub and woodland (Rodwell, 1992). It is likely that ribwort plantain would have also occupied these open grasslands.
- 7.4 A charred hazelnut occurred in context [13]. This may have been gathered for food as hazelnuts formed an important part of the diet during the Neolithic and to a lesser extent in the Bronze Age (Huntley & Stallibrass, 1995). The occurrence of sclerotia of the soil fungus *Cenococcum geophilum* may indicate the presence of nearby woodland as this soil fungus has mutualistic associations with the roots of some trees (Hudson, 1986). An uncharred elderberry fruit stone occurred in context [28] which would suggest elder also grew locally.
- 7.5 The well-drained nature of the sediment allowed the penetration of modern roots which occurred in small quantities in all of the flots. A few uncharred seeds of fat-hen and clover were found in contexts [4], [28] and [35] which may indicate the presence of ruderal communities. Alternatively, these seeds may have been introduced from later overlying soils. The flots also contained some charcoal which may have come from domestic fires. The small quantities of metal fragments and coal are likely to have been introduced from overlying sediment or have a natural origin.

### **Conclusions**

- 7.6 Due to their absence or limited number, plant macrofossils cannot provide any economic or chronological information about contexts [3], [4], [28], [35] and [38]. Although the numbers of macrofossils are low in contexts [19], [32] and [13], they point to a late Neolithic or Bronze Age date. It is likely that the landscape included areas of open, ungrazed grassland with some nearby woodland. Oats may have been cultivated locally, and wild foods, including onion couch and hazelnuts may have been gathered for food.

### **Recommendations**

- 7.7 No further work is recommended for any of these samples.

## **8. The potential archaeological resource**

- 8.1 The geophysical survey carried out on the site identified a high degree of magnetic disturbance, described as ‘typical of what might be expected on a brown field site’ (WYAS 2004). This obscured any underlying anomalies of archaeological origin. However, from the results of the evaluation work it is possible to identify further features within the geophysics results. A linear band of low magnetic susceptibility runs up the northeastern edge of the survey. This corresponds with the cobbled road surface proven by excavation. In addition, service trenches (both drains and electric cables) cross the site between the excavated trenches and are evident in the geophysical survey.
- 8.2 A prominent line of enhanced magnetic susceptibility was picked up by the survey. This could have been caused by either the palaeo-channel or the later gullies that ran along its length. From the strength of the magnetic response, the palaeo-channel appears to be the more likely cause. However, the narrowness of the anomaly suggests one of the gullies. In this respect, it may be significant that the anomaly did not continue into Trench D and gully [F11] did not continue into this trench either.
- 8.3 Archaeological deposits were deeply stratified in Trenches D, E and F. This depth of deposits is due to them lying in a north-south running palaeo-channel, *c.*2m deep and *c.*10m wide. The palaeo-channel was not present in the trenches to the south and is likely to curve towards the southeast in this area.
- 8.4 A number of pits, gullies and ditches were found at depth within the palaeo-channel and at a shallower depth outside of it. Mesolithic / Neolithic flint and Bronze Age pottery was found in association with these features. In addition, environmental samples gathered from these features contained plant assemblages typical of Neolithic or Bronze Age sites. The quantity of material found is sufficient to demonstrate occupation of that date across the site. One of the pits was large enough to be picked up by the geophysical survey, and a second one may have been, although its alignment with the geophysical anomaly was not particularly accurate.
- 8.5 A cobbled surface was found in Trenches D and E at a higher stratigraphic level to the prehistoric features. It had a ditch containing Roman

pottery running to its west and is likely to be a road surface of that date. A second patch of cobbling in Trench E may be a later re-surface of his road. If the line of this road is projected northwards from Trench F, it would have lain to the east of that trench and therefore would not have been exposed there. Projected southwards, the road surface should have been exposed in Trenches A and B although no evidence was found for it in either trench. Either the road changes to a more easterly alignment here or else truncation of deposits has been greater at this end of the site.

- 8.6 An additional cobble surface was identified in Trench B. This was totally different in character to those surfaces found in Trenches D and E and is unlikely to be directly related. It may be a later surface to the Great North Way.
- 8.7 The site therefore has a high potential to provide information on prehistoric occupation of the area and also on the Roman and later use of the Roman Road that became part of the Great North Way.

## **9. References**

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## Appendix 1: Context data

Summary list of contexts. The • symbols in the columns at the right indicate the presence of finds of the following types: P pottery, B bone, M metals, F flint, S slag, O other materials.

No	Description	P	B	M	F	S	O
1	Topsoil	•					•
2	Brown silt in Trench B	•					
3	Silty clay over 4 in Trench B				•		
4	Cobble surface in Trench B						
F5	Cut for cobble surface in Trench B						
F6	Plough furrow in Trench D						
7	Fill of F6 in Trench D					•	•
8	Brown silt in Trench E						
9	Cobble surface in Trench E		•				
10	Fill of F11 in Trench E	•					
F11	Cobble filled gully to west of 9 in Trench E						
12	Grey silt under 8 in Trench E				•		
13	Fill of F14 in Trench E				•		
14	Gully cutting 15 in Trench E						
15	Light brown sand in Trench E	•					
16	Brown silt in Trench F						
17	Natural in Trench F						
F18	Gully in Trench F						
19	Fill of F18 in Trench F						
20	Silt below 16 in Trench F						
21	Fill of F22 in Trench A						
F22	Cut of geo-technical test pit in Trench A						
23	Cobble layer in eastern baulk of Trench A	•					
24	Brown silt in Trench A						
25	Darker sand (natural?) at eastern end of Trench A						
26	Patch of gravel within 25 in Trench A						
27	Natural in Trench A						
28	Fill of ditch F29 in Trench A	•					
F29	Ditch cut in Trench A						
30	Natural in Trench A						
F31	Large pit in junction of Trenches C and D						
32	Fill of F31 in junction of Trenches C and D				•		
33	Brown silt in Trench C						
34	Sand lens within 32						
35	Fill of F36 in Trench C						
F36	Ditch in Trench C						
37	Natural in Trench C						
38	Fill of F 39 in Trench D						
F39	Gully in Trench D						
40	Cobble surface in Trench D						
41	Brown silt above 40						
42	Grey-brown silt under 40				•		
43	Light brown sand in Trench D						
44	Same as 41	•					
45	Same as 43						
46	Same as 7						

47	Same as 32						
F48	Same as F6						
49	Silt under 12 and over 15 in Trench E						
50	Cobble surface to east of 9 in Trench E						

## Appendix 2: Data tables

Table 1: pottery data

Context	Type	Number	Weight	ENV	Part	Form	Date range	Notes
1	Handmade pottery	2	5	1	BS	U/ID	Early-mid Bronze Age	Herring-bone pattern on exterior surface
1	Reduced Sandy ware	1	62	1	BS	U/ID	C15th - C16th	Thick walled body sherd, dark grey reduced body with irregular oxidised margin and patchy green glaze
1	Whiteware	1	1	1	BS	U/ID	C19th	Plain, thin walled white body sherd
1	Reduced Sandy ware	1	3	1	BS	U/ID	C13th - C14th	Unglazed, abraded
1	Unglazed Red Earthenware	1	4	1	BS	U/ID	Recent	
2	Unidentified Sandy ware	1	2	1	Rim	U/ID	Medieval	Heavily abraded buff sandy ware
10	BB1 copy	24	77	1	BS	jar	AD 120 - 300	Faint impressed lines on body; probably one vessel
15	Handmade pottery	1	20	1	BS	Urn	Bronze Age	Collar of a vessel, fine diagonal impressions on surface
15	Handmade pottery	1	2	1	BS	U/ID	Bronze Age	Fine vessel decorated with light linear grooves
23	Reduced Sandy ware	1	1	1	Flake	U/ID	C13th - C15th	Green glazed externally
28	Handmade pottery	1	4	1	Rim	U/ID	Bronze Age	Decorated with thumb or finger impressions around circumference
44	Late Medieval Sandy ware	1	10	1	Rim	Dish	C15th - C16th	Green-brown glaze internally on a buff body
	<b>Total</b>	<b>36</b>	<b>191</b>	<b>12</b>				

Table 2: Macrofossil results

Context	3	4	13	19	28	32	35	38
<i>Volume processed (ml)</i>	5000	5000	5000	5000	5000	5000	5000	5000
<i>Volume of flot (ml)</i>	10	20	20	20	40	30	50	30
<i>Volume of flot assessed (ml)</i>	10	20	20	20	40	30	50	30
<i>Residue contents (relative abundance)</i>								
Hammerscale	1	1	2	2	1	2	2	2
<i>Flot matrix (relative abundance)</i>								
Charcoal	-	-	1	1	1	2	1	1
Coal	1	1	1	1	1	-	1	1
Modern roots	1	1	1	1	1	1	1	1
<i>Charred remains (total counts)</i>								
(c) <i>Avena</i> spp grain (Oat species)	-	-	-	-	1	2	-	-
(c) <i>Cerealia</i> indeterminate	-	-	-	-	-	1	-	-
(r) <i>Plantago lanceolata</i> (Ribwort plantain)	-	-	-	-	-	3	-	-
(t) <i>Corylus avellana</i> (Hazelnut fragment)	-	-	1	-	-	-	-	-
(x) <i>Arrhenatherum elatius</i> (Onion couch)	-	-	-	1	-	4	-	-
(x) <i>Cenococcum geophilum</i> (Soil fungus)	-	-	-	-	-	1	-	-
(x) Lamiaceae (Mint family)	-	-	-	1	-	-	-	-
<i>Waterlogged remains (total counts)</i>								
(a) <i>Chenopodium album</i> (Fat-hen)	-	1	-	-	-	-	1	-
(r) <i>Trifolium</i> sp (Clover)	-	-	-	-	1	-	-	-
(t) <i>Sambucus nigra</i> (Elder)	-	-	-	-	1	-	-	-

(a: arable weed; c: cultivated plant; r: ruderal; t: trees/shrubs; x: wide niche)  
 Relative abundance is based on a scale from 1 (lowest) to 5 (highest).