global environmental solutions

Kenbury Wood Landfill
Old Dawlish Road, Kennford, Devon

Archaeological Investigations

SLR Ref. 402.00113.00029
June 2011

CONTENTS

FIGURES

APPENDICES

Status of report: Final

Author	Tim Malim
Date	10th June 2011
Reviewed	Gavin Kinsley
Date	17th June 2011
Comments	Revisions completed 7th July 2011
Revisions	Typographical errors, formatting issues, terminology inconsistencies

1.0 INTRODUCTION

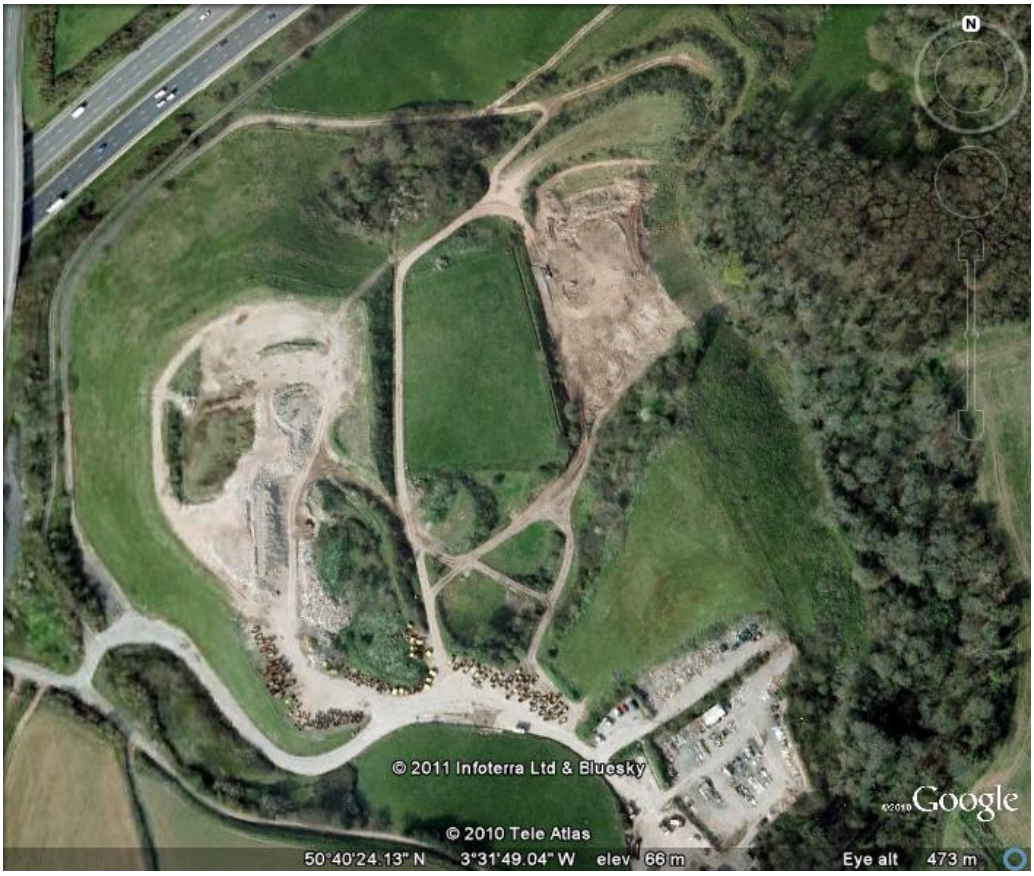
This report details background research and site investigation conducted at Kenbury Wood landfill site, Kennford, Devon, EX6 7XD (NGR SX91948710) in January – March 2011. Kenbury Wood landfill has been operating since 1985 when permission was granted[1] subject to a condition which protected a zone of potential archaeological importance that had been discovered as a result of aerial photography by Frances Griffith in 1984. The zone contained a trapezoidal ditched enclosure of possible prehistoric or Roman date (enclosure is shown as bold red line within Figure 1a; see detail in 1b).

Figure 1
a) Cropmark enclosure (red) traced from air photograph (see Fig1b) which can be seen superimposed on modern satellite image with contour survey applied

[1] Permission extended in 1991 and again in 2002

b) Air photograph detail showing cropmark of enclosure ditch (taken 1984)

c) Satellite image of Kenbury Wood Landfill showing protected archaeological area in centre, including circular feature apparent in north-eastern corner



Devon Waste Management (the client) is proposing to create a Materials Recycling Facility (MRF) and extend existing works to include the protected zone. This zone had been agreed between the landowner and Devon County Council (DCC) as a means to obtain planning consent in 1985 without incurring the costs of any prior evaluation to characterize archaeological remains indicated by the cropmarks. Therefore insufficient evidence exists under current planning guidance to assess the significance of the potential resource, and thus to determine whether an application to landfill over the zone would be permitted. The Planning Authority (advised by its Archaeological Officer, Steve Reed) has required a programme of archaeological work to be undertaken in advance of the planning application in order to make an informed decision on the potential application. This programme of works consists of background study and site investigation, and is in accordance with national planning guidance, PPS5 (March 2010).

The specification for this programme of work was included within a Written Scheme of Investigation[2] agreed with Devon County Council's planning archaeologist on 17th February 2011. The Royal Albert Memorial Museum, Exeter has provided a registration number (RAMM:11/6) but until a review of their collection policy is completed in 2012 they cannot guarantee acceptance of the excavation archive and so cannot provide an accession number.

[2] *Kenbury Wood Landfill, Archaeological Written Scheme of Investigation January 2011 SLR Consulting Ltd (402.00113.00029)*

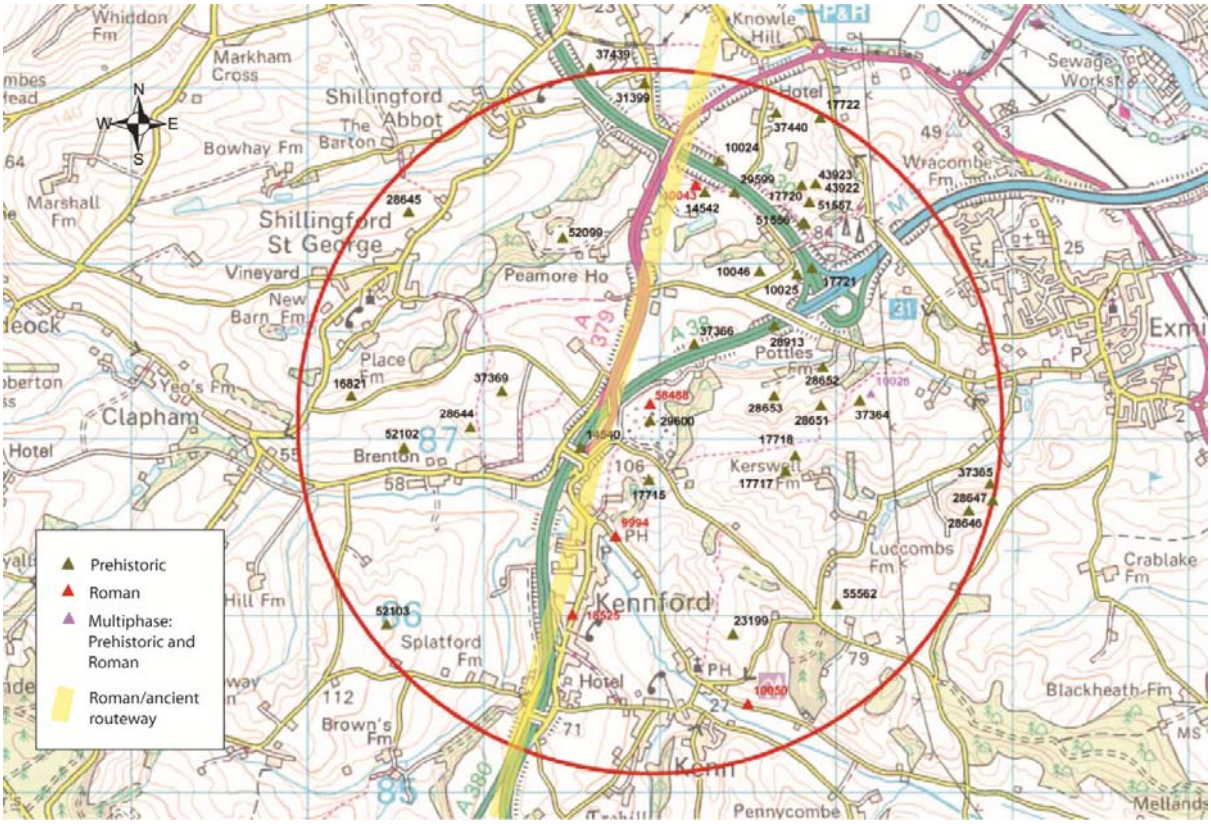
2.0 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

2.1 Site context from relevant known archaeological remains

A total of c.1500 rectilinear enclosures have been identified in the HER throughout Devon[3], of which 1450 are considered prehistoric, 17 Roman, and 16 multi-period. Some survive as earthworks but the majority are recorded as cropmarks, and only a handful have been subject to archaeological investigation[4]. Many of these enclosures cluster along the Exe valley, and within c.2km of the application site there are eight enclosures most of which are rectilinear, square or trapezoid in form. Within 1km to the north a scheduled monument (Devon 985) includes two square enclosures with circular features in their interiors, and 300m to the south of the site a large contour hillfort is located (Figure 2). A Roman road runs southwest – northeast through the area, and the Portable Antiquities Scheme has recorded two finds of coins (2nd and 4th centuries) and a Roman brooch distributed along the line of the road, which supplements data within the HER for Roman coins found in the River Kenn. Kenbury Wood Landfill itself contains three HER entries, the rectilinear enclosure subject of the present evaluation (HER29600), an old quarry shown on the 1906 OS map (HER39595), and a Hadrianic coin recovered from the topsoil during stripping operations south of the enclosure in 1997 (HER58488) (see Appendix 1 for concordance of Figure 2 and HER data).

Figure 2 Site location with 2km radius HER point data

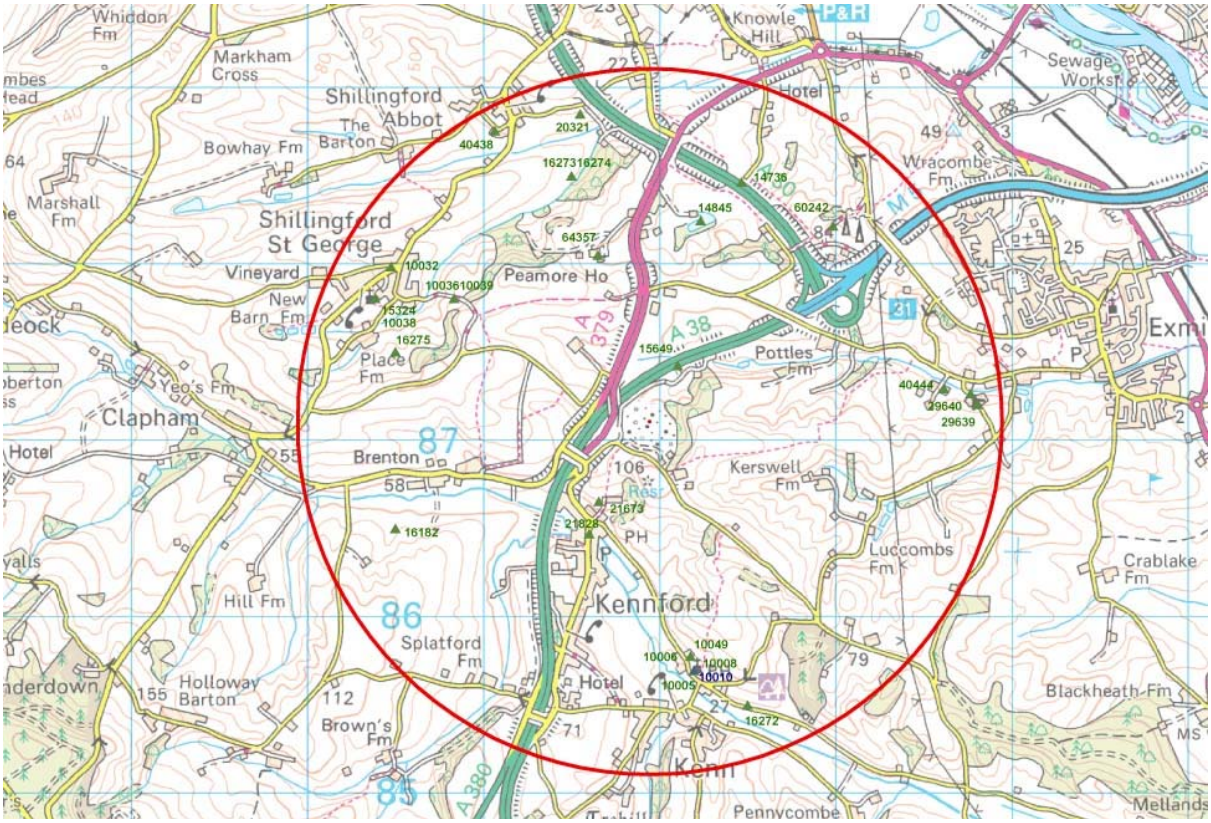
A) Prehistoric HER points shown as green triangles; Roman HER points shown as red triangles, mainly following course of Roman road



[3] Devon HER search by Marrina Neophytou

[4] 21 sites are listed dating from neolithic – medieval times in Fig. 2 Griffith F.M. Changing Perceptions of the context of Prehistoric Dartmoor in *The Archaeology of Dartmoor Perspectives from the 1990s*

B) Medieval and post-medieval HER points shown as green triangles below



A post-Roman cemetery was excavated in 1995 c.2km to the south-east of Kenbury Wood Landfill, during construction of a gas pipeline (Weddell et al. 2000), which lay just beyond the HER search area depicted in Figure 2.

2.2 Site context from historical records and historic mapping

Devon was part of the territory of the Iron Age Dumnonii tribe, and after conquest by the Romans Exeter became a legionary fortress by c.55AD, with a port at Topsham. The later tribal capital at Exeter (*Isca Dumnoniorum* in the Antonine Itinerary) formed the southern terminus of the Fosse Way (Lincoln – Exeter), but it is presumed that a road continued southwest past the site at Kenbury Wood Landfill (Route 491 Margary 1973, p.118-120) for 13 miles to Teignmouth. Margary presumed it to have run south over the hill at Kenbury to run along the High Street through Kennford village, thus it would have run very close to the enclosure at Kenbury Wood. Several other routes meet in this general location at Red Cross[5], and the origins of these minor roads might be ancient which would suggest the site lay in close proximity to an important crossroads.

Kenbury Wood administratively lies on the southern boundary of Exminster parish, which historically formed part of Exminster Hundred. However, its place-name, the proximity to Kennford and the fact that Kenbury House lies to the north, shows that it may well have had stronger social connections with the parish of Kenn to the south than with the parish centre at Exminster.

The place-name evidence suggests that Kenn or Ken is of Celtic origin perhaps implying “brilliant” or “white” (Gover et al 1969, p.7). The settlement is named after the river and is

[5] Labelled on 1889 - 1964 OS 1:2,500 and 1:10,560 mapping

first mentioned as *Chent* at Domesday (1086) and Ken in 1167 (ibid, p.498). Kenbury is first recorded as "*Kenebiri*" in 1083 and St Nicholas – *byry* in 1313, which refers to the "burh by the River Kenn" (ibid, p.497). Kennford achieved borough status in 1340 after a market and a fair had been established by Henry de Courtney c.1300 AD (HER 21828), so the place-name suggests a reference to a fortified place ("burh") rather than the borough.

The Tithe Apportionments Map of 1840 is the first historical map with any detail of Kenbury Wood (see section 5.3 below). This shows the application site as lying within two long fields oriented north-south and bordered by a woodland strip on either side to west and east. The fields were recorded as in arable production with field names of The Count, and Longbottom. The land formed part of the Kenbury House estate owned by Augustus Stowey, and they were farmed by John Way.

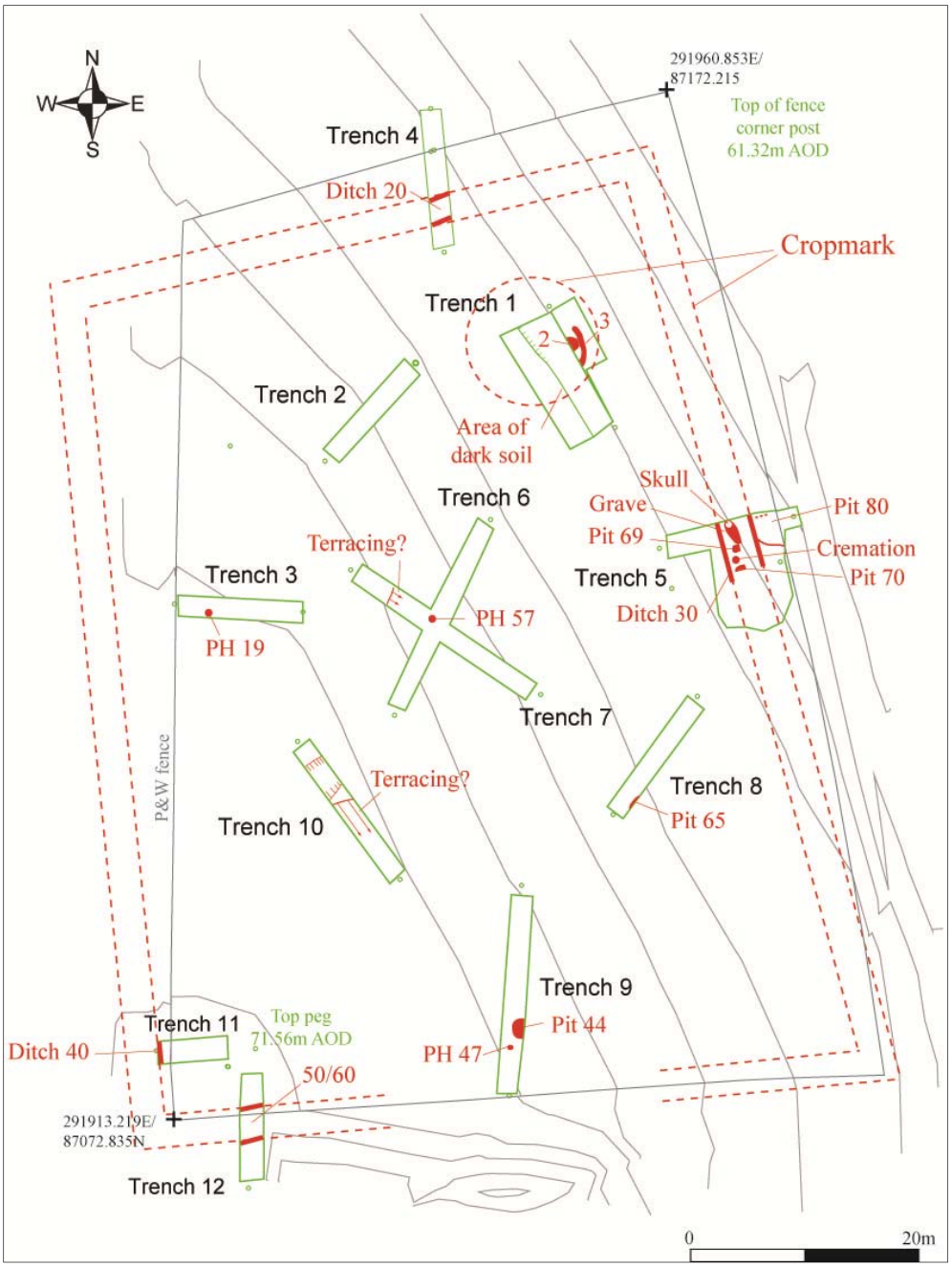
Ordnance Survey mapping shows little difference from the Tithe map for Kenbury Wood until recent times when the landfill site began to infill the steep descent to the valley north of the site. An Old Quarry is depicted at the northwestern corner of the landfill area from 1906 onwards (see section 5.3 below).

The Historic Landscape Characterization for Devon shows that the majority of the land around Kenbury Wood is one of two categories, either "modern enclosure replacing post-medieval watermeadows" or "post-medieval enclosure fields laid out in the 18th and 19th centuries – commonly with dead straight field boundaries". The exception to these categories is the enclosure at Kerswell Farm which is "medieval enclosure with hedge banks", and the woodland to the east of current landfill which is "broadleaved plantation, replanted ancient wood or secondary woodland". The Kenbury Wood enclosure and landfill site occupy land that is categorized as "rough grazing".

3.0 STRATEGY AND METHODOLOGY

During February 2011 a programme of archaeological investigation of the cropmark enclosure was undertaken. This consisted of an initial magnetometer survey, geo-referencing and rectified plotting of the cropmark enclosure against Ordnance Survey base mapping (Figure 1a), and the excavation of 12 trenches to sample 5% of the 0.7ha area enclosed by the ditch (Figure 3). In tandem with these studies desk-based background research on the context of the site (summarized above) was undertaken through consultation with the Devon Historic Environment Record (HER), the Portable Antiquities Scheme, the National Monuments Record and the Devon Record Office, as well as several published reports on enclosures of a similar nature that have been excavated previously in the county.

Figure 3 Trench location plan



4.0 RESULTS

4.1 Concordance of surveys

The results from the plotting of the aerial photograph and trial trenching demonstrated that the wire fence located to demarcate the protected area had been positioned very tightly to the actual location of the cropmark enclosure on the ground (Figure 3). This had prevented the magnetometer survey from detecting the infilled ditches because of magnetic contamination from the proximity of the post and wire fence. Additionally no features were geophysically detected in the interior, and the reason for this might be due to the variable nature of the underlying bedrock and breccia sub-soil (Appendix 2). This was found to be hard rock with shallow soil overburden at the top of the sloping site on its western edge, whilst downslope towards the east a large body of eroded breccia parent material had accumulated over time (Figure 4 and 5a). Archaeological features found during trial trenching were infrequent and dispersed, consisting of three post-holes and some pits (Figure 5b) visible as cut features into the bedrock. The pits could be traced in the section of the trench, cut through the breccia sub-soil, but during machine stripping of the topsoil and sub-soil there was often insufficient contrast between fill of the pit and the surrounding breccia matrix for the feature to show. A full description of archaeological contexts can be found in Appendix 3, trench descriptions in Appendix 4, and photographs of excavated trenches not discussed in the main text can be found in Appendix 5.

Figure 4 Profiles through the site showing original topography and depth of colluvial breccia

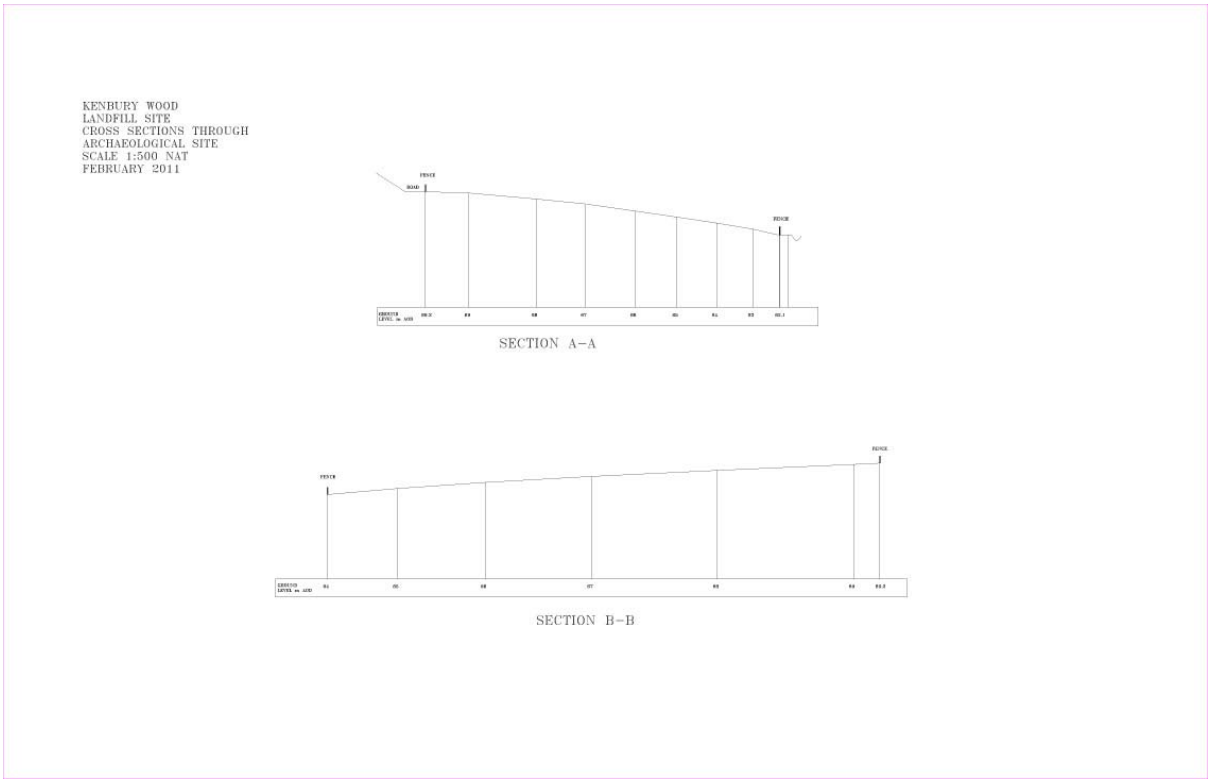


Figure 5 Site and trenches looking north showing slope downhill; excavated pit Trench 9

4.2 Trial trenching

The trial trenching took place over a three week period 7th – 25th February, in weather conditions dominated by heavy rainfall and wind. Undertaking archaeological investigation and recording in such conditions is far from ideal: it makes essential tasks much harder and requires frequent duplication of tasks to maintain visual clarity at the site and to ensure site records are clear and fully descriptive (Figure 6). Each trench was manually cleaned so that the base and one length of trench section was checked for any sign of archaeological remains, textual and drawn records made, and photographs taken (Appendix 5). The deepest trench was over 1.5m and therefore required stepping for safety reasons. A second trench cut across the eastern ditch of the enclosure was also stepped back and a small area opened around it to try to better understand a complex of archaeological remains.

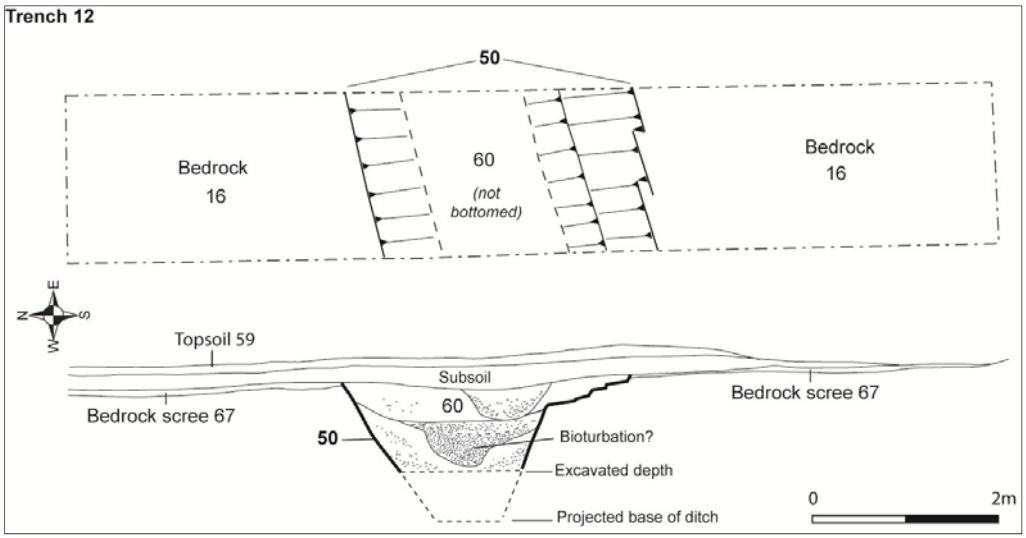
Figure 6 Recording eastern enclosure ditch (Trench 5) in wet and muddy conditions looking north-east

4.3 Enclosure ditch

4.3.1 Description of ditch cut

The enclosure ditch was sectioned and recorded on the southern (60), eastern (30) and northern sides (20). The trenching also located the inner edge of the western ditch (40) (see appendix 5), but as the remainder lay beneath an haul road it was agreed that excavation of this feature would not be required at this stage. The enclosure ditch was shown to be flat based with steep sides, up to c. 2m wide on the northern and southern sides by 0.9m and 1.45m deep respectively, and 3.5m wide by 1.5m deep on the eastern side (Figures 7 - 9). No evidence for a bank was detected either internally or externally, but it is quite possible that the infill of the ditches consists largely of soil and bank material that has been pushed in.

Figure 7 Section through southern enclosure ditch 60 (Trench 12) from west; unexcavated base but auger hole gave a total depth c.2m from surface to bedrock

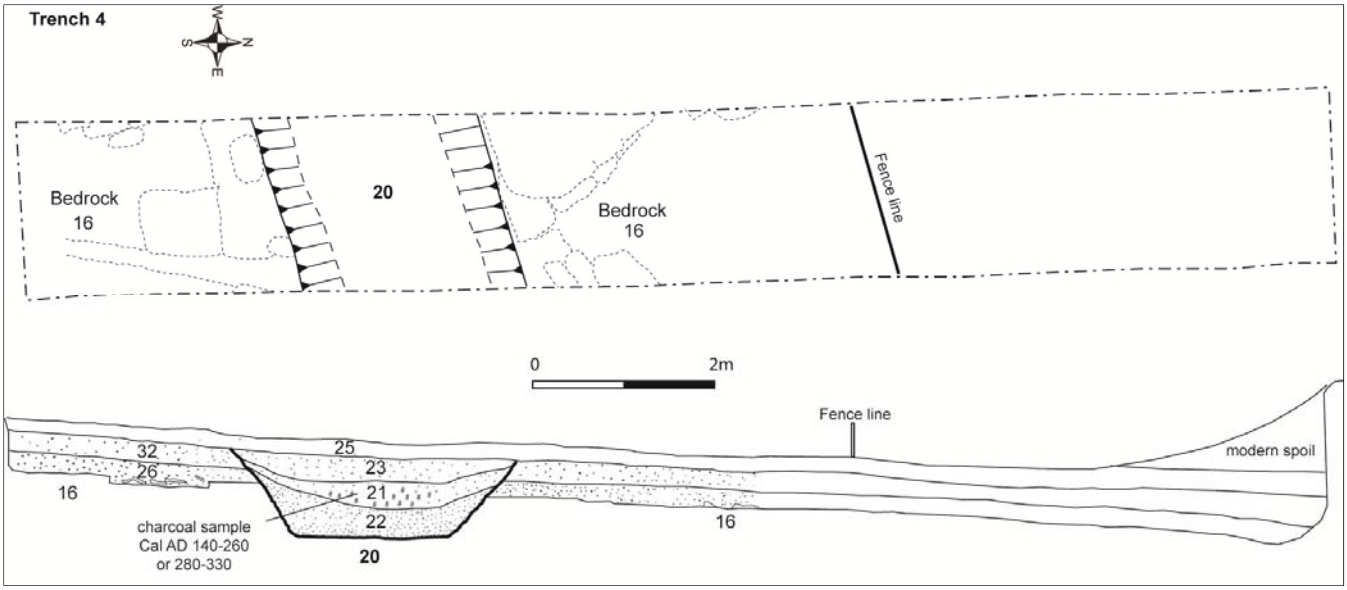


4.3.2 Description of deposits filling the ditch

The infill sequence for the enclosure ditches is broadly a primary deposit (22 in northern Ditch 20; and 75 within eastern Ditch 30) of compacted clayey-sand with 50% grit and gravel

(degraded breccias). Within Ditch 20 a secondary similar deposit but with a large charcoal content was found (21), whereas in Ditch 30 context 75 displayed a change in its upper level that could indicate a secondary fill. Capping these lower fills were context 23 (Ditch 20) and context 34 (Ditch 30), a loose sandy silt with frequent gravel inclusions. Within the southern ditch (Ditch 50) a single context number was attributed to the fill (60) as this was not fully excavated to the base. The section drawing, however, shows that probably more than one infill episode occurred in this location as well.

Figure 8 Trench 4: plan and section through northern enclosure Ditch 20



4.3.3 Dating evidence

The date of the infill episodes below (23) is Roman, with a radiocarbon date range (Beta 296233) of 1790 ± 30BP, calibrated to Cal AD 140 to 260 or Cal AD 280 to 330 at 95% probability. Romano-British pottery was recovered from the upper fills of Ditch 30 (context 34) and Ditch 50 (context 60). This is described as a Black-Burnished Ware copy of probably native origin which could be dated to any part of the Roman period.

4.4 Earlier features and graves

Two semi-circular features (69 & 70) were found set within the upper level of the interior edge of the eastern ditch (Figures 9 & 10), which might relate to some timber structural element, or were more likely to have been earlier pits which were bisected when the enclosure ditch was dug. It is also plausible that these are the ends of east-west orientated graves as they lie in close proximity to a definite grave-cut (cut 68) in the fill of which 14 coffin nails were found (context 36) but no skeletal remains which suggests the burial was removed when the grave was cut through during construction of the enclosure ditch. Abutting this feature was another possible grave (cut 73) from which fragments of a skull were recovered.

Figure 9 Trench 5 plan and section of Ditch 30; photograph of grave from south

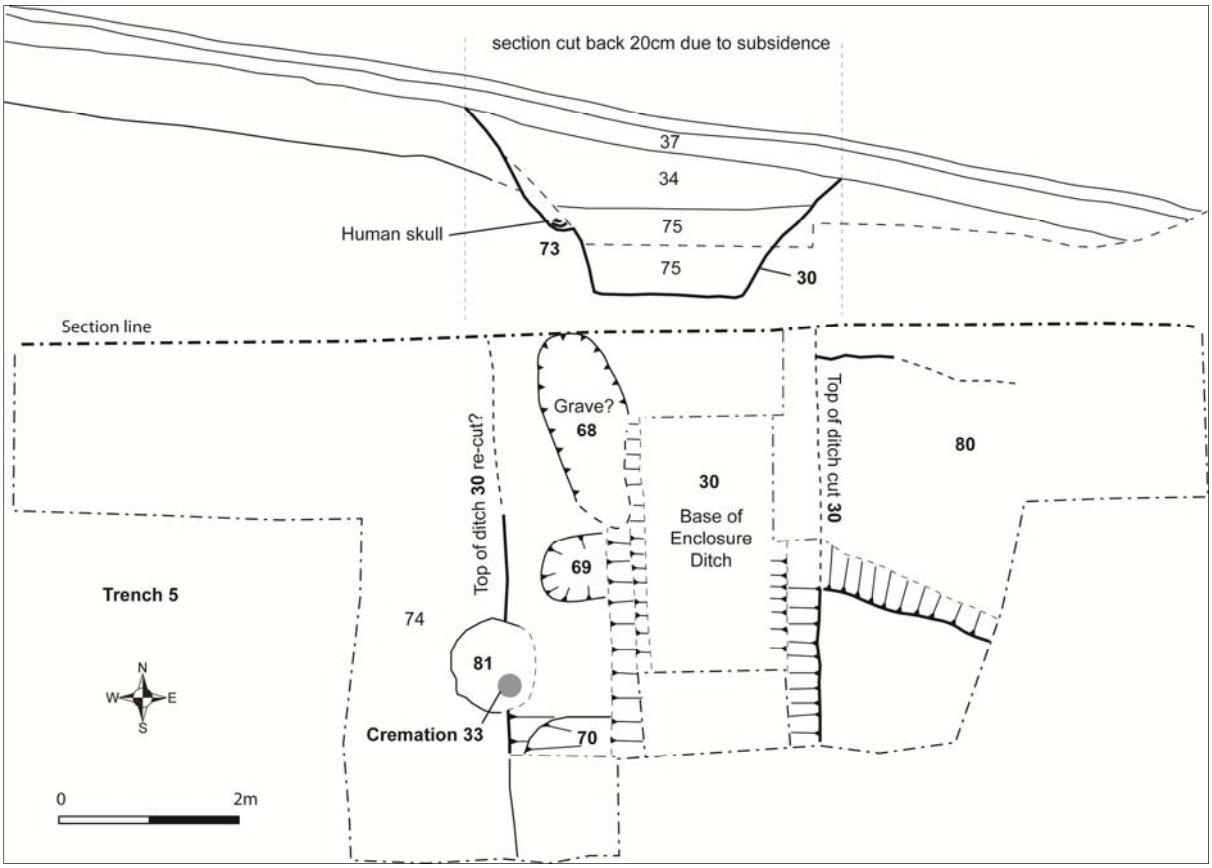


Figure 10 Trench 5 from east and south-east: eastern enclosure ditch in foreground showing graves or pits for possible timber structure cut by ditch; top: cremation found in ditch side below figure; below: post-excavation photo

Externally to the enclosure, on the east side of Ditch 30 and cut by it, a possible pit was identified. The cut (80) was recorded as 2.2m wide at the top and more than 1m in width at its base, but higher in the deposit sequence a possible linear feature overlay it. The fill (context 79) and overlying deposit had been much disturbed by bioturbation making identification of this feature in the upper levels very difficult, and thus its full dimensions, possible purpose, and any relationship to Ditch 30 cannot be confidently interpreted on existing information. It had been cut into the natural breccias.

A second possible pit was found on the interior, on the west side of Ditch 30 and cut by it. This was context 81, a semi-circular deposit survived with much bioturbation which would have been about 1m in diameter originally. It was found in very close proximity to an urned cremation (33), and it is possible that this had actually been placed in a pit (81). The cut for enclosure ditch 30 would have made any deposits in close proximity vulnerable to slumping towards the void, and the discovery of the cremation within the upper fill of the ditch (34) on the edge of the ditch cut might account for the ambivalent stratigraphic relationship between the possible pit, the cremation, the enclosure ditch and its infill history.

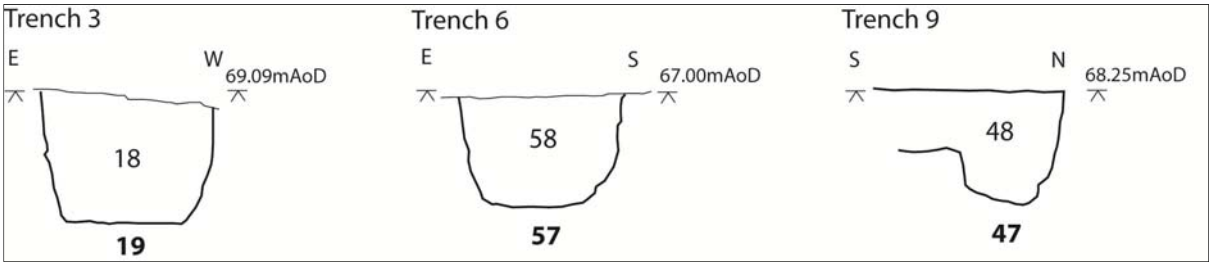
4.5 Enclosure interior

Within the interior of the enclosure three post-holes and two pits were excavated (Figures 5b and 11). They were dispersed across the site and no earth-fast timber post structures could be interpreted from their locations. Where hard bedrock was exposed in the base of the trenches undulations were apparent that could have been the result of natural erosion hollows, but also could possibly reflect human agency such as terracing for round-houses (Figure 11 trenches 7 and 10, and Appendix 5). No occupation surface was identified beneath the topsoil, but within the scree-like deposit of eroded breccia it is possible that a thin horizon of cultural origin could have remained undetected during the trial trenching exercise.

Figure 11 Trench 7 looking SE; 1m scale bar set in post-hole with natural hollowing or possible terracing of bedrock visible as deeper deposit in trench side

The postholes (contexts 19, 57 and 47) were found in trenches 3, 6 and 9, with a single pit (context 44) also found in the latter trench. All postholes survived to a depth of 0.16 – 0.18m cut into the bedrock (Figure 12), but varied from 0.2 – 0.46m in diameter. The pit was 0.5m deep and 2.6m diameter, and two fill deposits were detected within it.

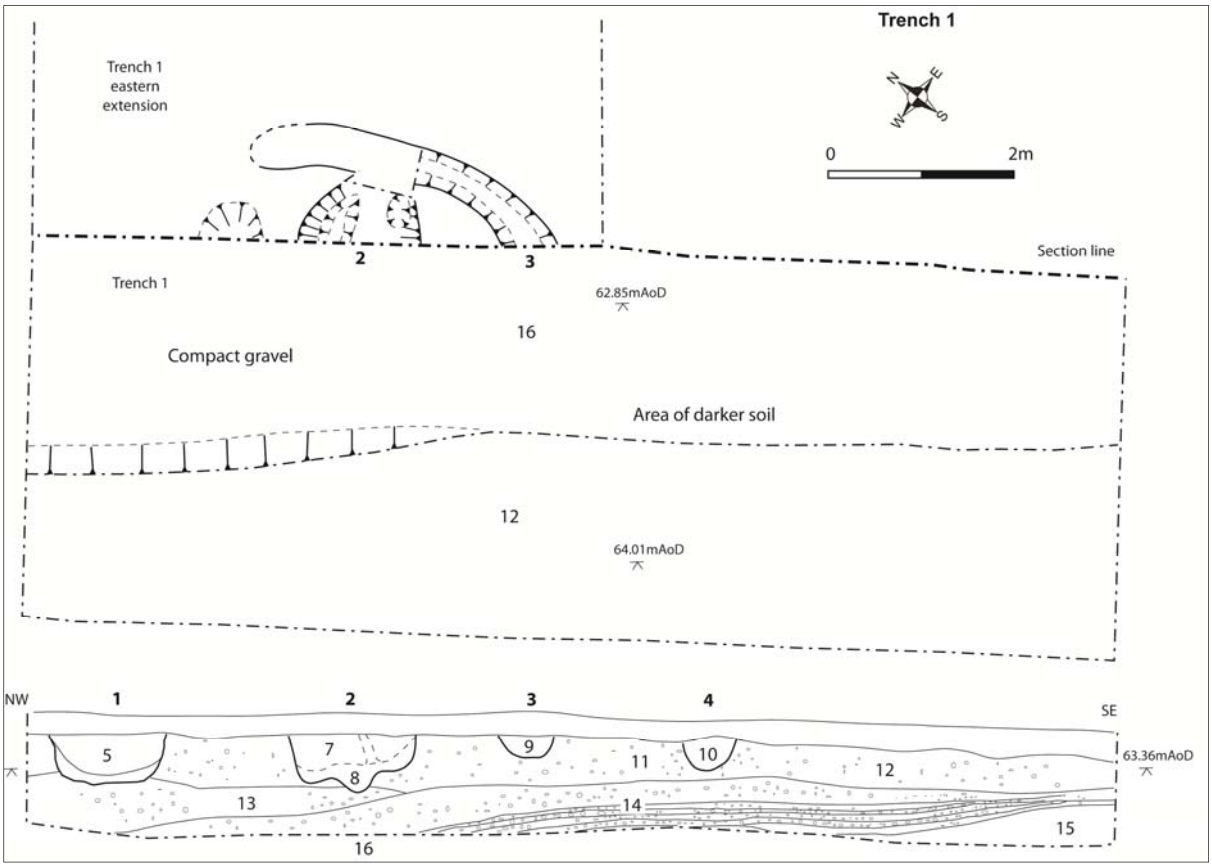
Figure 12 Post-hole profiles; photograph of "pit" 65 in section of Trench 8



Pit 65 was found in Trench 8 and contained a single fill with a Romano-British pot sherd of "native" type in it. The pit cut was irregular, 1.2m wide by 0.4m deep.

Further possible features were seen whilst excavating Trench 1, located to investigate a part of the interior of the enclosure in which a circular parchmark was visible on recent air-photographs (Figures 1c, 3 and 13). These features were investigated and interpreted on site as probably derived from natural agencies, such as tree-throw holes, root action and burrowing by animals. The trench was the deepest excavated on site because no hard rock could be found, and the loose breccias appeared to be of colluvial origin, which could have masked buried surfaces and archaeological features (see photograph of section reproduced at end of Appendix 5). As the first trench that was opened, familiarity with the nature and sequence of deposits on site was still at a learning stage, and in the event this trench was cut through a natural accumulation of lenses comprising eroded elements of the bed-rock and subsoil. In post-excavation analysis, however, some correspondence between the features investigated in Trench 1 and the circular parch-mark were apparent, and it is just possible that some might be archaeological features rather than natural.

Figure 13 Trench 1 plan and section drawing; photo of "features" 2 & 3



4.6 Burial evidence

4.6.1 Nature, context and sampling of remains

Human remains were found stratigraphically related to the eastern ditch of the enclosure. These consisted of a single urned cremation, and a skull which probably came from an inhumation, for which the post-cranium skeleton remained undiscovered beyond the trench section. The skull was found beneath the trench side which had subsided and required cutting back for section drawing. In addition a coffin-shaped feature was also detected at c.1.2m below present surface. This feature pre-dated the form of the enclosure ditch which survives today, and there was no evidence to suggest that the ditch had been re-cut so the presumption is that the burial came from an un-enclosed phase in the site's history. In addition fourteen coffin nails were recovered.

The cremation was found below plough depth but whether it had been cut into the fill of the ditch, or had moved into the edge of the ditch as part of a general downslope infilling slippage event, is unclear. The fact that it was incomplete suggests truncation by the ditch.

Samples from the fill of the ditch, including a thick layer of charcoal, were taken for palaeoenvironmental assessment and radiocarbon dating. These samples, together with the contents of the cremation urn, were sent to Birmingham University Archaeo-Environmental for processing and assessing. An exhumation licence was obtained from the Ministry of Justice and the skull lifted, but it was not possible to excavate into the trench side to see whether more bones existed, which would confirm the presence of an inhumation.

4.6.2 Inhumation

Corinne Duhig PhD FSA MIFA Wolfson College Cambridge

Fragments of a skull were recovered from the primary fill (Context 72) of a possible grave cut (Context 73), which later had been cut by an enclosure ditch (Context 30). These very heavily eroded fragments are from the cranium, and after restoration are:

1. the anterior part of the right parietal including coronal and sagittal sutures
2. part of the posterior right parietal attached to small fragments of left temporal and occipital bone
3. the left petrous bone; areas 1-3 form most of the right side of the skull vault behind the forehead, with the bony structure of the inner ear
4. the upper and outer parts of the left orbit
5. three teeth, an upper right 2nd or 3rd molar with negligible wear, a lower left or right first premolar, and a fragment of molar enamel

Areas used for determination of gender are all missing except a trace of the zygomatic root (where cheekbone joins skull just above the ear), which is possibly of more male than female form. Similarly determinants for age are generally absent, although the lack of wear on the molar suggests an age of 25 or under. Scattered small porosities in the eye orbit are *cribra orbitalia* stage 2, indicating one or more episodes of iron-deficiency anaemia.

A fragment of skull was sent for radiocarbon assay and the following date is suggested 1670 $\pm$ 30 BP (Beta-296234), at 95% confidence Cal AD 260 – 280 or Cal AD330 – 420.

4.6.3 Cremation

Methods used are those of Cho *et al*. and Ubelaker for general bone analysis and of McKinley and Mays for cremations (Cho *et al.* 1996; Mays 1998: Chapter 11; McKinley 1989; Ubelaker 1989). The contents of the cremation urn (context 33) arrived having been washed, sieved and divided into >10mm, >5 mm and residue after flotation, while a second sample (context 34) from the matrix surrounding the cremation arrived in an unwashed state. Both were washed in order to remove the soil staining and make the bone colour evident. It was immediately clear that sample (context 34) was compatible with (context 33) so they were combined.

The sample weighed 27 grammes: very light compared with the usual weight range for ancient cremations (approximately 200 to 2000g, average 800 g). After removal of the staining soil, the colour was white, showing that burning had been sufficient to remove almost all the organic content of the bone, which would have required a temperature of at least 645°C and combusion over several hours with adequate oxygen access (Mayne Correia 1997; Mays 1998: 216, Table 11.1; McKinley 1989). Pyre technology in this case was therefore very good, with a well-constructed and maintained pyre. The innermost part of the largest bone, the femur, had a blue-grey layer, showing that the thickness of this bone had protected it from burning to some extent and a small amount of organic material was still present, and one skull fragment also had a grey patch on the inner surface, where localised protection from fire had occurred.

The combined sample is too small for any interpretation from size fractions. Equally, it is too small for any division by body part to be informative, except to say that fragments came from the skull, axial skeleton and limbs/extremities, so there was no depositional selection by body area or part. As is usual in ancient cremations, less of the fragile axial skeleton was present: only three pieces of vertebral body. There were nine pieces of skull, including part of the right temporal bone immediately posterior to the mastoid process — from behind the ear — and the outer edge of the left eye orbit. Thirteen fragments of long bone refitted into 11 fragments, including the largest piece, a segment of femoral shaft 5.41 x 1.77 cm, and a short segment of radial shaft. One tiny fragment might be part of the shaft of a phalanx of the hand or foot. Fifteen fragments were unidentified.

No features that could assist in sex or age determination were present, but the bones are small even given the shrinkage caused by burning, so it is suggested that this is a person of slight build, either a female or immature individual; no bones have signs of active growth so an adult female is more likely, though it must be emphasised that a sample of this small size is unreliable. Three bone fragments were non-human in morphology, and have been removed and bagged separately, as have three pieces of charcoal.

4.7 Artefactual evidence

Artefactual evidence was sparse, and mainly recovered from ditch fills. In total 20 nail fragments were recovered (Figure 14), in association with the probable inhumation and grave feature, cut by the eastern ditch. These are interpreted as coffin nails. In addition a few pieces of worked flint and some daub were recovered. In addition to the cremation urn several sherds of Roman or Late Iron Age pottery were found and these have been examined by Kerry Tyler whose report is set out below.

Figure 14 Roman iron coffin nails

4.7.1 Ceramics

Kerry Tyler

Summary
A total of 36 wheel-thrown pottery sherds with a combined weight of 401g and representing at least 11 individual vessels were recovered from six different contexts. The assemblage is very small and the featureless nature of the bulk of the pottery severely limits any attempt to place the material in a wider ceramic context.

Methodology
The pottery was analysed and sorted into fabric groups with the aid of a hand held microscope (x10), according to the density, shape and size of their major inclusions; other less common inclusions were also recorded.

Context 29 (Topsoil trench 9)
A small, undiagnostic bodysherd weighing 20g was recovered from this context and identified as North African amphorae, dating from the mid to late Roman period.

Context 33 (Cremation urn and contents Trench 5)
This context produced a small incomplete cremation urn containing burnt bone and comprising 16 bodysherds, 3 rims sherds and a flat base with a combined weight of 257g. The vessel measures approximately 16cm high and has a rim diameter of 14cm. The vessel is wheel-thrown, well fired with brown to grey surfaces and a mid grey core. There appear to be the remains of a white slip on the neck of the vessel and one of the bodysherds has the remains of very faint lattice decoration. The fabric contains very frequent quartz grits up to 2mm in length and very occasional - rare rounded fragments of shale or shillet up to 3mm across. The fabric is very similar to Bidwell's Black-Burnished Ware Fabric 31 (1979:193), which has a date range throughout the Roman period.

Also within this context a small bodysherd weighing 8g was identified as being of possible Gallo-Belgic ware. This has a date range between the mid first century and late second century AD. The fabric is a very soft sandy matrix with occasional ferrous inclusions up to 3mm across and very occasional soft white non-calcareous inclusions.

Context 34 (Upper fill of enclosure ditch Trench 5)
This context produced three pottery sherds, a very degraded and burnt flagon spout weighing 20g, has a light buff to pinkish red fabric with occasional ferrous inclusions and is very similar to Fabric Series 435 (Bidwell 1979:194), which has a date range between the first and second century.

The remaining two sherds included a fragment of Black-Burnished Ware Fabric 31 which weighs 3g, and a bodysherd made from a fabric containing frequent rounded and angular quartz grits >3mm, frequent black mica plates, and sparse white soft non-calcareous inclusions. This latter fabric weighs 4g is very similar to Bidwell's Fabric Type 5 (1979:191) a 'Native' ware thought to be of relatively local origin, although probably not produced in the immediate vicinity of Exeter. The fabric is most likely a crude copy of black-burnished ware, with the earliest known finds dating from the first century, but the majority of pottery discovered in early third through to late fourth century (Bidwell 1979:192).

Context 35 (Topsoil Trench 5)
One undiagnostic bodysherd of Black-Burnished Ware Fabric 31weighing 15g, and one piece of post-medieval white slipware weighing 5g.

Context 37 (Subsoil Trench 5)
A small degraded and very soft sherd of decorated Samian weighing 31g, was recovered from this context. The fabric appears to coincide with description of the Central Gaulish Les Martres-de-Veyre production centre (Webster 1996:13), but unfortunately the decoration is too worn to ascertain a definite date range.

Context 60 (Upper fill of enclosure ditch Trench 12)
This context produced 4 wheel-thrown bodysherds and 3 undiagnostic rims weighing a total of 38g. The fabric is the same as the Black-Burnished Ware Fabric 31 recovered from contexts 33 and 35.

Context 66 (Fill of pit 65 Trench 8)
One undiagnostic bodysherd weighing 9g and manufactured from the same fabric as the 'Native' Fabric Type 5, as seen in context 34.

Discussion

The assemblage comprises all wheel-thrown examples and fabric and feature comparisons have established a Romano-British date for this group of pottery. Similar fabric assemblages have been recovered from various sites throughout the Roman period, and have produced dates ranging from the first to fourth centuries. Although the majority of pottery from Kenbury Wood falls within a broad date range, where sherds can be assigned a closer date range they appear to be earlier rather than later within the Roman period.

4.8 Palaeoenvironmental and soil chemical evidence

Three sediment samples from the enclosure ditch infill sequence and a sample comprising the cremation deposit were sent to Birmingham Archaeo-Environmental for assessment (Appendix 6). There were no charred plant remains present, but there was an abundance of oak and hazel charcoal, much of which had been visible whilst excavating the ditch. Oak was exclusively found within the cremation, which accords with standard practice of its use as a high energy fuel for an efficient funerary pyre. The charcoal from context (21) within Ditch 20 was radiocarbon dated (Beta 296233) to Cal AD 140 to 260 or Cal AD 280 to 330 at 2 sigma.

The absence of other remains and poor preservation of bone can be attributed to slightly acidic conditions; a basic test showed that the sediment samples from Ditch 20 returned a pH of 5 – 6.

5.0 DISCUSSION AND INTERPRETATION OF RESULTS

5.1 Summary of main results

Contrary to successful geophysical prospecting at sites such as the Kenn pipeline (Johnson 1996) the survey at Kenbury was disappointing, and more consistent with more recent surveys in the general area (e.g. Sabin and Donaldson 2006). The latter concluded that "the soils do not readily produce enhanced magnetic susceptibilities".

The trial trenching at Kenbury Wood landfill has successfully located all four sides of the enclosure ditch plotted from air photographs. Three of those ditches have been recorded (North, South and East) and found to be quite variable in dimensions. Although no bank or entrance way was identified in the trial trenches there are hints of an internal bank observed firstly as a slight rise surviving internally alongside the western ditch, and secondly from the deep internal accumulation beside, and in-fill of, the eastern ditch. The former surface indication could be due to a bank having protected the bedrock from erosion or plough damage resulting in a residual linear bump in the landform, and the latter the build up of colluvial deposits against a barrier that has since been removed. Superimposition of the excavated evidence with the air photograph (Figure 1b) suggests that an entrance could lie on the southern side in the vicinity of Trench 9 which failed to locate the enclosure ditch, and where the cropmark is not apparent. A second gap in the cropmark of the enclosure ditch appears to lie on the eastern side, south of Trench 5.

Internal features were few and only detected where they cut into the underlying natural breccias. Isolated post-holes and pits, however, indicate that there was activity within the interior, and it is possible that some of the undulations within the natural bed-rock could have been derived from intentional terracing, however, this could not be proved from narrow trenches. Ephemeral features in the subsoil, from bioturbation or natural origin, could account for the ring seen from air photographs in the area of Trench 1 (Figures 1b and 3).

The most complex sequence of archaeological remains was in Trench 5 where human remains were found (a cremation and a skull) as well as a grave-cut and coffin nails. These features had been cut by the enclosure ditch (or its last surviving form if the surviving cut had enlarged an earlier ditch). Other features in this area suggest further activity, perhaps related to burial, which occurred prior to the enclosure ditch.

Dating evidence is provided by both ceramics and C14 samples. The latter span the Roman period, but perhaps concentrate into two phases of early-mid Roman (1^{st} – 2^{nd} centuries AD), and mid–late Roman (2^{nd} – 3^{rd} centuries). There was little of palaeoenvironmental interest beyond charred timber, with species identified as hazel and oak.

5.2 Parallel sites

Excavated parallels for various aspects of the site exist within the region, with the nearest being the post-Roman east - west oriented inhumation cemetery found along the Kenn – Ashcombe gas pipeline at Longstone Field, Kenn (Weddell 2000). Kenbury Wood's grave, however, was orientated north-south, and the C14 dating for the skull is much earlier than the date of the Kenn cemetery. Inhumation was generally a later Roman tradition in Britain, but in rural areas continuation of earlier practices has meant that both cremations and inhumations have been found even in the 1^{st} and 2^{nd} centuries AD (Taylor 2001). By late Roman times cremations were mainly associated with military sites. Early Roman inhumations tended to be buried deeper than in the later Roman period within urban situations, but in rural locations deep burial persisted for longer. Grave orientation varied widely, and many burials were placed in wooden coffins secured by small iron nails and carpentry joints.

The square enclosure excavated at Blackhorse (Butterworth 1999) provides a useful comparison to the 0.7ha Kenbury enclosure, albeit the interior was much smaller at 0.25ha. The ditch profiles were variable but generally V - or U – shaped in nature, rather than the flat-based examples at Kenbury, and ranged from 3 – 5.8m in width, with a maximum depth of 1.85m. Within the enclosure a penannular gully was found which contained charcoal (from oak, gorse/broom and hazel) which was radiocarbon dated to 160 cal BC – cal AD 90 (GU-7227; 2000 ± 50 BP). In addition three four-post structures and a two-post structure were detected, and further similar arrangements of post-holes and penannular gullies were found outside the enclosure. A large assemblage of Iron Age pottery, including finely decorated sherds, was collected during the excavations, the majority of which came from the enclosure ditch. Charcoal of cereals, mainly wheat, and evidence for processing show that the community engaged in agricultural activities, and a series of radiocarbon dates were obtained ranging from 770 BC through to the 1st century AD.

At Hayes Farm, Clyst Honiton, archaeological investigations in 1987 examined two enclosures, one of Roman date and one post-Roman (Simpson et al 1989). The former was found to be a square ditch enclosing 0.1ha, the ditch described as having a "steep-sided profile with a narrow flat bottom" 2 – 3m in width and 0.9 – 1.6m deep. No surfaces survived within the interior but re-deposited pottery and roofing tile found within the ditch infill suggest occupation during the 2nd – late 3rd century AD.

In 1975 trial excavations at Pond Farm, Exminster, investigated one of a series of enclosures (Miles 1976) which was c.50 x 40m, enclosing an area of c.0.2ha. The enclosure was dated to the 2nd century AD from pottery and tile within the infill sequence, but no surviving internal surfaces were detected. Instead a Neolithic and Bronze Age flint scatter was collected from the interior. The enclosure ditch was U-shaped, 1.66 – 2.09m wide and between 0.51 – 0.6m deep, with no bank identified; it was interpreted as not having been designed for defensive purposes.

A smaller square enclosure which might provide a parallel was excavated at Lower Well Farm, Stoke Gabriel, 1958 - 60 (Masson-Phillips 1966). This had survived as an earthwork which enclosed an area of 0.07ha. Pottery, a brooch and coin indicated occupation during the 1st – 2nd centuries AD, with reoccupation in the 4th century. The bank comprised an earth core with a dry-stone wall facing, and a second bank exterior to the ditch had been constructed on three sides. The enclosing ditch (also found on just three sides) was c.2.13m wide and 1.22 – 1.52m deep, "with a flat bottom and roughly vertical sides". The infill sequence was interpreted as a rapid event, with loosely packed angular stones and domestic debris, and that this reflected the fact that the enclosure was never fully completed. The excavator's interpretation suggested that it was then used for stock-holding purposes in the later Roman period. Apart from the pottery (much of which was described as imported, but also included local coarse wares) iron nails, Roman vessel glass, and bronze artefacts were found in addition to animal bone and marine mollusc shells, showing domestic use and suggestive of access to high status products. The report draws attention to a similar site at Milber, Newton Abbot.

A review of excavated enclosures in Devon (excluding Dartmoor) examined 21 sites of which four were of prehistoric date, 11 were dated to Roman times, 1 was sub-Roman, and the remaining five were medieval (Griffith 1994). In this study an interpretation was offered that in general these types of square enclosure, the vast majority of which have been identified as cropmarks, did not survive as earthworks because any bank surrounding them was small, and not intended for defence but rather for stock-holding purposes. Another overview briefly summarized the evidence for enclosures in the same general area as Kenbury Wood when excavations along the A30 near Exeter allowed their examination (Griffith and Quinnell 1999) Dates of occupation ranged from Middle Bronze Age to Roman with traces of structures found in all enclosures investigated. This review also included a distribution map of the

c.1500 enclosures in Devon (*op.cit*. Map 7.4) which shows their prolific nature; concentrations are evident southwest of the Exe estuary, and extending in a band north and west of Exeter around the north edge of Dartmoor. Further notable concentrations can be seen on Dartmoor itself (surviving as earthworks) and in south-eastern Devon.

In summary the parallels reviewed above show that Kenbury is a large enclosure in comparison. Ditch dimensions were similar to those recorded at other sites, however, most of which also resembled the steep-sided, flat-based profile seen at Kenbury. In general the infill sequence in the enclosure ditches often seems to suggest a rapid episode of deposition, perhaps deliberate through pushing back in material originally excavated from the ditch. Dating evidence shows that these enclosures are predominantly from the Roman period, but are probably a manifestation of a late Iron Age tradition. Preservation of internal features and surfaces has been variable, with Blackhorse and Lower Well Farm suggesting better preservation than Kenbury, whilst Hayes and Pond Farm enclosures may have been not as well preserved as Kenbury. The quantity and quality of artefactual and palaeoenvironmental remains compared to the other excavated sites suggests that preservation at Kenbury is unexceptional. Kenbury appears to be unique, however, for the discovery of Roman burials within the enclosure, albeit of a slightly earlier time-period than the actual enclosure ditch.

5.3 Historic landscape

Perhaps the most striking relationship of the Kenbury enclosure to the historic landscape is its location near to the meeting point of various routes (Red Cross; Figure 15), including a Roman road (Margary 491) and a parish boundary that could possibly be derived from a more ancient territorial boundary origin. The name Kenbury (the fortification at Kenn) could even relate to the enclosure at Kenbury Wood, although if a series of linear features around two ring-ditches (HER 17715) c.400m to the south indicated the presence of a contour fort, then this would be a more likely contender.

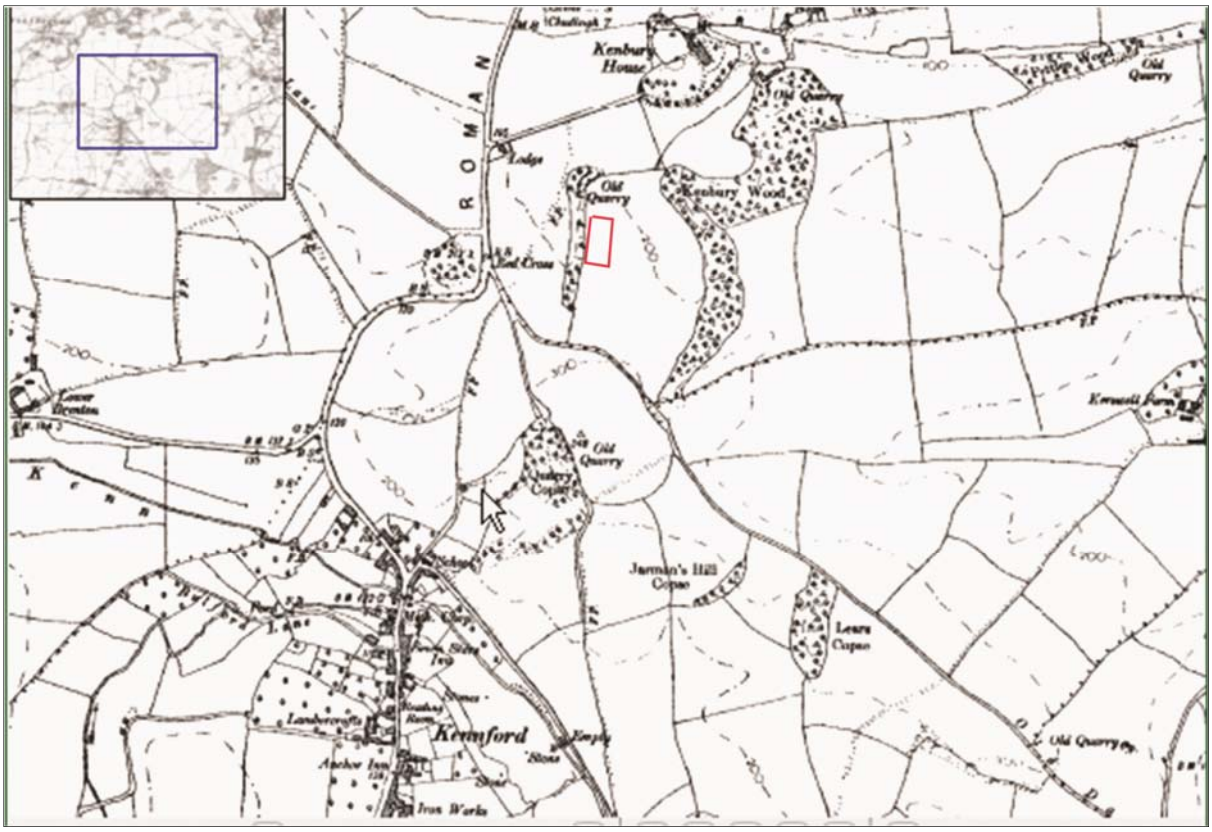
Figure 15 Red Cross: Kenbury Wood's location adjacent to an ancient cross roads (satellite photograph & 1st series OS mapping); the Roman road is north - south

The site occupies the steeply sloping side of a north-facing valley across which the course of a Roman road runs c.200m to the west of the enclosure. Historic mapping shows little change in the landscape occurred until relatively recent times, first with the introduction of quarrying in the general area of Kenbury, and later by infrastructure projects which included the demolition of Kenbury House to the north (Figure 16). An air photograph taken in 1947 shows how unchanged the local landscape was from that mapped for Tithe Apportionment purposes, and on this photograph it is just possible to discern the Kenbury Wood enclosure as a cropmark (CPE/UK/1995 13th April 1947).

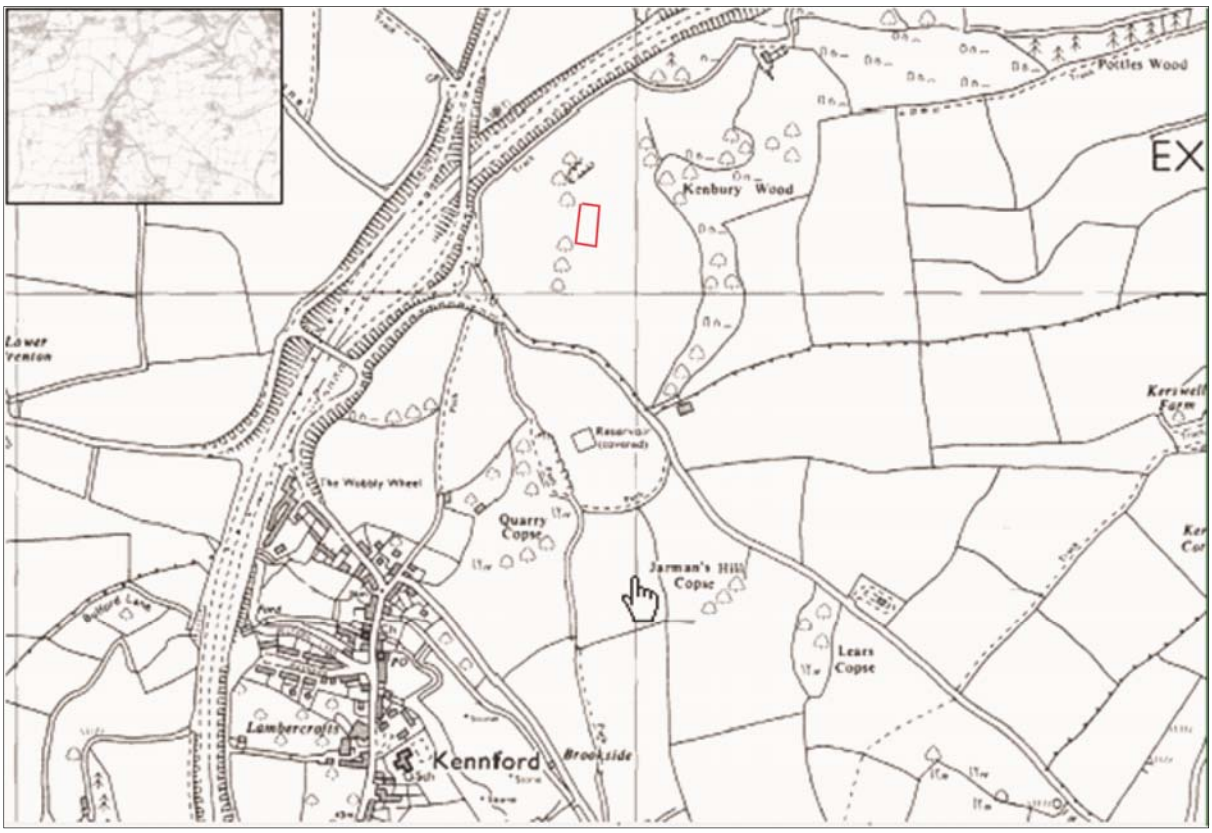
The use of the valley for landfill since the 1980s has altered the prospect and surroundings of the enclosure quite considerably, but in its contemporary landscape it can be seen to have formed a component of the Roman settlement pattern, with many similar sites of enclosed settlement sprinkled over the surrounding hills and valleys.

Figure 16 Historic mapping: Tithe maps c.1840, OS maps 1906 and 1981

Exminster Tithe Apportionment Map showing location of the enclosure within “The Count”, stitched together with Kenn Tithe Apportionment map (shaded part of map)



OS mapping at 1:10,560 (above) and 1:10,000 (below)



6.0 ASSESSMENT OF SIGNIFICANCE

6.1 Heritage importance

The Department of Communities and Local Government published criteria for assessing the national importance of monuments in March 2010[6]. These criteria are not intended to quantify heritage significance but are designed as a guide for consideration as to whether archaeological remains are eligible for scheduled status. At Kenbury Wood it is apparent from this exercise that the enclosure would not score highly enough for a successful recommendation to be made to the Secretary of State.

Period

Pottery and coffin nails provide a Roman date for activity at the site. The pottery is native derivative of Roman type, and some imported wares. Attribution of this assemblage tends towards the earlier rather than later Roman period.

Radiocarbon dating for charcoal from the fill of the enclosure ditch, as well as a sample from the human skull, also provides confirmation of Roman use. The skull appears most likely attributable to the late Roman period, and charcoal from the ditch infill to the mid-late period. This suggests that the ditch and burial were close in date, but stratigraphically the burial appears to have pre-dated the construction of the enclosure.

Roman occupation sites are amongst the most prolific archaeological remains found in the country, and Roman burials are also not uncommon, even when the large urban cemeteries are excluded. For example a survey of Wiltshire has identified 389 Romano-British burials (Foster 2001) with 25% being just one or two burials together, and the majority were without grave-goods. The situation in Devon is different, however, where human bone is particularly poorly represented in the archaeological record at a handful of known sites (mostly around Exeter).

Although not an artefact-rich site the trial trenching has demonstrated that Kenbury contains useful evidence for chronological studies and for furthering local understanding of Roman burial practices; it therefore has a medium value for period.

Rarity

This rectilinear enclosure is one of c.1500 recorded in Devon, of which 17 have been dated to the Roman period. Nationally rectilinear enclosures are a common type of site, with many examples identified from aerial photography, especially visible within the sand and gravel sub-strata found along river valleys. Rectilinear and square enclosures have been shown to represent a variety of functions, including stock protection, domestic use, funerary use, and temples. Roman burial remains are, however, very rare in Devon, and in this respect the Kenbury evidence is important.

Roman occupation evidence is prolific throughout much of England, and the findings from the trial trenching are not unusual for enclosed settlements; it therefore has a low value for rarity.

Documentation

[6] http://www.culture.gov.uk/images/publications/ScheduledMonuments.pdf

No previous investigation has been undertaken at the site, but an air photograph taken in 1984 revealed the cropmark of the enclosure ditch. There are no historic documents that refer to the enclosure, and it is not remembered as a field name. The name of the village and wood, Kenbury, could, however, possibly derive from this enclosure. The Kenbury Wood enclosure therefore scores low for documentation value.

Group Value

As one of a prolific type of site both nationally and locally the Kenbury Wood enclosure is of value for comparative study. In terms of excavated evidence, however, very few of the Devon enclosures have been investigated, and few have been subject to open area excavation. It therefore has enhanced local value as a potential site for excavation as the results from this would inform future decisions on the management of this type of site, and add to the knowledge base for comparative study. A medium-high local value can be given for group value.

Survival/Condition

The setting for the site has been damaged by previous landfill operations and archaeological investigations have been limited to the ditch and the interior of the enclosure. The site has not survived as an upstanding earthwork, and the apparent lack of occupation horizons and surfaces contemporary with its use shows that erosion has occurred, perhaps through ploughing or bio-turbation and weathering processes. There is strong evidence for mineral slippage of the breccias downslope to the north, and this process may well have destroyed original archaeological deposits. The site therefore survives as negative features cut into the underlying bed-rock. Nonetheless within these features the condition of the archaeological remains is relatively good for a dry site. The survival of human bone provides the site with enhanced local value, and the recovery of various artefacts and charred remains demonstrates that the site contains more surviving evidence than just the cut features and infill sequence. It is therefore considered to be of medium value for its present state of survival.

Fragility/Vulnerability

The surviving archaeological remains have reached equilibrium with their surroundings and it is unlikely that they will deteriorate further without substantial change to the existing conditions. The rate of decay for the cut features, the deposits infilling them, and for the inorganic artefacts will continue on a trajectory similar to that witnessed since Roman times, which suggests they are not vulnerable. One sample of human bone has also survived, and it is safe to presume that further human bone also exists on site. The absence of animal bone suggests that it was deliberately not discarded at the site, as if the chemical conditions are conducive to preservation of human remains, then they should also have preserved other faunal remains. In general the archaeological remains are considered to have a low susceptibility to further decay, and are not therefore considered as vulnerable.

6.2 Heritage significance

In accordance with PPS5 the significance of Kenbury Wood enclosure has been assessed on the basis of its heritage value, through application of English Heritage's Conservation Principles[7]. Definitions of each value are quoted in italics after each sub-heading below.

In summary this assessment demonstrates that the significance of the archaeological remains lies within their research potential for comparative study at a local level, to aid in greater understanding of the Roman period, rather than as a valuable site for aesthetic or communal appreciation. The severance of the protected area from its original setting has further devalued the usefulness of its continued preservation. The site's heritage value lies in the material evidence it contains which can be recovered through excavation.

Evidential Value: "value deriving from the potential of a place to yield evidence about past human activity"

There is good evidential value provided by the survival of the enclosure ditches and some internal features, in association with artefactual remains. In addition the presence of surviving human remains enhances the local significance of the site. Charcoal has provided a useful material for scientific dating, but palaeoenvironmental potential has been considered poor by the assessment. The site can therefore contribute partially to a greater understanding of Roman occupation and burial practice in Devon, and in particular would provide a valuable comparative collection for study of enclosed settlement.

Historical Value: "value deriving from the ways in which past people, events and aspects of life can be connected through a place to the present"

There is little historical value on present evidence. Further archaeological investigation would provide more historic depth to link the site with the social development of the area during the Roman period, especially in connection with settlement, burial, and proximity to major communication routes. The setting of the enclosure has been subject to major alteration in recent times, and therefore the link with its contemporary and historical landscape has been largely severed.

Aesthetic Value: "value deriving from the ways in which people draw sensory and intellectual stimulation from a place"

The site cannot be judged to have much aesthetic value remaining, as it now lies within a landfill site, and close to a major trunk road. The site consists of buried remains and so is invisible on the surface; this makes it more difficult to envisage as a coherent entity, and the major alteration to the surrounding topography has removed an ability to appreciate it within its setting.

Communal Value: "value deriving from the meanings of a place for the people who relate to it, or for whom it figures in their collective experience or memory"

There is no communal affinity with the site at present. It is unknown to the local community, it is not accessible to the public, and it has no sacred or intangible benefit in present circumstances. The value of its interpretation through investigation, analysis

[7] *Conservation Principles, Policies, and Guidance for the sustainable management of the historic environment* 2008 English Heritage

and dissemination of results to the local community and wider audience suggests that a latent communal value can be attributed to the archaeological remains.

6.3 Conclusions

Trial trenching at the Kenbury Wood enclosure has shown that its surviving condition is one of a degraded nature due to erosion of internal surfaces and major change to its setting. It has little to no aesthetic or communal value under the existing regime. The archaeological remains are not of national importance but do have a medium value in providing evidence to increase the knowledge base for local Roman studies.

7.0 BIBLIOGRAPHY

Bidwell, P.T. et al 1979. Exeter Archaeological Reports Volume One: The Legionary Bath-House and Basilica and Forum at Exeter, The Devonshire Press, Torquay

Butterworth, C.A., 1999. Blackhorse: Chapter 8 in Fitzpatrick, A.P., Butterworth, C.A., and Grove, J. Prehistoric and Roman sites in East Devon: the A30 Honiton to Exeter Improvement DBFO Scheme, 1996–9 Volume 1 *Wessex Archaeology Report No. 16*

Cho, H., Falsetti, A. B., McIlwaine, J., Roberts, C., Sledzik, P. S., & Willcox, A. W. Editors. 1996. *Handbook of the Forensic Anthropology Course, Department of Archaeological Sciences, University of Bradford and the NMHM/AFIP, Washington, D.C.*

Foster, A., 2001. Chapter 9 Romano-British Burials in Wiltshire in Ellis, P. (ed.) *Roman Wiltshire and After: papers in honour of Ken Annable*, p.165-177 Wiltshire Archaeological and Natural History Society

Gover, J.E.B., Mawer, A., and Stenton, F. M., 1969. The Place Names of Devon Parts 1 and 2 *English Place Name Society Volumes VIII and IX* Cambridge University Press

Griffith, F.M., 1994. Changing Perceptions of the Context of Prehistoric Dartmoor in The Archaeology of Dartmoor: Perspectives from the 1990s *Devon Archaeological Society Proceedings Vol. 52, p.85-100*

Griffith, F.M., and Quinnell, H., 1999. Settlement, c.2500BC to c.AD 600 in Kain, R., and Ravenhill, W. (eds) *Historical Atlas of South-West England* Chapter 7, p62-68 University of Exeter Press

Masson-Phillips, E.N., 1966. Excavation of a Romano-British Site at Lower Well Farm, Stoke Gabriel, Devon *Devon Archaeological Exploration Society Proceedings No 23, p.2-34*

Mayne Correia, P., 1997. 'Fire modification of bone: a review of the literature,' in *Forensic taphonomy. The postmortem fate of human remains*. Edited by W. D. Haglund & M. H. Sorg, pp. 275–93. Boca Raton: CRC Press.

Mays, S., 1998. *The archaeology of human bones*. London: Routledge.

McKinley, J. I., 1989. 'Cremations: expectations, methodologies and realities,' in *Burial archaeology. Current research, methods and developments*, vol. 211. Edited by C. A. Roberts, F. Lee & J. Bintliff, pp. 65–76. Oxford: British Archaeological Reports.

Simpson, S.J., Griffith, F.M., and Holbrook, N., 1989. The Prehistoric, Roman and Early Post-Roman site at Hayes Farm, Clyst Honiton *Devon Archaeological Society Proceedings Volume 47, p.1-28*

Taylor, A., 2001. *Burial Practice in Early England* Chapter 6 Roman burial: the third and fourth centuries, p.109-131 Tempus Publishing Ltd

Ubelaker, D. H., 1989. *Human skeletal remains: excavation, analysis, interpretation*. (Manuals on Archeology 2). Washington: Taraxacum for Smithsonian Institution.

Webster, P., et al 1996. Practical Handbooks in Archaeology No. 13: Roman Samian Pottery in Britain, Council for British Archaeology

Weddell, P.J., Sage, A. J., Reed, S. J., Bidwell, P.T., and Croom, A. T., 2000. The Excavation of a Post-Roman Cemetery near Kenn, South Devon *Proceedings of the Devon Archaeological Society Vol. 58 p.93-126*

9.0 ACKNOWLEDGEMENTS

This report has been written by Tim Malim, SLR Consulting Ltd, with specialist contributions by Corinne Duhig (human remains), Roz McKenna and Kris Krawiec (charred remains & C14 dating, BAE), Kerry Tyler (ceramics), Martin Roseveare, Anne Roseveare, and Ross Dean (geophysics, Archaeophysica), illustrations Caroline Malim (SLR Consulting). The archaeological investigation was supervised by Gerry Martin, assisted by Gwynfor Maurice and Richard Woolley (Gerry Martin Associates), and Thomas Wellicome (Archaeological Landscape Investigation). Matt Jones, SLR Consulting, plotted the air photograph against modern and historic mapping.

Thanks are due to Steve Reed, Marrina Neophytou and Bill Horner of Devon County Council whose help in providing background information was much appreciated, and also to Francis Griffith for her valuable knowledge of Devon's archaeology and identification of the Kenbury site by air photography in 1984. In addition Danielle Wootton, the Finds Liaison Officer for the Portable Antiquities Scheme, kindly supplied information on recent metal-detected finds from the Kenbury area.

The work has been funded by Devon Waste Management and special thanks are due to Colin Brown, Mike McGinley and Neil Browne.

10.0 CLOSURE

This report has been prepared by SLR Consulting Limited with all reasonable skill, care and diligence, and taking account of the manpower and resources devoted to it by agreement with the client. Information reported herein is based on the interpretation of data collected and has been accepted in good faith as being accurate and valid.

This report is for the exclusive use of Devon Waste Management; no warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SLR.

SLR disclaims any responsibility to the client and others in respect of any matters outside the agreed scope of the work.

Appendix 1: Chronological order of HER data plotted on Figure 2

HER No.	Type	Period	Description	National Status
10024	ENCLOSURE	Prehistoric	A complex of features visible on cuc ap in this area: ridge and furrow, ice-wedges or related natural markings, broad linear mark, boundary ditches of recently removed hedge, other linear marks (balkwill).	
10024	ENCLOSURE	Prehistoric	A complex of features visible on cuc ap in this area: ridge and furrow, ice-wedges or related natural markings, broad linear mark, boundary ditches of recently removed hedge, other linear marks (balkwill).	
10025	ENCLOSURE	Prehistoric	Linear marks and part of at least one sub-rectangular enclosure, possibly part of another (silvester).	
10025	ENCLOSURE	Prehistoric	Linear marks and part of at least one sub-rectangular enclosure, possibly part of another (silvester).	
10046	ENCLOSURE	Prehistoric	Cropmarks. Possible small square enclosure visible on cuc air photograph along with several linear features, also cropmarks, running between e-w and nw-se (griffith on ap). Vis=22/9/1982 (os) nothing visible on ground. Vis=linear features (but not squar	
10046	ENCLOSURE	Prehistoric	Cropmarks. Possible small square enclosure visible on cuc air photograph along with several linear features, also cropmarks, running between e-w and nw-se (griffith on ap). Vis=22/9/1982 (os) nothing visible on ground. Vis=linear features (but not squar	
14540	ARTEFACT SCATTER	Prehistoric	Prehistoric flint tools collected prior to construction of the M5 motorway to the north of Kennford in 1976	
14540	ARTEFACT SCATTER	Prehistoric	Prehistoric flint tools collected prior to construction of the M5 motorway to the north of Kennford in 1976	
14542	ARTEFACT SCATTER	Prehistoric	Flint scatter.24 flints of late neolithic or early bronze age including one core and two scrapers (jarvis).	
14542	ARTEFACT SCATTER	Prehistoric	Flint scatter.24 flints of late neolithic or early bronze age including one core and two scrapers (jarvis).	
16821	ENCLOSURE	Prehistoric	Part of a large D-shaped enclosure.	
16821	ENCLOSURE	Prehistoric	Part of a large D-shaped enclosure.	
17715	RING DITCH	Prehistoric	Possible enclosure surrounding two Prehistoric ring ditches & other features to the northeast of Kennford	
17715	RING DITCH	Prehistoric	Possible enclosure surrounding two Prehistoric ring ditches & other features to the northeast of Kennford	
17717	ENCLOSURE	Prehistoric	Immediately west of kerswell farm, a cropmark recorded by cuc shows 3 concentric, rectangular enclosures as cropmarks. The marks are thick and rectilinear. Not all of each rectangle is clear. Enigmatic site (griffith).	
17717	ENCLOSURE	Prehistoric	Immediately west of kerswell farm, a cropmark recorded by cuc shows 3 concentric, rectangular enclosures as cropmarks. The marks are thick and rectilinear. Not all of each rectangle is clear. Enigmatic site (griffith).	
17718	RING DITCH	Prehistoric	Cropmark of a possible ring ditch visible on cuc air photograph (griffith).	
17718	RING DITCH	Prehistoric	Cropmark of a possible ring ditch visible on cuc air photograph (griffith).	
17720	RING DITCH	Prehistoric	A ring ditch at sx92828831 is shown on cambridge air photograph bts 53. Sections of other curving features, none complete, are also visible as cropmarks in this field (see sx98nw/169) (griffith). Vis=23/9/1982 (os) the cropmark lies in a field of grass	
17720	RING DITCH	Prehistoric	A ring ditch at sx92828831 is shown on cambridge air photograph bts 53. Sections of other curving features, none complete, are also visible as cropmarks in this field (see sx98nw/169) (griffith). Vis=23/9/1982 (os) the cropmark lies in a field of grass	
17721	ENCLOSURE	Prehistoric	On cambridge air photographs, parts of two rectilinear enclosures and a curving mark that may be part of a circular one are visible as cropmarks. This complex is probably part of a system that also includes sx98nw/16 and sx98nw/34 (griffith).	
17721	ENCLOSURE	Prehistoric	On cambridge air photographs, parts of two rectilinear enclosures and a curving mark that may be part of a circular one are visible as cropmarks. This complex is probably part of a system that also includes sx98nw/16 and sx98nw/34 (griffith).	

HER No.	Type	Period	Description	National Status
17722	ENCLOSURE	Prehistoric	A subsquare enclosure with opening gap to the east is visible as a cropmark on cambridge air photograph. Approx 35m along the north side. Vis=23/9/1982 (os) the cropmark lies in a field of grass and stubble. The area is flat but reveals no remains. The	
17722	ENCLOSURE	Prehistoric	A subsquare enclosure with opening gap to the east is visible as a cropmark on cambridge air photograph. Approx 35m along the north side. Vis=23/9/1982 (os) the cropmark lies in a field of grass and stubble. The area is flat but reveals no remains. The	
23199	ENCLOSURE	Prehistoric	Chappel court. Five sided enclosure of 'flat iron' shape, overall dimensions c 40 x 50m. Entrance at the pointed end: apparent complex ditch terminals. Seen as a single-ditched cropmark in grass. Sited on flat ground above kenn church. Ap also shows per	
23199	ENCLOSURE	Prehistoric	Chappel court. Five sided enclosure of 'flat iron' shape, overall dimensions c 40 x 50m. Entrance at the pointed end: apparent complex ditch terminals. Seen as a single-ditched cropmark in grass. Sited on flat ground above kenn church. Ap also shows per	
28644	ENCLOSURE	Prehistoric	Higher brenton. Rectangular enclosure with broad single ditch about 70m square, with smaller rectangular single ditched enclosure against inner east side. Recorded as cropmark by f. Griffith in june + july 1984 (ap). Vis=30/1/1989 (robinson). Level hill	
28644	ENCLOSURE	Prehistoric	Higher brenton. Rectangular enclosure with broad single ditch about 70m square, with smaller rectangular single ditched enclosure against inner east side. Recorded as cropmark by f. Griffith in june + july 1984 (ap). Vis=30/1/1989 (robinson). Level hill	
28645	ENCLOSURE	Prehistoric	Rectangular single ditched enclosure about 70m square with entrance in E side.	
28645	ENCLOSURE	Prehistoric	Rectangular single ditched enclosure about 70m square with entrance in E side.	
28646	LINEAR FEATURE	Prehistoric	Broad linear feature running from sx93798667 to sx93788660 approx recorded as cropmark by f. Griffith in june 1984 (ap). Vis=5/5/1989 (griffith and robinson). Feature cuts off tip of spur. Nothing visible. Strongly defensive site with the land falling s	
28646	LINEAR FEATURE	Prehistoric	Broad linear feature running from sx93798667 to sx93788660 approx recorded as cropmark by f. Griffith in june 1984 (ap). Vis=5/5/1989 (griffith and robinson). Feature cuts off tip of spur. Nothing visible. Strongly defensive site with the land falling s	
28647	ENCLOSURE	Prehistoric	Small subrectangular single ditched enclosure c 50m diam. Recorded as cropmark by f. Griffith in june 1984 (ap). Vis=5/5/1989 (griffith and robinson). Site lies on level hilltop. Nothing visible (dprfp).	
28647	ENCLOSURE	Prehistoric	Small subrectangular single ditched enclosure c 50m diam. Recorded as cropmark by f. Griffith in june 1984 (ap). Vis=5/5/1989 (griffith and robinson). Site lies on level hilltop. Nothing visible (dprfp).	
28651	ENCLOSURE	Prehistoric	South of pottles wood. Small rectangular single ditched enclosure (w, s + e sides visible) with linear feature adjacent. Recorded as cropmark by f. Griffith 23/6/1984 (ap).	
28651	ENCLOSURE	Prehistoric	South of pottles wood. Small rectangular single ditched enclosure (w, s + e sides visible) with linear feature adjacent. Recorded as cropmark by f. Griffith 23/6/1984 (ap).	
28652	ENCLOSURE	Prehistoric	East of pottle's wood. Rectangular single ditched enclosure c 50m x 50m with entrance in centre of s side. Recorded as crop mark by f. Griffith 23/6/1984. Visible on dap/t 3 (june 1984) with linear features adjacent (ap). Vis=10/2/1989 (robinson). Site	
28652	ENCLOSURE	Prehistoric	East of pottle's wood. Rectangular single ditched enclosure c 50m x 50m with entrance in centre of s side. Recorded as crop mark by f. Griffith 23/6/1984. Visible on dap/t 3 (june 1984) with linear features adjacent (ap). Vis=10/2/1989 (robinson). Site	
28653	ENCLOSURE	Prehistoric	Sw pottles wood. Rectangular single ditched enclosure c 50m x 50m on spur of hill above pottle's wood. Recorded as crop mark by f. Griffith in june 1984 (ap)vis=10/2/1989. Site lies on gentle s slope. Nothing visible (dprfp).	
28653	ENCLOSURE	Prehistoric	Sw pottles wood. Rectangular single ditched enclosure c 50m x 50m on spur of hill above pottle's wood. Recorded as crop mark by f. Griffith in june 1984 (ap)vis=10/2/1989. Site lies on gentle s slope. Nothing visible (dprfp).	

HER No.	Type	Period	Description	National Status
28913	ARTEFACT SCATTER	Prehistoric	Thirteen neolithic/bronze age flints were found within a radius of 50 metres, including one core, one possible fabricator, one notched flake and four retouched flakes. Gentle south facing slope at about 50m on subsoil of permian breccia. Collected in ad	
28913	ARTEFACT SCATTER	Prehistoric	Thirteen neolithic/bronze age flints were found within a radius of 50 metres, including one core, one possible fabricator, one notched flake and four retouched flakes. Gentle south facing slope at about 50m on subsoil of permian breccia. Collected in ad	
29599	RING DITCH	Prehistoric	Peamore farm (e of scheduled area). Small ring ditch, 10-15m diam. Recorded as cropmark by f. Griffith in july 1984.	
29599	RING DITCH	Prehistoric	Peamore farm (e of scheduled area). Small ring ditch, 10-15m diam. Recorded as cropmark by f. Griffith in july 1984.	
29600	ENCLOSURE	Prehistoric	S kenbury house. Rectangular single ditched enclosure (w side not visible). Length 60-70m. Recorded as cropmark by f. Griffith in july 1984.	
29600	ENCLOSURE	Prehistoric	S kenbury house. Rectangular single ditched enclosure (w side not visible). Length 60-70m. Recorded as cropmark by f. Griffith in july 1984.	
30159	EDGED WEAPON	Prehistoric	Spearhead.	
30159	EDGED WEAPON	Prehistoric	Spearhead.	
31399	AXE	Prehistoric	Prehistoric flint axe found in the garden of 3 Waybrook Cottages	
31399	AXE	Prehistoric	Prehistoric flint axe found in the garden of 3 Waybrook Cottages	
37364	RING DITCH	Prehistoric	Two small ring ditches, diam c 15m, one w of the blackalls copse enclosure, and a fainter one to the s of it. Recorded from the air 1975 (ap). Vis=15/3/1989 (robinson). Level or gently sloping ground. Nothing visible.(dprfp).	
37364	RING DITCH	Prehistoric	Two small ring ditches, diam c 15m, one w of the blackalls copse enclosure, and a fainter one to the s of it. Recorded from the air 1975 (ap). Vis=15/3/1989 (robinson). Level or gently sloping ground. Nothing visible.(dprfp).	
37365	ENCLOSURE	Prehistoric	Part irregular single ditched enclosure. Recorded from the air 1984 (ap). Vis=5/5/1989 (griffith and robinson). Site lies in small side valley, part on valley floor and partly on steep e side. Nothing visible (dprfp).	
37365	ENCLOSURE	Prehistoric	Part irregular single ditched enclosure. Recorded from the air 1984 (ap). Vis=5/5/1989 (griffith and robinson). Site lies in small side valley, part on valley floor and partly on steep e side. Nothing visible (dprfp).	
37366	RING DITCH	Prehistoric	Small annular dark mark, diam c 15m recorded form the air 1984 (ap). Vis=23/3/1989 (robinson). Low level ground, nothing visible (dprfp).	
37366	RING DITCH	Prehistoric	Small annular dark mark, diam c 15m recorded form the air 1984 (ap). Vis=23/3/1989 (robinson). Low level ground, nothing visible (dprfp).	
37369	RING DITCH	Prehistoric	Small annular dark mark. Recorded from the air 1985 (ap). Vis=14/6/1989 (robinson). Even moderate se slope, nothing visible (dprfp).	
37369	RING DITCH	Prehistoric	Small annular dark mark. Recorded from the air 1985 (ap). Vis=14/6/1989 (robinson). Even moderate se slope, nothing visible (dprfp).	
37439	ENCLOSURE	Prehistoric	Parts of several possibly Prehistoric rectilinear enclosures shown on aerial photographs to the east of the A30 between Warkham Lane and Waybrook Lane	
37439	ENCLOSURE	Prehistoric	Parts of several possibly Prehistoric rectilinear enclosures shown on aerial photographs to the east of the A30 between Warkham Lane and Waybrook Lane	
37440	ENCLOSURE	Prehistoric	Prehistoric triple ditched enclosure shown on aerial photograph to the north of Trood House	
37440	ENCLOSURE	Prehistoric	Prehistoric triple ditched enclosure shown on aerial photograph to the north of Trood House	
43922	BURIED SOIL HORIZON	Prehistoric	A 10cm thick layer of buried soil overlying waterborne silts and gravels recorded during archaeological evaluation. A layer of silty loam overlying the buried soil may represent ploughing.	

HER No.	Type	Period	Description	National Status
43922	BURIED SOIL HORIZON	Prehistoric	A 10cm thick layer of buried soil overlying waterborne silts and gravels recorded during archaeological evaluation. A layer of silty loam overlying the buried soil may represent ploughing.	
43923	ENCLOSURE	Prehistoric	Cropmark enclosure identified from the air in 1975. Evaluation trench dug by emafu in 1991 located a shallow depression 2m wide by 0.25m deep, probably representing the enclosure ditch. Likely to define the boundary of a prehistoric, roman or early medi	
43923	ENCLOSURE	Prehistoric	Cropmark enclosure identified from the air in 1975. Evaluation trench dug by emafu in 1991 located a shallow depression 2m wide by 0.25m deep, probably representing the enclosure ditch. Likely to define the boundary of a prehistoric, roman or early medi	
51556	RING DITCH	Prehistoric	Probable second right ditch recorded on ap just to ne of headsheet site (aph).	
51556	RING DITCH	Prehistoric	Probable second right ditch recorded on ap just to ne of headsheet site (aph).	
51557	RING DITCH	Prehistoric	Probable third, smaller, ringditch visible to n of previous two (aph).	
51557	RING DITCH	Prehistoric	Probable third, smaller, ringditch visible to n of previous two (aph).	
52099	ENCLOSURE	Prehistoric	Small irregular enclosure, possibly double ditched, about 40m diam. Recorded from the air as a cropmark in 1987 by f. Griffith (aph).	
52099	ENCLOSURE	Prehistoric	Small irregular enclosure, possibly double ditched, about 40m diam. Recorded from the air as a cropmark in 1987 by f. Griffith (aph).	
52102	ENCLOSURE	Prehistoric	Irregular single ditched enclosure with one straight side, about 70m x 35m. Recorded from the air as cropmark by f. Griffith in 1989 (aph).	
52102	ENCLOSURE	Prehistoric	Irregular single ditched enclosure with one straight side, about 70m x 35m. Recorded from the air as cropmark by f. Griffith in 1989 (aph).	
52103	ENCLOSURE	Prehistoric	Rectilinear single-ditched enclosure lies on gentle east slope.	
52103	ENCLOSURE	Prehistoric	Rectilinear single-ditched enclosure lies on gentle east slope.	
55562	EARTHWORK	Prehistoric	'castle park' recorded in ta (now divided into 2 fields). Cut by proposed pipeline route (manning + turton).	
55562	EARTHWORK	Prehistoric	'castle park' recorded in ta (now divided into 2 fields). Cut by proposed pipeline route (manning + turton).	
10026	ENCLOSURE	Multi-period	Possible Iron Age or Romano-British enclosure, visible as cropmark on aerial photographs, to south-east of Blackall's Copse.	Scheduled Monument
10026	ENCLOSURE	Multi-period	Possible Iron Age or Romano-British enclosure, visible as cropmark on aerial photographs, to south-east of Blackall's Copse.	Scheduled Monument
96	COIN	Roman	Constantine II. Date AD 330-335. Minted Turkey. Found on pavement after building works at village hall.	
672	Brooch	Roman	Cast copper alloyT-shaped brooch circa AD 43 - AD 175. Returned to finder	
971	COIN	Roman	Hadrian AD117-38. Minted in Rome.	
9994	COIN	Roman	4th century Roman coin found in the River Kenn near Kennford	
9994	COIN	Roman	4th century Roman coin found in the River Kenn near Kennford	
10043	SETTLEMENT	Roman	Pond farm complex.	Scheduled Monument
10043	SETTLEMENT	Roman	Pond farm complex.	Scheduled Monument
10050	COIN	Roman	Roman coins of claudius, antoninus pius, caracalla, faustina, julia maesa, philip and probus found at kenn.	
10050	COIN	Roman	Roman coins of claudius, antoninus pius, caracalla, faustina, julia maesa, philip and probus found at kenn.	
18525	ROAD	Roman	Roman road from exeter to teignbridge. The course for the first three miles to kennford is not yet known. From red cross an old derelict road runs straight over the hill to kennford and continues in an almost straight line to kenn cross. This is believe	

HER No.	Type	Period	Description	National Status
18525	ROAD	Roman	Roman road from exeter to teignbridge. The course for the first three miles to kennford is not yet known. From red cross an old derelict road runs straight over the hill to kennford and continues in an almost straight line to kenn cross. This is believe	
58488	COIN	Roman	A worn coin of emperor hadrian has been found in topsoil from the kenbury tip site. Discovered in soil now deposited in garden in exmouth (musson).	
58488	COIN	Roman	A worn coin of emperor hadrian has been found in topsoil from the kenbury tip site. Discovered in soil now deposited in garden in exmouth (musson).	
10005	PARISH CHURCH	Medieval	Church of st. Andrew,kenn. Built of deep red sandstone from the tree- hill quarry. Essentially early 14th. Century, enlarged and given new windows late in the 15th. Century.(hoskins).	Listed Building
10005	PARISH CHURCH	Medieval	Church of st. Andrew,kenn. Built of deep red sandstone from the tree- hill quarry. Essentially early 14th. Century, enlarged and given new windows late in the 15th. Century.(hoskins).	Listed Building
10006	SCREEN	Medieval	Kenn parish church. A 15th. Century screen of 13 bays to nave and aisles with painted panels. Screen restored in 1887 and groining replaced. Two parclose screens were restored 1890.(bond). Rushforth notes central of three panels at base of chancel scree	
10006	SCREEN	Medieval	Kenn parish church. A 15th. Century screen of 13 bays to nave and aisles with painted panels. Screen restored in 1887 and groining replaced. Two parclose screens were restored 1890.(bond). Rushforth notes central of three panels at base of chancel scree	
10008	CROSS	Medieval	Kenn parish church. In the churchyard, s of the church, stands a restored cross, type b or c, dated 1885. A modern pedestal of two octagonal steps bears the ancient socket-stone, which is square at the base with almost suppressed corner shoulders and oc	
10008	CROSS	Medieval	Kenn parish church. In the churchyard, s of the church, stands a restored cross, type b or c, dated 1885. A modern pedestal of two octagonal steps bears the ancient socket-stone, which is square at the base with almost suppressed corner shoulders and oc	
10032	CROSS	Medieval	At the road junction, 183m ne of the church, on the road to alphington, is a type c cross. A circular socket-stone, with pieces cut away, supports a cross of rectangular section with chamfered angles, the shaft tapering upwards. The arms are straight. O	Listed Building
10032	CROSS	Medieval	At the road junction, 183m ne of the church, on the road to alphington, is a type c cross. A circular socket-stone, with pieces cut away, supports a cross of rectangular section with chamfered angles, the shaft tapering upwards. The arms are straight. O	Listed Building
10036	PARISH CHURCH	Medieval	Parish church of st. George. A small 15th century building of red sandstone, over-restored internally in 1856(hoskins).	Listed Building
10036	PARISH CHURCH	Medieval	Parish church of st. George. A small 15th century building of red sandstone, over-restored internally in 1856(hoskins).	Listed Building
10038	COMMEMORATIVE MONUMENT	Medieval	Church of st. George. Sir william and dame kataryn huddersfield, dated 1499, are the only figures in devon wearing armorial bearings. He wears a tabard with the huddersfield arms and she wears a mantle with the courtenay arms.	
10038	COMMEMORATIVE MONUMENT	Medieval	Church of st. George. Sir william and dame kataryn huddersfield, dated 1499, are the only figures in devon wearing armorial bearings. He wears a tabard with the huddersfield arms and she wears a mantle with the courtenay arms.	
10039	CROSS	Medieval	Parish church of shillingford st. George. In the churchyard is a type c cross. A massive ancient socket-stone, square at the base with corner shoulders and octagonal above with a chamfered top edge, bears a tall modern cross, of rectangular section with	Listed Building
10039	CROSS	Medieval	Parish church of shillingford st. George. In the churchyard is a type c cross. A massive ancient socket-stone, square at the base with corner shoulders and octagonal above with a chamfered top edge, bears a tall modern cross, of rectangular section with	Listed Building
10049	CHAPEL	Medieval	Chapel house on site of medieval st. John's chantry chapel.1822(lysons) there was at former times a chantry chapel dedicated to st john at kenn. Vis=5/7/1953(os) no further information.	

HER No.	Type	Period	Description	National Status
10049	CHAPEL	Medieval	Chapel house on site of medieval st. John's chantry chapel.1822(lysons) there was at former times a chantry chapel dedicated to st john at kenn. Vis=5/7/1953(os) no further information.	
14736	BUILDING	Medieval	Building about 9m long and 5m wide divided into two equal rooms. Walls survived up to 2m in places. Construction of conglomerate with lime mortar binding. Some extension walls visible. Probably a barn of late post-medieval period. Destroyed by motorway.	
14736	BUILDING	Medieval	Building about 9m long and 5m wide divided into two equal rooms. Walls survived up to 2m in places. Construction of conglomerate with lime mortar binding. Some extension walls visible. Probably a barn of late post-medieval period. Destroyed by motorway.	
14845	FISHPOND	Medieval		
14845	FISHPOND	Medieval		
15324	MONUMENTAL BRASS	Medieval	Brass plate to sir william huddersfield and his wife and children. Shield bearing huddersfield impaling courtenay, 1499.(pengelly).	
15324	MONUMENTAL BRASS	Medieval	Brass plate to sir william huddersfield and his wife and children. Shield bearing huddersfield impaling courtenay, 1499.(pengelly).	
15649	MANSION	Medieval	Kenbury house is mainly georgian, in a pleasant little park. The kenbury estate is recorded as early as 1083 (hoskins). Mentioned by worth for the possible implications of its name (worth). In 1086 the estate was included in the manor of aexeministra an	
15649	MANSION	Medieval	Kenbury house is mainly georgian, in a pleasant little park. The kenbury estate is recorded as early as 1083 (hoskins). Mentioned by worth for the possible implications of its name (worth). In 1086 the estate was included in the manor of aexeministra an	
16182	FARMSTEAD	Medieval	At higher and lower brenton farms, exminster, is the site of a medieval farmstead which was included in the manor of aexeministra at the time of the domesday survey. It formed a submanor with the manor of exminster. Some post-conquest descents until 142	
16182	FARMSTEAD	Medieval	At higher and lower brenton farms, exminster, is the site of a medieval farmstead which was included in the manor of aexeministra at the time of the domesday survey. It formed a submanor with the manor of exminster. Some post-conquest descents until 142	
16272	MANOR	Medieval	At kenn the probable site of the domesday manor of chent. In 1086 it was held by baldwin. Descents, through the courteneys, until 1639 are given.(reichel).	
16272	MANOR	Medieval	At kenn the probable site of the domesday manor of chent. In 1086 it was held by baldwin. Descents, through the courteneys, until 1639 are given.(reichel).	
16273	MANOR	Medieval	At peamore, exminster, the probable site of the domesday manor of peumera. In 1086 it was held by roger, son of pagan, of ralf de pomeray. A series of subsequent descents is given, until the post-medieval period (reichel).	
16273	MANOR	Medieval	At peamore, exminster, the probable site of the domesday manor of peumera. In 1086 it was held by roger, son of pagan, of ralf de pomeray. A series of subsequent descents is given, until the post-medieval period (reichel).	
16274	MANOR	Medieval	At shillingford abbott, exminster, the site of the domesday manor of selingeforda. Also known as north shillingford. Given to torre abbey in 1199 by william briwere. The estate included pengellys and bowhay (reichel).	
16274	MANOR	Medieval	At shillingford abbott, exminster, the site of the domesday manor of selingeforda. Also known as north shillingford. Given to torre abbey in 1199 by william briwere. The estate included pengellys and bowhay (reichel).	
16275	MANOR	Medieval	At shillingford st. George the probable site of the domesday estate of esselingeforda. Post-conquest descents until 1480 are given.(reichel).	
16275	MANOR	Medieval	At shillingford st. George the probable site of the domesday estate of esselingeforda. Post-conquest descents until 1480 are given.(reichel).	

HER No.	Type	Period	Description	National Status
20321	EARTHWORK	Medieval	Earthworks in fields south of waybrook lane, shillingford abbot. Vis=-/3/1983 (laming). Field visit and study of aps suggest that these earthworks represent various drainage operations and also a possible trackway running roughly n-s. Further drainage w	
20321	EARTHWORK	Medieval	Earthworks in fields south of waybrook lane, shillingford abbot. Vis=-/3/1983 (laming). Field visit and study of aps suggest that these earthworks represent various drainage operations and also a possible trackway running roughly n-s. Further drainage w	
21673	QUARRY	Medieval	Kenn quarry. Illustrations by swete (dro).	
21673	QUARRY	Medieval	Kenn quarry. Illustrations by swete (dro).	
21828	BURGH	Medieval	Kennford was named as a borough in 1340	
21828	BURGH	Medieval	Kennford was named as a borough in 1340	
29639	COTTAGE	Medieval	Cottage just north west of spurway farmhouse, 17th century, two storeys, cob and thatch. Three semi-dormer casement windows. Wing at rear with large external chimney. Enclosed porch with pointed tiled roof (doe, 1949).	Listed Building
29639	COTTAGE	Medieval	Cottage just north west of spurway farmhouse, 17th century, two storeys, cob and thatch. Three semi-dormer casement windows. Wing at rear with large external chimney. Enclosed porch with pointed tiled roof (doe, 1949).	Listed Building
29640	FARMHOUSE	Medieval	Spurway farmhouse, 17th century and later. Two storeys with attic. Roughcast with modern slate roof. Large half external chimney on north front with oven bulge. Very small windows with old mullions (blocked on left side of chimney). Two wings at rear.	Listed Building
29640	FARMHOUSE	Medieval	Spurway farmhouse, 17th century and later. Two storeys with attic. Roughcast with modern slate roof. Large half external chimney on north front with oven bulge. Very small windows with old mullions (blocked on left side of chimney). Two wings at rear.	Listed Building
40438	COTTAGE	Medieval	Nos 1, 2 and 3 hamlyn cottages.	Listed Building
40438	COTTAGE	Medieval	Nos 1, 2 and 3 hamlyn cottages.	Listed Building
40444	HOUSE	Medieval	Damerosehay cottage.	Listed Building
40444	HOUSE	Medieval	Damerosehay cottage.	Listed Building
60242	POT	Medieval	Watching brief by exeter archaeology, during construction of transceiver station at pearce's hill, recorded ditch of hedgebank and recovered 2 unstruck flints + a sherd of frechen ware (watts).	
60242	POT	Medieval	Watching brief by exeter archaeology, during construction of transceiver station at pearce's hill, recorded ditch of hedgebank and recovered 2 unstruck flints + a sherd of frechen ware (watts).	
64357	DEER PARK	Medieval	In c18 swete mentions a lease of the house + 'what was formerly the park' (gallant).	
64357	DEER PARK	Medieval	In c18 swete mentions a lease of the house + 'what was formerly the park' (gallant).	
10010	WALL PAINTING	Post Medieval	In st andrew's church, kenn. A painting under the tower arch in similar style to those on the screen; i. E. Early 16th century. About 5 feet tall: two female saints and heads of two other figures. Evidently not in its original state or setting.(pevsner)	
10010	WALL PAINTING	Post Medieval	In st andrew's church, kenn. A painting under the tower arch in similar style to those on the screen; i. E. Early 16th century. About 5 feet tall: two female saints and heads of two other figures. Evidently not in its original state or setting.(pevsner)	

Appendix 2: Geophysical Survey report

Martin Roseveare, ArchaeoPhysica Ltd

Non-Technical Summary

SLR Consulting commissioned magnetic survey to prospect a small area of land known from aerial photographs to contain a trapezoidal monument, now protected within a fenced area.

The fence was found to partly overlay the monument which meant that the postulated lines of an enclosure ditch could not be surveyed. The interior of the monument yielded only weak magnetic anomalies that could not be correlated with features of archaeological interest found during subsequent trenching. These features did not produce any measurable magnetic anomaly at the surface due to soil conditions, specifically breccia fills and colluvium, present on this site.

1 Introduction

Objective

1.1 Tim Malim of SLR Consulting commissioned ArchaeoPhysica to undertake magnetic survey of a small area of ground contained within a landfill and thought to host a potentially prehistoric monument. The primary objective was simply to prospect this area for anything that might be of archaeological interest.

Location

Country	England
County	Devon
Nearest Town	Exeter
Central Co-ordinates	291925, 087085

2 Context

Archaeology

2.1 A trapezoidal enclosure has been identified on aerial photographs, now retained within a landfill. The exact position has been difficult to gauge due to changes in the monument's surroundings, however, before survey it was thought to have been contained by a modern wire fence erected to protect it.

2.2 Magnetic survey demonstrated that the fenced area is actually within the monument and subsequent excavation appears to have confirmed that an enclosure ditch now lies beneath and perhaps partly beyond the fence line (Malim, *pers. comm.*).

Environment

Superficial 1:50000 BGS	None known within site
Bedrock 1:50000 BGS	Heavitree Breccia Formation (HVBR)
Topography	Slopes down to northeast
Hydrology	Presumed free draining
Current Land Use	Pasture
Historic Land Use	Mixed agricultural
Vegetation Cover	Grassland
Sources of Interference	Wire fencing surrounding survey area

2.3 The Heavitree Breccia Formation is, to quote the British Geological Survey:

"Reddish brown, mainly fine-grained, breccia; clasts (mainly less than 8cm, some 30cm+) of Culm sandstone, vein quartz, hornfels lava, granite, and potassium feldspar (Murchisonite). Well cemented locally"

2.4 The presence of this material was confirmed during subsequent excavation and found to form the bulk of the soil profile with just a thin (perhaps only about 10cm) topsoil over up to 50cm of colluvial breccia.

3 Methodology

Objective

3.1 The objective was simply to prospect for buried structures of archaeological interest, using magnetic technology as requested by the local archaeological curator.

Survey

Hardware

Measured Variable	Vertical gradient of vertical field component in nT/m
Instrument	Bartington 601-2 Fluxgate dual gradiometer
Configuration	1m vertical gradiometer
Sensitivity	0.1 nT/m
QA Procedure	field observation
Resolution	0.125m along lines 1.0m apart

Monitoring and quality assurance

3.2 Data was inspected for errors upon the completion of survey and none were found. The instrumentation functioned normally throughout survey.

3.3 A suitably qualified Project Geophysicist was in the field at all times and fieldwork and technical considerations were guided by the Senior Geophysicist.

Processing

Procedure

3.4 All data processing is minimised and limited to what is essential for the class of data being collected, e.g. reduction of orientation effects from magnetic sensors, suppression of single point defects (drop-outs or spikes), etc. The process stream for these data is as follows:

Process	Software	Parameters
Elementary data cleaning and imaging	ArcheoSurveyor	n/a
Imaging and presentation	Manifold GIS	n/a

3.5 General information on processes commonly applied to data can be found in standard text books and also in the 2008 English Heritage Guidelines "*Geophysical Survey in Archaeological Field Evaluation*" at http://www.helm.org.uk/upload/pdf/Geophysical_LoRes.pdf.

3.6 ArchaeoPhysica uses more advanced processing for total field magnetic data using potential field techniques standard to near-surface geophysics. Details of these can be found

in Blakely, 1996, "*Potential Theory in Gravity and Magnetic Applications*", Cambridge University Press.

3.7 All archived data includes process metadata.

Interpretive framework

Resources

3.8 Numerous sources are used in the interpretive process which takes into account shallow geological conditions, past and present land use, drainage, weather before and during survey, topography and any previous knowledge about the site and the surrounding area. Old Ordnance Survey mapping is consulted and older sources, if available.

Magnetic survey

3.9 Interpretative logic is based on structural class and examples are given below. For example a linear field or gradient enhancement defining an enclosed or semi-enclosed shape is likely to be a ditch fill, if there is no evidence for accumulation of susceptible material against a non-magnetic structure. Weakly dipolar discrete anomalies of small size are likely to have shallow non-ferrous sources and are therefore likely to be pits. Larger ones of the same class could also be pits or locally-deeper topsoil but if strongly magnetic could also be hearths. Strongly dipolar discrete anomalies are in all cases likely to be ferrous or similarly magnetic debris, although small repeatedly heated and *in-situ* hearths can produce similar anomalies. Reduced field strength (or gradient) linear anomalies without pronounced dipolar form are likely to be caused by relatively low susceptibility materials, e.g. masonry walls, stony banks or stony or sandy ditch fills.

Standards & guidance

3.10 All work was conducted in accordance with the following standards and guidance:

- David et al, "Geophysical Survey in Archaeological Field Evaluation", English Heritage 2008
- "Standard and Guidance for Archaeological Field Evaluation", Institute for Archaeologists 2008.

3.11 Archive formation is in the spirit of the following document which is, however, dated and not of direct relevance to the form and structure of data collected during non-gridded multi-sensor survey:

- Schmidt, A. et al, 2001, "Geophysical Data in Archaeology: A Guide to Good Practice", ADS

3.12 In addition, all work is undertaken in accordance with the high professional standards and technical competence expected by the Geological Society of London and the European Association of Geoscientists and Engineers.

3.13 All personnel are experienced surveyors trained to use the equipment in accordance with the manufacturer's expectations. All aspects of the work are monitored and directed by fully qualified professional geophysicists.

4 Catalogue

4.1 The catalogue refers to DWG 03 and provides the detailed description of what was found. Catalogue labels are enclosed in square brackets where referenced within the report.

Label	Anomaly Form	Feature Type	Description	Easting	Northing
1	Strong dipolar - Discrete	Debris?	One of two (with [2]) or possibly three discrete magnetic sources. If a third does exist just north of [4] then they would align	291935.5	87140.1
2	Strong dipolar - Discrete	Debris?	See [1]	291944.2	87114.7
3	Enhanced gradient - Area	Natural?	This could be due to surface soil with elevated magnetic susceptibility or perhaps an area of slightly deeper topsoil	291939.5	87081.9
4	Enhanced gradient - Area (Group)	Natural?	An area of numerous weakly dipolar anomalies clustered with the southeast part of the survey could simply relate to increased soil depth or susceptibility	291955.4	87089.3

5 Discussion

Introduction

5.1 For an explanation of the data processing see the section entitled "Process Documentation" in the appendices.

5.2 The sections below first discuss the geophysical context within which the results need to be considered and then specific features or anomalies of particular interest. Not all will be discussed here and the reader is advised to consult the catalogue (*ibid*) in conjunction with the graphical elements of this report.

Principles

Soil magnetism

5.3 The following paragraphs describe the sorts of processes that are likely to be present at the site creating magnetic anomalies.

5.4 In general, topsoil is more magnetic than subsoil which can be slightly more magnetic than parent geology, whether sands, gravels or clays, however, there are exceptions to this. The reasons for this are natural and are due to biological processes in the topsoil that change iron between various oxidation states, each differently magnetic. Where there is an accumulation of topsoil or where topsoil has been incorporated into other features, a greater magnetic susceptibility will result.

5.5 Within landscapes soil tends to accumulate in negative features like pits and ditches and will include soil particles with thermo-remanent magnetization (TRM) through exposure to heat if there is settlement or industry nearby. In addition, particles slowly settling out of stationary water will attempt to align with the ambient magnetic field at the time, creating a deposit with depositional remanent magnetization (DRM).

5.6 As a consequence, magnetic survey is nearly always more a case of mapping accumulated magnetic soils than structures which would not be detected unless magnetic in their own right, *e.g.* built of brick or tile. As a prospecting tool it is thus indirect. Fortunately, the mechanisms outlined above are commonplace and favoured by human activity and it is nearly always the case that cut features will alter in some way the local magnetic field.

Instrumentation

5.7 The vertical magnetic gradiometer responds best to narrow features with significant depth extent and is relatively insensitive to wider structures. In theory its horizontal discrimination is better than total field instruments, however, this is a theoretical consideration and is heavily influenced by the magnetic susceptibility distribution within features, depth of burial, etc. The sensitivity of the fluxgate technology used is adequate for archaeological purposes where features are buried just beneath the topsoil, however, the vertical gradiometer configuration significantly reduces sensitivity to greater depths for features with typical magnetic susceptibility contrast.

Kenbury Wood

5.8 For any buried structure to be detectable at the surface using magnetic techniques it must exhibit sufficient magnetic susceptibility contrast against its surroundings. In this sense, sufficient means large enough to produce a measurable magnetic field anomaly at the surface perhaps 0.5m above the structure. There must also be enough material with sufficient depth extent to modify the ambient magnetic field enough to be detected by a vertical gradiometer; purely laminar structure cannot be detected by this configuration of instrument except from anomalies produced at its edges.

5.9 Examination of Figure 1 and other photos not reproduced here suggest a number of potentially complicating factors at this site. The most important is a clear lack of material contrast between feature fills and the surrounding (natural) substrate. Although visible characteristics are not a reliable indicator of magnetic contrast, it is clear that the fills within cuts into the breccia are predominantly re-deposited breccia. Unless this material has been subjected to thermal alteration, for example, there is no reason to expect it to have become more magnetised than the natural parent material.

5.10 In addition, breccia is a not a soil in the true sense; it is a mixed mineral deposit formed by sedimentary processes. If it lacks available iron then it obviously cannot support the formation of relevant ferri-magnetic oxides. The pink colouration is arguably more likely to be due to manganese rather than iron. However, should there be iron, then redox cycling in the presence of heat and organic material might produce magnetic iron oxides but this may be the only realistic means of magnetic enhancement.

5.11 Examination of photographs from the excavation also reveals a fairly thick blanket of colluvial breccia covering what are thought to be archaeological features. Although this would be relatively non-magnetic and therefore not a contributor to the surface magnetic field, it does significantly increase the separation between the magnetometer and the buried features with a resultant rapid decrease in vertical magnetic gradient. Weak magnetic field anomalies from small susceptibility contrasts will be further weakened by the depth of colluvium.

5.12 As already stated the colluvium at this site is predominantly a mineral deposit; it is not colluvium resulting from the accumulation of topsoil. Where topsoil is present within fills it tends to augment the magnetic susceptibility of the deposit because it is normally significantly more magnetic than deeper regions of the soil. Even when fairly finely divided its presence can be sufficient to produce a measurable magnetic field anomaly at the surface. However, because the colluvium here is essentially a mineral deposit, this important source of magnetic anomalies is likely to be absent.

5.13 Taking these factors into account suggests that unless the fills of features cut into the natural material have been chemically altered, e.g. through burning, or include significant quantities of former topsoil, they are unlikely to contribute significantly to the surface magnetic field. Their detection through magnetic methods is therefore doubtful.

Character & principal results

5.14 For detailed comment the reader is advised to consult the catalogue in section four, above.

5.15 The photograph below is courtesy of Tim Malim and provides an overview of the geological context of archaeological and natural structures found during excavation.

5.16 The survey revealed virtually nothing of archaeological interest. All of the anomalies could be related to probable items of debris, variations in soil (perhaps topsoil rather than colluvium) depth and interference from the wire fencing surrounding the site.

Figure 17: Overview of excavation (courtesy T. Malim)

Conclusions

5.17 The trenching that followed the survey did reveal features of archaeological interest (Malim, *pers. comm.*) and it is clear that the nature of the soils at this site do not support the use of magnetic survey as an effective prospecting technique.

Caveats

5.18 Geophysical survey is a systematic measurement of some physical property related to the earth. There are numerous sources of disturbance of this property, some due to archaeological features, some due to the measuring method, and others that relate to the environment in which the measurement is made. No disturbance, or 'anomaly', is capable of providing an unambiguous and comprehensive description of a feature, in particular in archaeological contexts where there are a myriad of factors involved.

5.19 The measured anomaly is generated by the presence or absence of certain materials within a feature, not by the feature itself. Not all archaeological features produce disturbances that can be detected by a particular instrument or methodology. For this reason, the absence of an anomaly must never be taken to mean the absence of an archaeological feature. The best surveys are those which use a variety of techniques over the same ground at resolutions adequate for the detection of a range of different features.

5.20 Where the specification is by a third party ArchaeoPhysica will always endeavour to produce the best possible result within any imposed constraints and any perceived failure of the specification remains the responsibility of that third party.

5.21 Where third party sources are used in interpretation or analysis ArchaeoPhysica will endeavour to verify their accuracy within reasonable limits but responsibility for any errors or omissions remains with the originator.

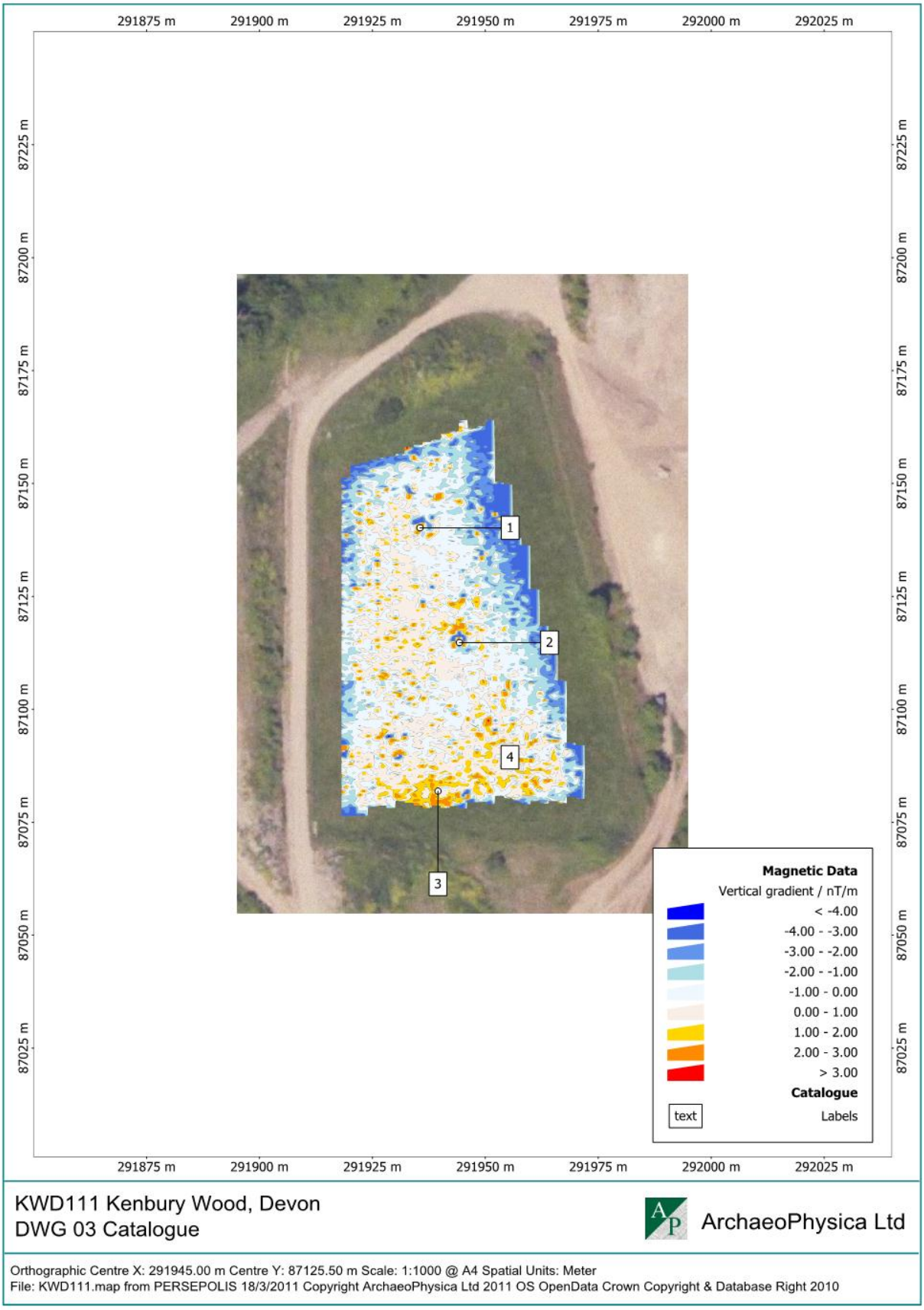
5.22 Any recommendations are made based upon the skills and experience of staff at ArchaeoPhysica and the information available to them at the time. ArchaeoPhysica is not responsible for the manner in which these may or may not be carried out, nor for any matters arising from the same.

KWD111 Kenbury Wood, Devon
DWG 01 Site Location

ArchaeoPhysica Ltd

Orthographic Centre X: 291945.00 m Centre Y: 87125.50 m Scale: 1:5000 @ A4 Spatial Units: Meter
File: KWD111.map from PERSEPOLIS 27/1/2011 Copyright ArchaeoPhysica Ltd 2011 OS OpenData Crown Copyright & Database Right 2010


291875 m
291900 m
291925 m
291950 m
291975 m
292000 m
292025 m
87225 m
87200 m
87175 m
87150 m
87125 m
87100 m
87075 m
87050 m
87025 m
Magnetic Data
Vertical component
Vertical gradient / nT/m
3
0
-3
KWD111 Kenbury Wood, Devon
DWG 02 Magnetic Data
ArchaeoPhysica Ltd
Orthographic Centre X: 291945.00 m Centre Y: 87125.50 m Scale: 1:1000 @ A4 Spatial Units: Meter
File: KWD111.map from PERSEPOLIS 27/1/2011 Copyright ArchaeoPhysica Ltd 2011 OS OpenData Crown Copyright & Database Right 2010


291875 m
291900 m
291925 m
291950 m
291975 m
292000 m
292025 m
87225 m
87200 m
87175 m
87150 m
87125 m
87100 m
87075 m
87050 m
87025 m
1
2
3
4
Magnetic Data
Vertical gradient / nT/m
< -4.00
-4.00 - -3.00
-3.00 - -2.00
-2.00 - -1.00
-1.00 - 0.00
0.00 - 1.00
1.00 - 2.00
2.00 - 3.00
> 3.00
Catalogue
text
Labels
KWD111 Kenbury Wood, Devon
DWG 03 Catalogue
ArchaeoPhysica Ltd
Orthographic Centre X: 291945.00 m Centre Y: 87125.50 m Scale: 1:1000 @ A4 Spatial Units: Meter
File: KWD111.map from PERSEPOLIS 18/3/2011 Copyright ArchaeoPhysica Ltd 2011 OS OpenData Crown Copyright & Database Right 2010

Appendix 3: Context descriptions Richard Woolley, Gerry Martin Associates

Context	Interpretation	Trench	Description	Dimensions	Finds & dating evidence
1	Probable Tree Bole	1	Vertical S side, steeply sloping N side, curved b.o.s. to flat base	1.24m (NW-SE); 0.54m deep	
2	Bioturbation	1	Vertical/ near vertical sided with a rather uneven undulating base	1.33m (NW-SE); 0.64m deep	
3	Bioturbation	1	Bowl shaped cut with sloping sides & concave base	0.4m (NW-SE); 0.2m deep	
4	Natural feature	1	Vertical/ near vertical sided cut with a concave base	0.54m (NW-SE); 0.44m deep	
5	Fill of [1]	1	fairly stiff & compact Red gravel and breccia with some reddish grey-brown silt	1.24m (NW-SE); 0.45m thick	
6	Fill of [1]	1	Compact red brown sand & gravel	1.15m (NW-SE); 0.09m thick	
7	Fill of [2]	1	Quite compact bown very gravelly silty sand	1.33m (NW-SE); 0.35m thick	
8	Fill of [2]	1	Compact/moderately compact brown slightly silty sand with a high proportion of gravel	1.05m (NW-SE); 0.29m thick	
9	Fill of [3]	1	Soft light grey orange-brown sand with broken breccia	0.4m (NW-SE); 0.2m thick	
10	Fill of [4]	1	Coarse orange-red sandy gravel (breccia)	0.54m (NW-SE); 0.44m thick	
11	Topsoil	1	Loose, fine, brown (paler towards base) slightly silty sand. Pea grit & angular gravel towards base.	12m (NW-SE); 0.25m thick	
12	Natural Geology	1	Soft reddish orange mix of gravel & small rock fragments from conglomerate & sandstone (breccia)	12m (NW-SE); 0.6m thick	
13	Natural Geology	1	Clean orange-red breccia	4.2m (NW-SE); 0.52m thick	
14	Natural Geology	1	Hard, solid bands (70mm thick, dipping S-N) of 'welded' sand, gravel & small stone fragments	11m (NW-SE); 0.55m thick	
15	Possible Buried Soil	1	Clean, friable pinkish brown slightly clayey sand	3.1m (NW-SE); 0.2m thick	
16	Natural Bedrock	1, 2-12	Solid pinkish red stone, often fragmented with orange-red breccia filling any voids		

17	Modern Hut Foundation	2	Outline in bedrock (16). Triangular. Possible corner.	1.0m x 0.9m; >10mm thick	
18	Fill of [19]	3	Loose, coarse brown silty gravelly sand. No large stones as packing	0.28m diameter; 0.18m thick	
19	Possible Post-hole	3	Circular, vertical sided, flat bottomed cut. Clearly defined.	0.28m diameter; 0.18m deep	
20	Ditch: N side of Enclosure	4	Linear E-W aligned cut with fairly steep (75º) sides and a flat base.	3m wide; 0.85m deep	
21	2º fill of Ditch [20]	4	Moist, plastic grey clay with occ. large stone mixed with gravel & sand. Mod.-freq. charcoal. Pieces of pink clay (decayed daub).	2.85m wide; <0.3m thick	Cal AD 140 to 260 or Cal AD 280 to 330 @ 95% probability
22	1º fill/slump in Ditch [20]	4	Very clean, moderately compact pink sand & gravel (degraded breccia).	2.6m wide; <0.45m thick	
23	3º fill of Ditch [20]	4	Loose brown sandy silt and gravel.	3m wide; 0.25m thick	
24	Topsoil	3	Loose, brown, coarse very gravelly silty sand	0.22m thick	
25	Topsoil	4	Fine, brown silty sand with some gravel (less than on higher ground to W)	0.3m thick	
26	Natural Geology	4	Loose pink sand & gravel (breccia)	0.3m thick	
27	Topsoil	2	Loose, brown, gravelly silty sand	0.2-0.4m thivk	
28	Natural Geology	2	Broken stone, sand & gravel (degraded breccia)	0.35m thick	
29	Topsoil	9	Loose, brown, very gravelly silty sand	0.1m thick	Mid – late RB pottery
30	Ditch: E side of Enclosure	5	N-S aligned linear cut with very steep-near vertical sides (70-85º), stepped in places with a sharp b.o.s. to a flat base.	3.5m wide; 1.5m deep	
31	Natural Geology	9	Loose red sand & gravel (degraded breccia)	0.1-0.3m thick	
32	Natural Geology	4	Friable, mid-reddish brown slightly humic, slightly gritty clay silt with 5% gravel & small stone	0.2-0.25m thick	
33	Cremation burial	5	Cremation urn & contents. Possibly displaced having perhaps rolled from higher up western slope of field.	1.24m (NW-SE); 0.54m deep	RB pottery
34	Fill of Ditch [30]	5	Reddish brown sandy silt with freq. rounded gravel & small stones.	1.33m (NW-SE); 0.64m deep	RB pottery
35	Topsoil	5	Loose brown silty sand with moderate rounded gravel	0.4m (NW-SE); 0.2m deep	RB & Post-med pot sherds
36	Backfill of Grave [68]	5	Friable, mid-reddish brown clay silt with c. 30% grit & small rounded gravels.		14 Roman coffin nails

37	Subsoil	5	Light reddish brown sandy silt with freq. rounded gravel & small stones.	3.5m wide; 0.65m deep	Burnt bone & Roman pot sherd (samian)
38	Topsoil	10	Loose, brown, averagely gravelly silty sand	0.1m thick	
39	Bioturbation	10	Thin, fairly amorphous spread.	2.4m (N-S) x 0.9m (E-W); 1.0m thick	14 Fe nails
40	W side of Enclosure Ditch	11	N-S aligned linear cut with vertical E edge. Not fully excavated as under trackway outside fence of field.	0.2-0.3m thick	
41	Topsoil	11	Loose mid-brown silty sand with high concentration of gravel.	0.3-0.6m thick	
42	Subsoil	11	Loose mid-brown slightly silty sand with very high concentration of gravel.	0.5m diameter; >10mm thick	
43	Fill of Ditch [40]	11	Loose, clean, orange-brown sand & gravel (degraded breccia). Not excavated.	>0.3m wide; >0.4m deep	
44	Possible Pit.	9	Sub-circular cut with vertical sides & a flattish base.	0.15m thick	
45	Animal burrow	9	Distinct S side, less diatinct elsewhere. Probably a flat base tapering upwards.	0.14m thick	
46	Possible hollow	9	Steep sided (70º) cut with curved b.o.s. to flat base	>0.3m thick	
47	Possible Post-hole	9	Poorly defined, circular plan cut with apparantly vertical side & square b.o.s. to flat base dipping to a pointed rather irregular plan depression	2.6m wide; 0.5m deep	
48	Fill of Post-hole [47]	9	Loose red pea grit & decayed sand & gravel developing into a clean pale grey silty clay	2.45m wide; 0.27m deep	
49	Subsoil	9	Clean soft, light brown silty sand	1.1m wide; 0.35m deep	
50	Ditch: S side of Enclosure	12	E-W aligned with steep sides (80º). Ledge on S side. Not bottomed	0.46m diameter; 0.17m deep	
51	Upper fill of [44]	9	Soft, homogenous, clean brown silty sand with frequent gravel.	0.46m diameter; 0.17m deep	
52	Basal fill of [44]	9	Soft, homogenous, clean orange-brown slightly silty sand with frequent gravel & sand	0.1-0.3m thick	
53	Fill of [45]	9	Lower part: Mid-slightly dark grey silt with 'organic' looking material. Develops into an upper part of loose, homogenous light brown sand & gravel in a silt matrix	3.1m wide;	
54	Fill of [46]	9	Clean, loose, homogenous, soft mid-light brown silty sand with high gravel content.	2.35m wide; 0.4m thick	
55	Topsoil	6	Loose, brown silty sand with high gravel content	2.55m wide; 0.25m thick	

56	Topsoil	7	Loose, brown silty sand with high gravel content	2.45m wide; 0.27m deep	
57	Possible Post-hole	6	Sub-circular cut with steeply sloping, sightly concave sides & a flat base.	1.1m wide; 0.35m deep	
58	Fill of [57]	6	Loose dark pinkish brown sandy clay with occ. small pieces of grit	0.1-0.4m thick	
59	Topsoil	12	Loose mid brown silty sand with high concentration of gravel	0.1-0.4m thick	
60	Fills of Ditch [50]	12	Soft, orange, slightly clayey sand with freq. gravel & decayed breccia. To sides (especially S) hard buff sandy silt (slump?). Loose centre of almost pure gravel.	0.3 x 0.2m; 0.16m deep	RB pottery
61	Natural Geology	6	Loose-moderately compact pink gravel small stones & sand (degraded breccia)	0.3 x 0.2m; 0.16m deep	
62	Natural Geology	7	Loose-moderately compact pink gravel small stones & sand (degraded breccia)	0.15m thick	
63	Topsoil	8	Loose, mid-brown silty sand with high concentration of gravel	>0.6m thick	RB pottery
64	Natural Geology	8	Loose, homogenous red sand with freq. gravel (heavily degraded breccia)	0.1m thick	
65	Pit	8	Uneven profile: scooped shape to NE, developing into a bowl & then a steep SW side	0.1m thick	
66	Fill of pit [65]	8	Soft, homogenous, fine mid-brown silty sand with occ. rounded pebbles	1.2m wide; 0.4m thick	RB pottery
67	Natural Geology	12	Clean, soft, very loose sand & gravel (decayed breccia)	0.1m thick	
68	Grave	5	Rectilinear N-S orientated cut with near vertical sides & a flat base. Truncated by [30].	2.4m (N-S) x 0.9m (E-W); 1.0m deep	
69	Possible Pit	5	Semi-circular cut with steep sides (75º). Sharp b.o.s. to flat base. Truncated by [30].	0.8m wide (N-S); 0.95m deep	
70	Possible Pit	5	Sub-circular cut with steep sides (60º). Fairly sharp b.o.s. to flattish base. Truncated by [30].	0.95m wide (E-W); 0.76m deep	
71	Backfill of Grave [73]	5	Friable, mid-reddish brown clay silt with c. 30% grit & small rounded gravels.	0.2m wide; 0.2-0.4m thick	
72	Burial-Skull	5	Fragments of fairly well preserved skull (Juvenile 8-12yrs old?). Revealed in S facing section of trench.	c. 0.1 wide; c. 0.1m thick	Cal AD 260 – 280 or Cal AD330 – 420 @ 95% probability
73	Grave	5	Steep W Side rounded base. Revealed in S facing section of trench. Truncated by [30].	0.2m wide; 0.2-0.4m thick	
74	Colluvium	5	Friable mid-brownish red clay silt & c. 50% sub-rounded grit & gravels. Evidence of	<0.84m thick	

			banding.		
75	1º Fill of Ditch [30]	5	Loose, friable mid-brownish red clay silt & c. 50% sub-rounded grit & gravels.	<2.4m wide; <0.85m thick	1 Fe nail
76	Natural Bedrock	5	Heavitree bedrock		Skull & Teeth
77	Fill of [69]	5	Friable mid-reddish brown clay silt & c. 30% grit & gravels.	0.8m wide (N-S); 0.95m deep	
78	Fill of [70]	5	Friable mid-reddish brown clay silt & c. 30% grit & gravels.	0.95m wide (E-W); 0.76m deep	Flint
79	Fill of [80]	5	Friable mid-reddish brown clay silt & c. 25% grit & gravels. Mottled withmid greyish-brown slightly humic clay silt as a result of bioturbation.	2.2m wide E-W; <1.0m thick	
80	Possible pit	5	Sub-rectangular very steep sided (80º), flat bottomed cut.	2.2m wide E-W; <1.0m thick	
81	Possible bioturbation	5	Sub-circular deposit of grey-brown silty gravels observed in colluvium (74). Not excavated. Truncated by [30].	1.0m (N-S) x 0.75m (E-W); 0.35m thick	

Appendix 4: Trench descriptions Gerry Martin, Gerry Martin Associates

Trench 1 12m long, 2m wide, 1.3 – 1.5m deep, + step 2m wide along west side, 2m wide extension 6m long along north-eastern part of trench to investigate features seen in section

Location: N end *SX91950.24 87150.77*, S end *SX91956.62 87139.05*

Contexts: 1-16

The trench was reduced to solid bedrock comprising red Breccia (16).

Overlying this horizon (16) was an undated soil horizon consisting of primarily pinkish brown clay and sand (15). Resting above this material were further bands of hard sand and gravel (14) beneath a spread of orange-red Breccia (13)that was sealed by a reddish orange layer of mixed gravel and broken Breccia (12). All these deposits represented natural geology.

No features were observed during the reduction of the trench, however four possible intrusions sealed by topsoil (11) but cut into Breccia (12) were observed in the main trench section. They are summarised below:

A bowl-shaped feature of uncertain plan [1] filled by a red-brown sand and gravel, forming the basal fill (6) resting below reddish grey-brown silt (5). The feature was a natural hollow or tree-bole.

Near vertical sides but an uncertain plan feature [2] filled by a lower fill of brown slightly silty sand (8) and an upper fill of brown very gravelly silty sand (7) representing a tree-bole.

A bowl-shaped cut [3] filled by soft light grey orange-brown sand (9) forming a shallow intrusion probably associated with animal burrowing or a shrub.

An apparent vertical sided feature with a concave base but of unknown plan [4] filled by coarse sandy gravel (10) most probably part of the underlying geology.

It should be noted that the trench is currently riddled by animal burrowing.

Interpretation suggests that this trench is devoid of archaeological features.

Trench 2 11.5m long, 2m wide, 0.25 – 0.5m deep; E end sondage 0.5m into Breccia

Location: N end *SX91937.34 87145.29*, S end *SX91919.43 87135.82*
Contexts: 16, 17, 27, 28

A trace of a small right-angle outlined in pinkish cream mortar (17) subsequently washed away, could confirm the presence of a south-western corner belonging to a rectangular crop-mark seen on the aerial photograph.

Conversation with the landowner, suggested that a small shepherd's cottage once existed in close proximity. This could be grouting for a timber sill beam or stone plinth for a small building as the need for any formal foundation was not required due to the presence of solid bedrock (16).

Topsoil 27 rested above a deposit of broken and degraded Breccia (28) sealing solid Breccia

(16).

No other features were found within the Trench.

Trench 3 12m long, 2m wide, 0.15 – 0.25m deep

Location: E end *SX91926.46 87121.24*, W end *SX91914.04 87132.02*

Contexts: 16, 18, 19, 24

Beneath topsoil (24) was a single circular plan post-hole [19] filled by a loose brown silty, gravelly sand (18).

No other cultural features were uncovered whilst topsoil rested directly above solid geology (16).

Trench 4 14m long, 2m wide, 0.6m deep

Location: N end *SX91938.80 87169.90*, S end *SX91940.10 87156.00*

Contexts: 16, 20-23, 25, 26, 32

A northern ditch [20] forming an enclosure was defined beneath topsoil (25), comprising a 2.00m wide trench that was approximately 0.60m in depth. The ditch possessed a flat base following the plane of the bedding rock (16).

Within the ditch, a brown clayey soil (21) was observed that contained a high charcoal content with traces of daub. The primary fill consisted of redeposited sand and gravel (22), presumably from weathering of the sides of the ditch and exposed rock, whilst a tertiary fill of brown sandy silt and gravel (23) capped the ditch.

Ditch [20] cut mid-reddish brown gritty clay silt (32), resting above loose pink Breccia (26), both deposits representing natural geology.

Within the Trench, a large crack appeared to indicate an earth tremour that had dislocated the bedding plane of the rock exaggerating the southerly dip of the rock.

Trench 5 12m long, 2m wide, 0.6 – 0.9m deep, plus a 3m wide extension to south along line of enclosure ditch, with step on each side

Location: E end *SX91973.87 87172.38* W end *SX91960.90 87130.46*

Contexts: 30, 33-37, 68-81

Trench 5 required enlargement in order to produce a safe working area.

As the trench lay at the foot of a steep slope it was anticipated that cultural material may have gathered at this location alongside rock and soil that had migrated down the slope.

The earliest event appears to be the accumulation of redeposited Breccia and gravel (74) consistent with soil creep resting above natural solid Breccia (76) the same as bedrock (16).

A number of features penetrated or rested above layer (74) before being truncated by ditch [30]. These features included the following:

A friable mid reddish-brown clay silt (36) within a north-south aligned linear cut [68] with rounded corners and possessing vertical sides and a flat base. This feature contained twelve iron nails and although no human bone was present (the soil is highly acidic), it appears likely that this was a grave.

Mid reddish brown clay silt (71), resting above a possible juvenile skeleton derived from skull fragments (72) within an uncertain plan grave [73].

Friable mid reddish brown clay silt (79) within a sub-rectangular plan, steep sided cut [80] which could represent a possible pit.

Friable mid reddish brown clay silt (78) within a semi-circular plan, steep sided cut [70] that could represent a post-hole.

Friable mid reddish brown clay silt (77) within a semi-circular plan, steep sided cut [69] that could represent a post-hole.

A spread of grey-brown silty gravel (81) that may represent landslip or bioturbation within the colluvium horizon (74).

As the eastern side of the enclosure was on a steep slope, post-holes (69) and (70) may represent revetment to the west side for an early ditch, lost by the later cutting of ditch [30].

Graves [68] and [73] must therefore have been inserted very close to the ditch edge indicating that the presumed bank would have to have been on the east of the ditch and thereby outside of the enclosure

The eastern ditch [30] forming the enclosure was up to 2.00m in depth and 3.50m in width, possessing steep sides with a flat base bottoming onto a solid plane of bedrock Breccia (16).

This cut [30] was probably the final re-cut for the ditch following accumulation of loose sand and gravel whilst it was in use. The re-cut appeared to obliterate any earlier, smaller ditch cut.

At the base of ditch [30] was friable mid reddish brown clay silt (75) that may represent slumped colluviums similar to layer (74). Reddish brown sandy silt (34) rested above this material that included, a Roman cremation within a ceramic vessel (33) disturbed from its original provenance by slippage into an open ditch.

Ditch [30] was eventually filled with light red-brown silty sandy gravel (37) before being sealed by topsoil (35).

Trench 6 21m long, 2m wide, 0.3 – 0.6m deep

Location: N end *SX91944.59 87130.17*, S end *SX91935.30 87111.27*

Contexts: 16, 55, 57, 58, 61

Beneath topsoil (55) was a fill of loose pinkish brown sandy clay (58) within a sub-circular plan cut [57] with steepish sides cutting degraded pink Breccia (61) resting above solid Breccia (16). This feature may be the result of bioturbation.

Trench 7 21m long, 2m wide, 0.2 – 0.8m deep

Location: E end *SX91949.43 87113.26*, W end *SX91931.07 87125.31*

Contexts: 16, 56, 62

An archaeologically sterile trench comprising topsoil (56) overlying degraded Breccia (62) resting above solid Breccia (16).

Trench 8 12m long, 2m wide, 0.8 – 1.3m deep

Location: N end *SX91964.57 87113.08*, S end *SX91954.43 87101.66*

Contexts: 16, 63-66

A single pit [65] of probable Roman date and uneven profile was uncovered in the side of the trench. The pit was filled by soft mid-brown silty sand (66) beneath topsoil (63).

Pit [65] cut degraded Breccia (64) resting above solid Breccia (16).

Trench 9 19m long, 2m wide, 0.5 – 0.7m deep

Location: N end *SX91947.57 87094.83*, S end *SX91946.39 87074.49*

Contexts: 16, 29, 31, 44-49, 52-54

Below topsoil (29) was light brown silty sand (49) that sealed the following features:

A circular plan cut [44] slightly undercut that contained a basal fill of orange-brown slightly silty sand (52) overlain by brown slightly silty sand (51) that may represented a putative pit albeit undated.

A shallow bowl-shaped feature [45] filled by light brown sand (53), almost certainly a former tree-bole subsequently used as an animal burrow.

A possible east-west aligned hollow [46] filled by light brown silty sand (54) probably a naturally occurring hollow down-slope.

A shallow circular plan cut [47] filled by loose red pea-grit and decayed sand (48), possibly a heavily truncated post-hole.

All the features cut clean, degraded Breccia (31) resting above solid Breccia (16).

Trench 10 16m long, 2m wide, 0.3 – 0.6m deep

Location: N end *SX91925.94 87108.73*, S end *SX91935.83 87095.39*

Contexts: 16, 38, 39

Topsoil (38) lay directly onto solid Breccia (16) with a small, dark grey spread of organic material (39) resting at the interface, the result of natural agency.

The trench was archaeologically sterile.

Trench 11 7m long, 2m wide, 0.2 – 0.4m deep

Location: E end *SX91921.86 87079.04*, W end *SX91912.29 87078.85*

Contexts: 16, 40-43

Beneath topsoil (41) and developed subsoil of broken gravel and mid brown slightly silty sand (42) was the upper fill (43) of the western side of the enclosure. This material comprised orange-brown sand (43) within a north-south aligned linear ditch [40] with a vertical eastern side. This feature penetrated natural bedrock 16.

Trench 12 10m long, 2m wide, 0.25 – 0.4m deep

Location: N end *SX91921.86 87079.04*, S end *SX91921.19 87065.57*

Contexts: 16, 50, 59, 60, 67

Sealed by topsoil (59) and subsoil (Figure 7b) was generic ditch fill (60) comprising soft orange clayey sand developing into a central core of gravel that may indicate a number of deposition events. This material filled an east-west aligned ditch [50] with steep, near-vertical sides and a flat base penetrating a thin deposit of decayed Breccia (67) resting above solid Breccia (16).

Appendix 5: Excavated Trenches photographic record

Trench 2 looking east excavated to bedrock: 2m scale lengthways, 1m scale horizontally

Trench 3 looking east with posthole 19 next to 1m scales; Trench 6 looking north-east

Trench 7 looking south-east: posthole 57 visible at intersection with Trench 6; 1m scale bars at crest of slight dip/terrace in bedrock visible as greater depth of overburden in trench side

Trench 8 looking south-west and Trench 10 looking southeast; note undulations in bedrock, perhaps a natural gully or holloway in foreground, and a dip or terracing beyond scales

Trench 9 looking south; pit 44 and posthole 47 at far end

Trench 11 looking east; edge of Enclosure Ditch (40) water-filled in foreground, bedrock beyond with slight rise which may indicate line of possible bank internally parallel to ditch running in a north-south alignment

Trench 1: west-facing section (stitched together)

Appendix 6: Palaeoenvironmental Assessment

An Assessment of Charred Remains from Kenbury Wood, Dorset

by

Roz McKenna and Kristina Krawiec

April 2011

Summary

An archaeological evaluation was carried out at Kenbury Wood landfill site, Devon by SLR Consulting. A total of four samples were assessed for charred remains from a ditch and urned cremation both dating to the Romano-British period. An inhumation was also recorded and this, along with a sample from the upper fill of the ditch, were submitted for radiocarbon dating. The assessment did not record any charred plant remains but did show an abundance of charcoal. This was mainly oak and alder/hazel indicating that these species were being exploited as a source of fire fuel. Oak was the only firewood selected for the funerary pyre which is a standard practice given its high energy properties. The radiocarbon dates confirmed the inhumation and ditch were of the Romano-British period but it was the stratigraphic relationship which determined which was the older feature. It appears the burial was cut by the ditch and is therefore the older feature. If further excavations take place it may be possible to employ Bayesian modelling to these and subsequent dates in order to refine the chronology. No further work is recommended for the charred samples.

1. INTRODUCTION

An archaeological evaluation was carried out by SLR consulting at Kenbury Wood landfill site, Devon (centred on NGR SX 9194 8710). Archaeological deposits including a ditch of probable Romano-British date, a cremation and an inhumation also of Romano-British date.

A programme of soil sampling was implemented during the excavation, which included the collection of soil samples from sealed contexts. A series of four samples were submitted for a post excavation assessment. The aims of the sampling were:

- To assess the type of preservation and the potential of the biological remains
- To provide material for radiocarbon dating
- To record any human activities undertaken on the site – both domestic and industrial
- To provide comparative material which will contribute to our understanding of the site within the area as a whole

2. METHODS

Four samples were submitted for assessment:

Table 1: Samples from Kenbury Wood

Sample number	Context	Feature	Amount processed	Amount remaining
1	21	Upper fill of ditch	29.6K	17.7Kg
2	22	Lower fill of ditch	21Kg	None
3	33	Fill of Cremation Urn	4.1Kg	None
4	21 (C14 sample)	Upper fill of ditch	1Kg	None

The samples were examined in the laboratory, where they were described using a pro forma. The subsamples were processed by staff at Birmingham Archaeology using their standard water flotation methods. The flot (the sum of the material from each sample that floats) was sieved to 0.3mm and air dried.

The heavy residue (the material which does not float) was also examined, and the remains of charcoal and plant macrofossils were removed and sent to the author for identification and incorporation into the report. The results presented here incorporate both material from the heavy residue and the flot. The material was examined under a low-power binocular microscope at magnifications between x12 and x40.

A four point semi quantitative scale was used, from '1' – one or a few specimens (fewer than an estimated six per kg of raw sediment) to '4' – abundant remains (many specimens per kg or a major component of the matrix). Data were recorded on paper and subsequently on a personal computer using a Microsoft Access database.

The flot was then sieved into convenient fractions (4, 2, 1 and 0.3mm) for sorting and identification of charcoal fragments. Identifiable material was only present within the 4 and 2mm fractions. A random selection of ideally 100 fragments of charcoal of varying sizes was made, which were then identified. Where samples did not contain 100 identifiable fragments, all fragments were studied and recorded. This information is recorded with the results of the assessment in Tables 2 and 3 below. Identification was made using the wood identification guides of Schweingruber (1978) and Hather (2000).

Taxa identified only to genus cannot be identified more closely due to a lack of defining characteristics in charcoal material.

Two samples were submitted for radiocarbon dating to BETA Anlaytic Laboratories, Florida. A piece of *Alnus/Corylus* (alder/hazel) roundwood was submitted from the upper fill of the ditch (SN.4) and a piece of skull from the inhumation. Each sample underwent acid/alkali/acid pre-treatment prior to dating.

3. RESULTS

Charcoal fragments were present in all of the samples, and scored a maximum of '4' on the semi quantitative scale. Due to the small size of these charcoal fragments and their poor preservation, little interpretable information can be gained from the samples investigated.

The preservation of the charcoal was relatively variable even within the samples. Some of the charcoal was firm and crisp and allowed for clean breaks to the material permitting clean surfaces where identifiable characteristics were visible. However, most of the fragments were very brittle, and the material tended to crumble or break in uneven patterns making the identifying characteristics harder to distinguish and interpret. Table 2 below shows the results of the charcoal assessment. *Quercus* (Oak), and *Alnus/Corylus* (Alder/Hazel) were recorded with *Quercus* being the most frequently recorded.

The total range of taxa comprises oak, and alder/hazel. These taxa belong to the groups of species represented in the native British flora. There are various, largely unquantifiable, factors that affect the representation of species in charcoal samples including bias in contemporary collection which are inclusive of social and economic factors, taphonomy and preservation (Thery-Parisot 2002). The identified taxa are not considered to be indicative of the availability of woodland resources in the local area and are possibly reflective of particular choices of fire making fuel from these resources. The charcoal recovered from the cremation urn was *Quercus* with no other species recorded suggesting that this species was preselected as the most suitable material to form the pyre.

Root / rootlet fragments were also present within all of the samples. This indicates disturbance of the archaeological features, and this may be due to the shallow nature of the topsoil coverage of the archaeological features. This is further confirmed by the presence of earthworm egg capsules in one of the samples.

The radiocarbon date from the upper fill of the ditch (context 21) confirms this upper fill was Romano-British, Cal AD140 to 260 (Cal BP 1680-1670) and Cal AD 280 to330 (Cal BP 1620 to 1520). The inhumation also dated to the same period, Cal AD 260 to 280 (Cal BP 1810-1680) and Cal AD 330 to 420 (Cal BP 1670-1620). The calibrated range of these dates overlap at 2 sigma hence it is not possible to definitively state which feature is the oldest. However, stratigraphically the inhumation was shown to be truncated by the ditch places it at an earlier date.

5. CONCLUSIONS

The charcoal remains show the exploitation of oak and alder/hazel woodland and with the wood collected being used for fire material and also in the construction of a funerary pyre. The sole use of oak in cremation pyres is not unusual and appears to have been selected for its firm support of the body and its properties as a long lasting, high energy fuel (Brickley in Hewson 2006:95).

A basic pH colorimetric test was carried out on the soils from the ditch which gave a pH of 5-6 indicating acidic conditions prevail at the site. This may explain the lack of faunal remains and the poor preservation of bone.

However, due to the small amount of charred material, there is no further interpretable value to these samples.

REFERENCES

English Heritage (2002) *Environmental Archaeology: A guide to the theory and practise of methods, from sampling and recovery to post-excavation.* English Heritage Publications. Swindon.

Hather, J G. 2000 *The identification of Northern European woods; a guide for archaeologists and conservators*, London. Archetype Press.

Hewson, M. 2006. *Excavations at Whitemoor Haye Quarry, Staffordshire, 2000-2004*. British Archaeological Report 428

Kenward, H.K., Hall, A.R. and Jones A.K.G. (1980) *A tested set of techniques for the extraction of plant and animal macrofossils from waterlogged archaeological deposits*. Science and Archaeology 22, 315.

Schweingruber, F H, 1978 *Microscopic wood anatomy.* Birmensdorf. Swiss Federal Institute of Forestry Research

Théry-Parisot, I, 2002, 'Gathering of firewood during the Palaeolithic' in S Thiébault (ed), *Charcoal Analysis, Methodological Approaches, Palaeoecological Results and Wood Uses*, BAR International Series 1063

Table 2: Components of subsamples from Kenbury Wood (BA2150/KWL'11)

Semi-Quantitative score on a scale of 1 – 4: from '1' – one or a few (less than an estimated six per kg of raw sediment) to '4' – abundant remains (many specimens per kg or a major component of the matrix).

Component	**SN. 1 (21) Ditch Fill**	**SN. 2 (22) Ditch Fill**	**SN. 3 (33) Pyre Material**	**SN. 4 (21)**
Charcoal fgts.	4	1	2	3
Earthworm egg capsules		1		
Root/rootlet fgts.	3	4	4	2
Sand	2	3	1	4

Table 3. Complete list of taxa recovered from deposits at Kenbury Wood (BA 2150/KWL'11)

Taxonomy and nomenclature follow Schweingruber (1978). Numbers are identified charcoal fragment for each sample.

Latin Name	**English Name**	**Sample 1 (21) 100+ fgts. max. size – 12mm**	**Sample 2 (22) 28 fgts. max. size – 13mm**	**Sample 3 (33) 100+ fgts. max. size – 4mm**	**Sample 4 (21) 50+ fgts. max. size – 17mm**
Alnus / Corylus	Alder / Hazel	5			2
Quercus	Oak	41	1	16	38
	Indeterminate	45	27	84	10

Table 4. Radiocarbon dating results

Sample/ Beta code	Material	13C/12C	Radiocarbon Age	Calibrated Age
BA2150-BONE BETA-296234	Bone, collagen extraction with alkali	-20.8 ‰	1670+/- 30BP	Cal AD 260 to 280 (Cal BP 1810-1680) and Cal AD 330 to 420 (Cal BP 1670-1620)
BA2150-4-21 BETA-296233	Charred roundwood (alder/hazel) acid/alkali/acid	-24.5 ‰	1790+/- 30BP	Cal AD140 to 260 (Cal BP 1680-1670) and Cal AD 280 to330 (Cal BP 1620 to 1520)

SLR

global environmental solutions

AYLESBURY
7 Wornal Park, Menmarsh Road, Worminghall, Aylesbury, Buckinghamshire HP18 9PH
T: 01844 337380 / F: 01844 337381

BELFAST
24 Ballynahinch Street, Hillsborough, Co. Down, BT26 6AW, Northern Ireland
T: 028 9268 9036 / F: 028 9268 1037

BRADFORD-ON-AVON
Treenwood House, Rowden Lane, Bradford-on-Avon, Wiltshire BA15 2AU
T: 01225 309400 / F: 01225 309401

BRISTOL
Langford Lodge, 109 Pembroke Road, Clifton, Bristol BS8 3EU
T: 0117 9064280 / F: 0117 3179535

CAMBRIDGE
8 Stow Court, Stow-cum-Quy, Cambridge CB25 9AS
T: 01223 813805 / F: 01223 813783

CARDIFF
Fulmar House, Beignon Close, Ocean Way, Cardiff CF24 5HF
T: 029 2049 1010 / F: 029 20487903

CHELMSFORD
Unit 77, Waterhouse Business Centre, 2 Cromar Way, Chelmsford, Essex CM1 2QE
T: 01245 392170 / F: 01245 392171

DUBLIN
7 Dundrum Business Park, Windy Arbour, Dundrum, Dublin 14, Ireland
T: + 353 (0)1 2964667
F: + 353 (0)1 2964676

EDINBURGH
No. 4 The Roundal, Roddinglaw Business Park, Gogar, Edinburgh EH12 9DB
T: 0131 3356830 / F: 0131 3356831

EXETER
The Innovation Centre, Rennes Drive, University of Exeter Campus, Exeter EX4 4RN
T: 01392 247913 / F: 01392 425246

FARNBOROUGH
The Pavilion, 2 Sherborne Road, South Farnborough, Hampshire GU14 6JT
T: 01252 515682 / F: 01252 512274

GLASGOW
4 Woodside Place, Charing Cross, Glasgow G3 7QF
T: 0141 3535037 / F: 0141 3535038

HUDDERSFIELD
Westleigh House, Wakefield Road, Denby Dale, Huddersfield HD8 8QJ
T: 01484 860521 / F: 01484 868286

LEEDS
Suite 1, Jason House, Kerry Hill, Horsforth, Leeds LS18 4JR
T: 0113 2580650 / F: 0113 2818832

MAIDSTONE
19 Hollingworth Court, Turkey Mill, Maidstone, Kent ME14 5PP
T: 01622 609242 / F: 01622 695872

NEWCASTLE UPON TYNE
Sailors Bethel, Horatio Street, Newcastle-upon-Tyne NE1 2PE
T: 0191 2611966 / F: 0191 2302346

NOTTINGHAM
Aspect House, Aspect Business Park, Bennerley Road, Nottingham NG6 8WR
T: 0115 9647280 / F: 0115 9751576

REDDITCH
Brockhill Court, Brockhill Lane, Redditch, Worcestershire B97 6RB
T: 01527 597000 / F: 01527 584408

SHREWSBURY
Mytton Mill, Forton Heath, Montford Bridge, Shrewsbury SY4 1HA
T: 01743 850170 / F: 01743 850868

STAFFORD
8 Parker Court, Staffordshire Technology Park, Beaconside, Stafford, Staffordshire ST18 0WP
T: 01785 253331 / F: 01785 246660

WARRINGTON
Suite 9 Beech House, Padgate Business Park, Green Lane, Warrington WA1 4JN
T: 01925 827218 / F: 01925 827977