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AN ANGLO-SAXON EXECUTION CEMETERY AT WALKINGTON WOLD, YORKSHIRE

Summary. This paper presents a re-evaluation of a cemetery excavated over 30 years ago at Walkington Wold in east Yorkshire. The cemetery is characterized by careless burial on diverse alignments, and by the fact that most of the skeletons did not have associated crania. The cemetery has been variously described as being the result of an early post-Roman massacre, as providing evidence for a 'Celtic' head cult or as an Anglo-Saxon execution cemetery. In order to resolve the matter, radiocarbon dates were acquired and a re-examination of the skeletal remains was undertaken. It was confirmed that the cemetery was an Anglo-Saxon execution cemetery, the only known example from northern England, and the site is set into its wider context in the paper.

This paper offers a new perspective on a previously insecurely dated Anglo-Saxon cemetery at Walkington Wold in east Yorkshire (Fig. 1). The results of excavations at the site were published in 1973, but more recent examination of the skeletal material, including the acquisition of radiocarbon dates, casts new light on the cemetery and its significance. Rather than being of late Roman or early post-Roman date, as has been previously suggested, it can now be demonstrated that the cemetery includes a series of burials of mid- and later Anglo-Saxon date. The cemetery consists of a number of decapitated individuals but, contrary to earlier speculation, it is unlikely to represent a massacre, and is more plausibly interpreted as an Anglo-Saxon execution cemetery, used periodically over perhaps as much as a couple of hundred years.

THE EXCAVATIONS

Between 1967 and 1969 two Bronze Age barrows at Walkington Wold were excavated by J.E. Bartlett and R.W. Mackey on behalf of the East Riding Archaeological Society (Bartlett and Mackey 1973). During these excavations 12 burials were discovered cut into the southern part of Barrow 1 (Fig. 2), which was located 36 m to the south-west of Barrow 2. The orientation of the burials was apparently random, and the methods of disposal varied. There were eight extended supine burials and four flexed burials, at least two individuals were interred in shallow graves while three were buried together in the same grave (Bartlett and Mackey 1973, 25). Among these burials, there were two complete inhumations, and a further ten inhumations containing individuals without crania, interpreted as decapitations. Eleven disarticulated crania,

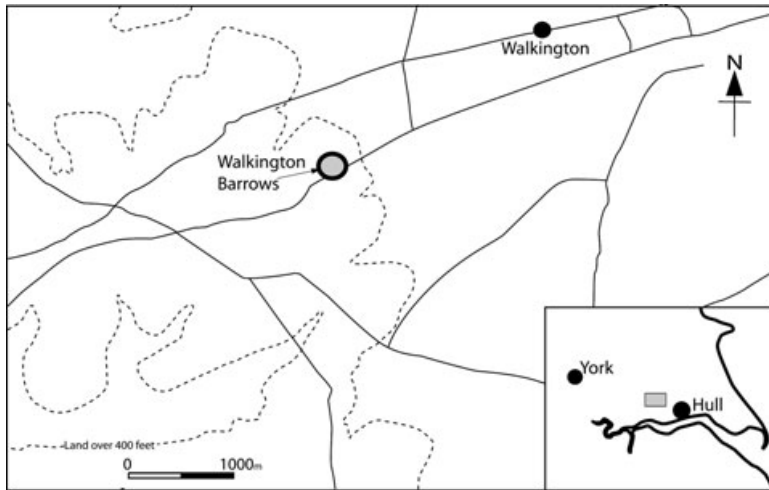


Figure 1
Location map (after Bartlett and Mackey 1973, drawn by Oliver Jessop).

in some cases articulated with mandibulae and/or vertebrae, were also recovered. The excavators deduced that ‘a massacre or a series of executions’ had taken place at the site (Bartlett and Mackey 1973, 3). These burials were assigned a date early in the post-Roman period. The date was based on the likelihood that the burials post-dated the late Roman occupation identified at Barrow 1. This occupation was evidenced by over 700 coins and thousands of sherds of pottery of late fourth-century date, and it was suggested that the barrow, in a commanding position with views across the Humber and out to the east coast, may have served as an inland Roman signal station (Bartlett and Mackey 1973, 27). Half a dozen small bronze objects of post-Roman ‘Germanic manufacture’ were found near to the bodies, and the excavators concluded that the ‘most likely date’ for the burials was the fifth century (Bartlett and Mackey 1973, 10). They suggested that the cemetery may indicate a violent end to the putative signal station, arguing that the burials, some of which were sealed by chalk cobbles and soil from the Bronze Age burial mound, perhaps indicate ‘the deliberate slighting of the site in early post-Roman times’, and they recalled similar evidence from other signal stations (Bartlett and Mackey 1973, 13). However, the dating offered by Bartlett and Mackey was, as they admitted, speculative. Their excavations suggested only that the burials date to between the fourth century – given that fourth-century pottery was found in the fill of two of the graves and that a coin of Claudius Gothicus (AD 268 to 270) was found by the shoulder of one skeleton – and some time before the later Middle Ages, since the site is crossed by parallel medieval ditches, perhaps associated with a droveway (Bartlett and Mackey 1973, 21, 26). Despite the uncertainties over dating, the site, nonetheless, has entered the broader secondary literature as a late Roman or sub-Roman cemetery (for example, see Allison 1976, 41–2; Philpott 1991, 77).

REINTERPRETATIONS

The site was re-examined in 1985 by G.B. Bailey, who questioned the deduction that Barrow 1 had been reused as a Roman signal station. Instead, he suggested that the large numbers

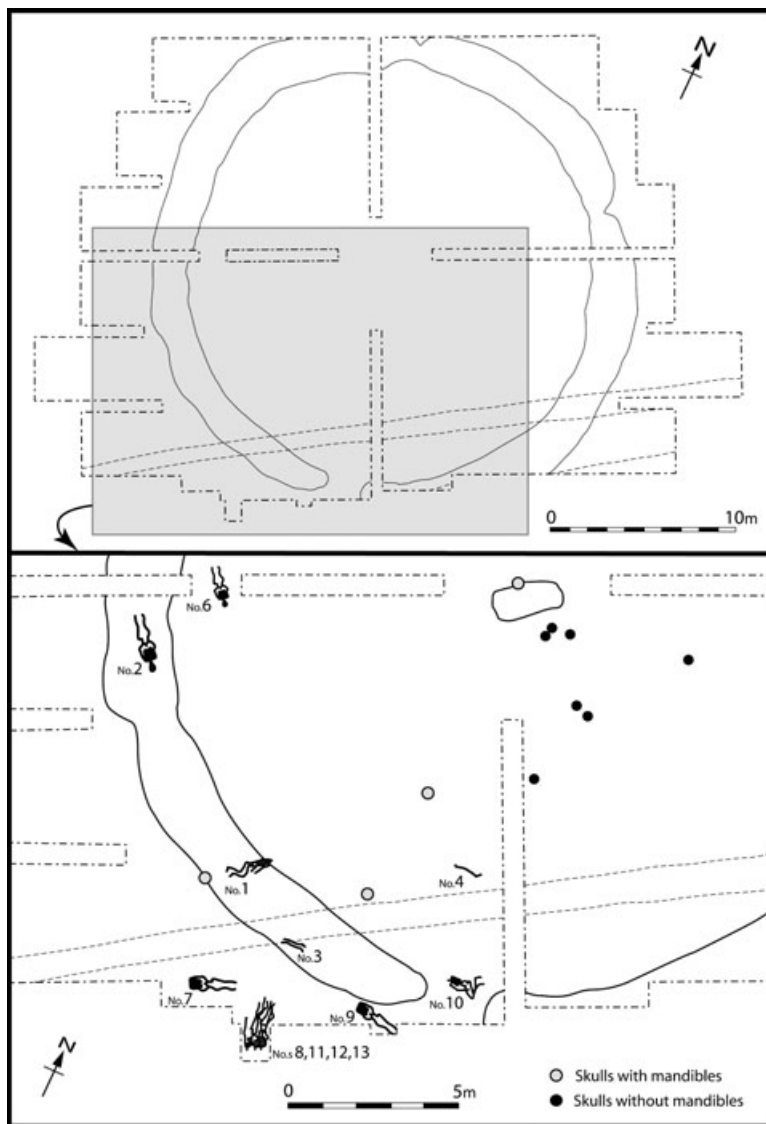


Figure 2
Plan of Walkington Wold Barrow 1 (after Bartlett and Mackey 1973, drawn by Oliver Jessop).

of Roman coins were unusual among numismatic finds from Roman signal stations, and that they were more in keeping with finds from temple sites. Moreover, he suggested that some of the metalwork tenuously identified by Bartlett and Mackey as ‘Germanic’ was more likely to be of Roman date. In support of his argument that the material evidence derived from a temple site, he suggested that it was significant that the metalwork had been damaged, as if ‘ritually rendered useless’ (Bailey 1985, 11–12). Decapitated individuals are certainly found in many Roman cemeteries, but normally the heads are placed close to the body, often between or below the legs,

TABLE 1
Radiocarbon dates obtained from Walkington Wold

Laboratory Number	Skeleton Number	Radiocarbon Age (BP)	Calibrated date range (1 σ)	Calibrated date range (2 σ)
OxA-10826	11	1336 \pm 34	AD 655–765	AD 640–775
OxA-12716	Humerus associated with Skeleton 13	1160 \pm 25	AD 780–960	AD 775–980
OxA-12717	8	1037 \pm 27	AD 985–1020	AD 900–1030

and decapitation burials are usually found within larger cemeteries, rather than as separate cemeteries as at Walkington Wold (Bailey, 1985: 13; Philpott, 1991: 77–89; Boylston *et al.* 2000). Accordingly, Bailey suggested that the archaeological evidence may indicate the site of a small shrine associated with a ‘Celtic’ head cult, of which examples have been identified elsewhere in east Yorkshire, a tradition that survived into the Roman period (on head cults in the later Iron Age, see Stead 1971, 43). Bailey suggested that if this deduction were correct, then the skulls were perhaps ‘displayed as a warning to other potential victims’ or, alternatively, as ‘an object of reverence’ (Bailey 1985, 13).

More recently, Andrew Reynolds has suggested that the site may be a later Anglo-Saxon execution cemetery because, although it was not closely datable, it bears many of the characteristics of such cemeteries (Reynolds 1997, 36; 1998, 155–6). For example, there is evidence for decapitation, varied burial alignment, a triple burial and possible evidence, inferred from the site plan, for burial with tied hands. Moreover, like other known execution cemeteries, the site is also in a prominent elevated position, associated with a prehistoric monument, and located near to the boundary between two local Anglo-Saxon administrative units, the hundreds of Welton and Cave (Reynolds 1998, 155; Pantos 2004).

In the light of these competing interpretations it was apparent that understanding of the burials at Walkington Wold could only be refined by recourse to radiocarbon dating, since the stratigraphy and general context of the site provided only broad parameters. Accordingly, permission was granted by Hull and East Riding Museum, where the bones are curated, to submit samples for radiocarbon dating and funding was secured from the Natural Environment Research Council. Four radiocarbon samples from Walkington Wold were submitted to the Oxford Radiocarbon Laboratory (Buckberry and Hadley in prep.). Unfortunately, one of the samples, from the Skull associated with Skeleton 1, did not have sufficient collagen surviving to obtain a radiocarbon date. However, the samples from Skeletons 8 and 11, from the ‘triple burial’, and a humerus associated with the extensively disturbed Skeleton 13, successfully produced dates spanning the late seventh to early eleventh centuries (Table 1).¹ It should be noted that the humerus (AD 775–980), which was considered to be more suitable for dating than the cervical vertebrae and foot bones that comprised the articulated remains of Skeleton 13, was found in the grave fill between Skeletons 8 and 11; thus, it was not certain that the humerus was part of Skeleton 13, and, indeed, the radiocarbon date (AD 775–980) revealed that it must have belonged to a different individual, since it produced a later date than one of the burials (Skeleton 11) that disturbed the articulated remains of Skeleton 13. The two radiocarbon dates from the so-called triple burial (AD 640–775 and AD 900–1030) did not overlap at the 95% confidence level,

1 The radiocarbon dates were calibrated using Oxcal (v3.5) and the INTCAL98⁷ calibration curve.

revealing that they were not contemporary burials. The acquisition of radiocarbon dates, combined with the nature of the site, confirmed that Walkington Wold was, indeed, an Anglo-Saxon execution cemetery.

Andrew Reynolds (1997; 1998) has done much to raise awareness of execution cemeteries as a distinct category of Anglo-Saxon funerary provision. However, many of the sites to which he has drawn attention were excavated in the nineteenth or early twentieth century, and generated only cursory excavation reports, often with sketchy illustrations, if any are provided at all (see discussion in Hayman and Reynolds 2005). Even those sites published in detail for their era, for example Meon Hill (Hants) and Stockbridge Down (Hants), do not meet the standards of analysis and publication expected of modern excavations (Liddell 1933; Hill 1937). In addition, the skeletal material frequently does not survive, meaning that no further information on the cemetery and those interred there can be generated without further excavation. By contrast, Walkington Wold was excavated relatively recently, was a comparatively well-recorded excavation, and the bones from the excavation survive and can be reanalysed. Having acquired the radiocarbon dates, this site presented an important opportunity to investigate further the phenomenon of the Anglo-Saxon execution cemetery.

SKELETAL ANALYSIS

The skeletal material from Walkington Wold was previously analysed by Jean Dawes and her full report was included in the 1973 publication. However, in light of recent developments in osteological techniques, it was thought that the skeletal material would benefit from reanalysis. As the current research was concerned only with the late Anglo-Saxon burials, those skeletons from the site dating to the Bronze Age were not reanalysed by the present authors.² It should be noted that the skeleton numbers and skull numbers used in the museum archive are different from the skeleton numbers and skull numbers used in the 1973 publication. A partially complete list relating archive numbers to skeleton numbers was provided to the authors by Rod Mackey and the remaining skeletons and skulls were identified with their publication number by comparing the completeness of the skeleton, pathologies present and the state of their dentitions with the data presented in Jean Dawes' report (see Table 2). For simplicity, and for the ease of any future researchers, the skeleton and skull numbers used in this paper relate to the archive numbers used on the boxes in the museum.

Of the 12 Anglo-Saxon skeletons, two were complete burials, with the cranium in anatomical alignment with the rest of the body (Skeletons 2 and 6). These burials were set slightly apart from the remainder of the burials, and it is possible that these relate to a different period of use; however, without further radiocarbon dates, it is impossible to confirm this. One further skeleton (Skeleton 1) was seemingly associated with its head, as a cranium, mandible and several cervical vertebrae were located 0.5 m from the feet of the skeleton, and it is therefore stored as a single individual within the archive. However, as we shall see, our reanalysis demonstrated that this deduction was erroneous (see below). The remaining skeletons were in varying levels of completeness, and none of them was associated with a cranium. The least complete skeletons were Skeleton 3, represented by both lower legs (distal femora, tibiae, fibulae and some foot bones), Skeleton 4 represented by the right leg only (femur, tibia, fibula and some

2 All skeletal analysis was undertaken by JLB.

TABLE 2

Summary of archive numbers used in the Hull and East Riding Museum and publication numbers used in Bartlett and Mackey 1973. The archive numbers are used throughout the present paper

Archive Number	Original Publication Number	Notes
1	13	Cranium, mandible and cervical vertebrae boxed with this individual do not belong to this skeleton
2	4	Complete skeleton with articulated cranium, numbers match the excavator's list
3	11	Identification based on completeness of skeleton
4	15	Identification based on completeness of skeleton
6	5	Complete skeleton with articulated cranium. Skeleton numbers match the excavator's list
7	12	Skeleton numbers match the excavator's list
8	9	Identification based on the pathologies present
9	10	Skeleton numbers match the excavator's list
10	14	Skeleton numbers match the excavator's list
11	8	Skeleton numbers match the excavator's list
12	7	Identification based on the pathologies present
13	6	Skeleton numbers match the excavator's list
Skull associated with Skeleton 1	Skull 1	Stored with Skeleton 1, but does not relate to this individual
Skull 1	Skull 2	Identification based on dentition
Skull 2	Skull 3	Identification based on dentition
Skulls 4–11	Skulls 4–11	Identification based on dentition confirms that the archive numbers and publication numbers for these Skulls were the same

foot bones), and Skeleton 13, which was cut by the graves of Skeletons 8, 11 and 12, and was represented by the right tibia and both feet at one end of the grave, and the cervical vertebrae at the other end of the grave (with a disarticulated right humerus, part of a right radius, a right tibia shaft and several carpals present in the grave fill). Skeleton 11 was the sole complete burial with a mandible, and was only missing a cranium.

In addition to the Skull associated with Skeleton 1, a further ten disarticulated crania were found at the site. Three of these were found with their mandibulae and/or several of the superior cervical vertebrae articulated with the cranium. These crania must have been buried *in situ* before the soft tissue holding them together had fully decomposed. The remaining crania did not have mandibulae or vertebrae, and therefore were probably deposited in their final location after the soft tissues holding the bones together had decomposed. The absence of mandibulae may be the result of displaying the heads of the deceased on stakes, a practice inferred from references to head stakes (*heafod stoccan*), sometimes explicitly linked to the treatment of criminals, in Anglo-Saxon written sources, including charter boundaries (S430 and S501; Rypins 1924, 161; Skeat 1881, 492; Meaney 1995, 30). Such a practice has tentatively been identified at Cottam (E Yorks), where a weathered cranium found in a pit may have been formerly displayed (Richards 1999, 34–7, 92–4; see also discussion below). At Walkington Wold, given that some crania were found 'in the filled-in tunnels of a badger sett' (Bartlett and Mackey 1973, 25), along with at least six mandible fragments and vertebrae, it is possible that some bones, at least, were moved by badgers. Nonetheless, given that some of the crania were associated with other bones, it seems unlikely that the crania were brought to their final resting place by the actions of badgers alone, although they may have been subsequently disturbed by them.

TABLE 3
Sex of individuals buried at Walkington Wold

Sex	Skeletons with associated crania	Skeletons without associated crania	Disarticulated crania	Total (crania)
Male	2	6	9	11
Probable male	0	1	2	2
Unsexed	0	3	0	0

The skeletal remains represent 13 crania and at least 12 post-cranial skeletons, in varying states of completeness. In addition, several disarticulated bones were recovered from the site, and it is possible that these derive from yet more burials. Furthermore, given that the articulated burials lie at the southern extreme of the areas excavated by Bartlett and Mackey, it is possible that the execution cemetery extended to the south of the excavated area.

Assessment of sex

The sex of the individuals was assessed during the present research using standard morphological features of the pelvis and skull (Buikstra and Ubelaker 1994). Many of the criteria for assessment of sex have remained unchanged since the initial report written by Jean Dawes was compiled; however, it is unlikely that the sexing method using the pubic bone was used in the first bone report.³ This method has been shown to provide highly accurate assessments of sex, and was applied to all of the skeletons with a pubic bone present during our reanalysis.⁴

Eight of the skeletons were assessed as male and one as a probable male. For the remaining three individuals (Skeletons 3, 4 and 13) sex could not be determined due to the incompleteness of the remains. Nine of the 11 disarticulated crania were assessed as male, and the two remaining crania were assessed as probable male (see Table 3). The most significant result concerns Skeleton 1, which was previously deemed to be female by Jean Dawes but which has been identified as a probable male in the present analysis. Overall, this skeleton is certainly very gracile, with many feminine features; however, the pubic bone is characterized by a narrow pubic angle, no sub-pubic concavity and no ventral arc. All of these latter traits indicate that this individual is male, with an accuracy level of 96 per cent (Phenice 1969). This conclusion is important, as Skeleton 1 has been noted as being one of a very small corpus of females buried in late Anglo-Saxon execution cemeteries (Reynolds 1998, 155–6), and it also highlights the need for reanalysis of human skeletal remains in light of recent methodological advances. Assuming that the disarticulated crania belonged to the skeletons buried without heads, and not to additional individuals, then the cemetery population consists of a minimum of 11 males and two probable males.

3 The Phenice (1969) method for sexing using the pubic bone was published around the time of the excavation of Walkington Wold, and was probably unavailable to Jean Dawes at the time of her analysis. However, the method has since been recognized as the most accurate for assessing sex.

4 Pubic bones are frequently absent or damaged in archaeological populations. For example, Waldron (1987) reported a survival rate of 29 per cent for Romano-British skeletons from West Tenter Street, London.

TABLE 4
Age-at-death of individuals buried at Walkington Wold

Age	Skeletons with associated crania	Skeletons without associated crania	Disarticulated crania	Total (crania)
Young adult (18–25 years)	2	2	3	5
Young to young middle adult (20–35 years)	0	2	2	2
Young middle adult (26–35 years)	0	2	4	4
Young or middle adult (18–45 years)	0	1	2	2
Adult (18+)	0	3	0	0

Estimation of age

Age-at-death was estimated using standard osteological methods, many of which have been developed or revised since the initial osteological report (Miles 1962; Meindl and Lovejoy 1985; Webb and Suchey 1985; Suchey *et al.* 1988; Scheuer and Black 2000; Buckberry and Chamberlain 2002). All of the individuals buried at Walkington Wold were adults (see Table 4). Our reassessment of age-at-death provided the evidence that the cranium, mandible and vertebrae buried 0.5 m from the feet of Skeleton 1 did not belong to that individual. Assessment of the degree of epiphyseal and apophyseal fusion of Skeleton 1 revealed that this individual was aged between 18 and 25 years (probably at the lower end of this range), whereas the degree of dental wear and molar eruption of the associated cranium, mandible and vertebrae is consistent with an age estimate of 26 to 35 years.

By combining the data for individuals with associated crania with the data for the disarticulated crania, the demography of the entire population can be derived. This reveals that a minimum of five individuals were young adults (18 to 25 years), two were aged between 20 and 35 years, and a further four were aged between 26 and 35 years. The age-at-death of the remaining two individuals could not be determined precisely; however, it is certain they were both adults and were no older than 45 years. Overall, the age and sex data for Walkington Wold show that the population consisted entirely of young to middle adult males (18 to 45 years).

Evidence of decapitation

The skeletons were analysed macroscopically for evidence of decapitation. Although 11 individuals were buried without their heads articulated with their bodies, it cannot be assumed that all of these individuals had been decapitated. It has already been mentioned that many of the disarticulated crania were found in an old badger sett, and it is just possible, if a little improbable, that these skulls were all somehow moved from the graves containing their bodies into the sett by the badgers. However, at least four individuals (the Skull associated with Skeleton 1 and Skulls 4, 8 and 11) had their heads removed and buried elsewhere while there was still soft tissue holding the mandible and/or several vertebrae together with the cranium. Thus, it can be assumed that these four individuals, at least, had their heads removed from their bodies close to the time of death, as it would be virtually impossible for an animal to move bones and leave them articulated, since the soft tissue holding these bones together would decay over a relatively short period of time.⁵

5 For a discussion of the many factors that influence the decay of human remains, see Janaway 1996. It can take from two months to 20 years for bodies to become completely skeletonized (Byers 2005; Pollard 1996).

TABLE 5
Burial data from Walkington Wold

Archive number	Age	Sex	Osteological evidence of decapitation	Body position	Additional information
1	Young adult (18–25, probably at the lower end of this age range)	Probable male	None observed	Flexed on left side	Cranium located 0.5 m beyond feet does not belong to this individual. The young age of Skull 8 indicates that it may belong to Skeleton 1 instead
2	Young adult (18–25)	Male	None observed, cranium articulated with body	Extended and supine	Shallow grave (NE–SW) cut into pre-Roman fill of barrow ditch. Coin AD 268–270 by shoulder, 4C pottery in fill
3	Adult (18+)	?	None observed	Lower half of both lower limbs, probably extended	Cut by roadside ditch
4	Adult (18+)	?	None observed	Complete right lower limb, flexed	Cut into burial mound
6	Young adult (18–25)	Male	None observed, cranium articulated with body	Extended and supine, with arms crossed over torso	Shallow grave (NE–SW) in foot of barrow mound. 4C pottery in fill
7	Young to middle adult (20–35)	Male	Two cut marks to the anterior of the first thoracic vertebra	Extended and supine	On surface of natural chalk, outside barrow ditch. No trace of grave cut
8	Young middle adult (25–36)	Male	None observed	Extended and supine	Part of ‘triple burial’ that disturbed Skeleton 13
9	Young or middle adult (18–45)	Male	None observed	Extended and supine	Located beyond barrow ditch. No trace of grave cut
10	Young middle adult (26–35)	Male	None observed	Flexed on right side, with left arm contorted under back	Over prehistoric causeway
11	Young to middle adult (20–35)	Male	Peri-mortem fracture to base of mandible. Observable on both sides, but more pronounced on right side	Supine with legs flexed and slightly apart	Part of ‘triple burial’ that disturbed Skeleton 13. Between Skeletons 8 and 12
12	Young adult (18–25)	Male	None observed	Extended and supine	Part of ‘triple burial’ that disturbed Skeleton 13
13	Adult (18+)	?	None observed	Feet at one end of grave and cervical vertebrae at other – implies extended supine. Lack of disturbance of cervical vertebrae would suggest later grave did not disturb cranium of this individual. Disarticulated humerus, radius, carpals and tibia in grave fill may belong to this individual. The humerus is robust and was sexed as possible male	Disturbed by ‘triple burial’

TABLE 5
continued

Archive number	Age	Sex	Osteological evidence of decapitation	Body position	Additional information
Skull associated with Skeleton 1	Young middle adult (26–35)	Probable male	Blade injury to base of mandible, flat and polished. No signs of injury to cervical vertebrae, but poorly preserved	Cranium, mandible and vertebrae	Located 0.5 m beyond feet of Skeleton 1
Skull 1	Young adult (18–25)	Male	None observed	Cranium only	
Skull 2	Young adult (18–25)	Male	3 blade injuries to occipital: 1) glancing blow exposing area of diploë; 2) shallow blow, just cutting into crania; 3) deep blow exposing diploë with 2 radiating fractures. Direction of blows: upwards (inferior to superior)	Cranium only	
Skull 4	Young to middle adult (20–35)	Male	None observed	Cranium and mandible. Badly crushed, most of right side damaged or missing	
Skull 5	Young to middle adult (20–35)	Male	Large penetrating blade injury to occipital on right side. Second blow sliced off the base of the left mastoid process and zygomatic. Direction of blows: from behind	Cranium only	
Skull 6	Young or middle adult (18–45)	Male	None observed	Cranium only	
Skull 7	Young or middle adult (18–45)	Male	None observed	Cranium only	
Skull 8	Young adult (18–25, probably at the lower end of this age range)	Male	Blade wound to vertebral body of C4 and to base of C3. Direction of injuries: from front	Cranium, mandible and vertebrae	The young age of this cranium indicates that it may belong to Skeleton 1
Skull 9	Young middle adult (26–35)	Male	None observed	Cranium only	
Skull 10	Young middle adult (26–35)	Male	None observed	Cranium only	
Skull 11	Young middle adult (26–35)	Probable male	None observed	Cranium, mandible and vertebrae. Fragmentary and incomplete	

Evidence of trauma consistent with the removal of the head was found in five individuals, consisting of two skeletons and three disarticulated crania, while an additional cranium had trauma that, although not consistent with decapitation, is indicative of repeated blows to the back of the head. The Skull associated with Skeleton 1, a young middle adult (26 to 35 years) and probably male, had a peri-mortem blade injury (i.e. one that occurred around the time of death) consistent with decapitation on the posterior of the mandibular body. Skeleton 11, which was fairly complete aside from the cranium, was a young to middle adult male (20 to 35 years) with a peri-mortem fracture to the base of his mandible. This injury is consistent with the follow-through from a blade injury from behind, similar to that observed on the Skull associated with Skeleton 1 (Fig. 3), and appears to have removed the odontoid process of the second cervical vertebra (this area of the bone has been obscured by the use and subsequent removal of consolidant applied at the time of excavation). Skull 2, a young adult male (18 to 25 years), had three blade injuries to the back of his cranium (Fig. 4). The blows were delivered in an upwards direction, indicating that the victim was most likely bent over with their head held in extreme flexion (i.e. with their chin resting on their chest), a position that is unlikely to have occurred had these injuries been the result of armed combat. The injuries are not consistent with decapitation, but the concentration of them on the occipital and the direction of the blows suggest that decapitation may have been attempted. It is, indeed, possible that a further blow or blows succeeded in removing the head at a lower level through the neck region, but this proposition cannot be verified since no vertebrae or mandible were found with this cranium. Nonetheless, this burial is probably best interpreted as a 'botched' decapitation. Skull 5, a young to middle adult male (20 to 35 years), had a blade injury cutting into the occipital bone (Fig. 5). A second blade injury to the base of the cranium, slicing off the base of the left mastoid process and zygomatic bone, probably succeeded in decapitating the individual. A possible third injury was present anterior to the large penetrating injury, on the inferior of the occipital. It is possible that either of these Skulls (2 or 5) belonged to Skeleton 11 (or, indeed, Skeleton 7; discussed below), and that the blow to the mandible of this skeleton was the final, terminal, injury. However, due to the state of preservation, it is impossible to verify this, and thus it can only be stated that between three and four individuals suffered sharp force trauma to the back of the head/neck region that is consistent with the use of a large bladed weapon, for example an axe or sword.

Two individuals had suffered peri-mortem injuries to the anterior surfaces of the vertebrae. Skull 8, from a young male adult (18 to 25 years, probably at the lower end of this age range), exhibited injuries delivered from the front in the upper neck region. These included a fine cut mark to the anterior of his fourth cervical vertebra (Fig. 6). A further cut was present on the base of the third cervical vertebra. No other cut marks were evident on the bones, but since they were in a poor state of preservation, evidence of any other injuries may have been lost. Skeleton 7, a young to middle adult male (20 to 35 years), had two narrow cut marks to the front of the first thoracic vertebra (Fig. 7). The cut marks were fine and were running parallel to each other across the bone and were delivered from the front. Both of these individuals suffered from cuts to the front of their necks, which can be interpreted as evidence of blood-letting, throat slitting or decapitation from the front. The depth of the cuts to the second thoracic vertebra of Skeleton 7 would suggest the latter, a highly unusual form of decapitation, perhaps indicating the deliberate removal of the head either around the time of, or shortly after, death. The narrow nature of the cuts suggests that the weapon was a thin sword or knife, rather than an axe.

It can be concluded, therefore, that a minimum of four, but potentially as many as six, individuals from this cemetery had injuries consistent with violent death, probably execution, or

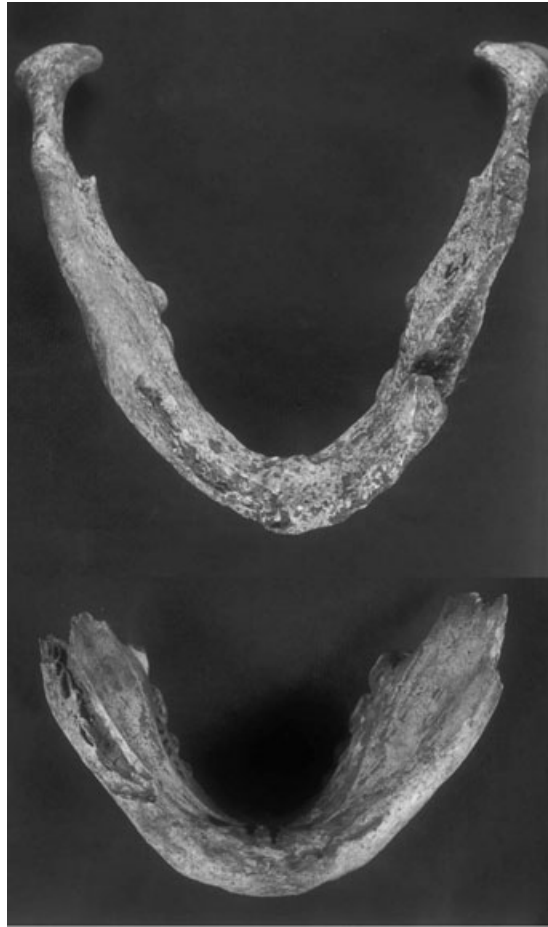


Figure 3

Mandibulae from the Skull associated with Skeleton 1 (above) and from Skeleton 11 (below) showing evidence of decapitation from behind (Jo Buckberry).

mutilation immediately post-mortem.⁶ Moreover, two further Skulls (4 and 11) were found articulated with the mandible and the first three cervical vertebrae and the mandible respectively,⁷ indicating that they were not subject to post-mortem disturbance but were deliberately removed from the bodies around the time of death. No other injuries were found on

6 Due to the absence of duplication of skeletal parts, we cannot exclude the possibility that Skulls 2 or 5 belong to Skeletons 7 and 11.

7 Jean Dawes reported that Skull 11 consisted of 'the left petrous temporal and portion of the squamous temporal, the right petrous temporal, most of the upper jaw arch, the mandible without ascending rami and the first three cervical vertebrae' (Bartlett and Mackey 1973, 85); however, just the left and right temporal fragments and the maxilla were present at the time of our reanalysis, suggesting these elements had been misplaced during storage.



Figure 4
Posterior of Skull 2 showing three blade injuries (Jo Buckberry).



Figure 5
Posterior of Skull 5 showing blade injury (Jo Buckberry).

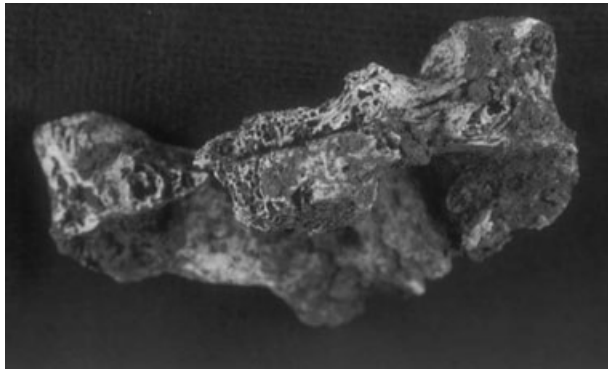


Figure 6
Fourth cervical vertebra from Skull 8 with single cut mark to the anterior (Jo Buckberry).



Figure 7
First thoracic vertebra from Skeleton 7 with two cut marks to the anterior (Jo Buckberry).

the front of the crania or elsewhere on any of the skeletons from Walkington Wold, suggesting that these individuals had not died in a battle. In contrast, medieval skeletons from a mass grave relating to the battle of Towton (AD 1461, N Yorks) had multiple injuries to both their cranial and post-cranial bones (Novak 2000). Thus, the interpretation of this site as an execution cemetery is well supported by the osteological evidence.

DISCUSSION

The radiocarbon dates yielded by the skeletal material reveal that the site is rather later in date than the excavators suspected (although within their largest possible date range for the burials), and the various discussions of the significance of the burials previously offered by Bartlett and Mackey and later by Bailey are now clearly invalid. This new dating evidence and our analysis of the skeletal material from Walkington Wold confirm that, as Andrew Reynolds

suggested, the site is an Anglo-Saxon execution cemetery. Anglo-Saxon execution cemeteries have been extensively studied as a group in recent years by Andrew Reynolds and their characteristics have been identified as including the presence of burials on varied alignments, shallow and undersized graves, unusual burial positions, prone burials, multiple interments and predominantly adult male populations, and evidence of decapitation or other trauma (for example amputation of hands or feet), and of tied hands and/or feet (Reynolds forthcoming). In addition, the cemeteries are frequently situated close to boundaries, especially hundredal boundaries, and are often in visible locations, such as near pre-existing earthworks, especially prehistoric barrows, and along major routeways (Hayman and Reynolds 2005, 37–8). Many such cemeteries were excavated in the early part of the twentieth century and this limits our capacity to throw new light on the phenomenon of execution cemeteries, but more recent excavation and publication, of cemeteries such as those at Staines (Hayman and Reynolds 2005), South Acre (Wymer 1996) and now Walkington Wold, permit more detailed and reliable insight into the nature and significance of such cemeteries, which can throw important light on the processes of state formation and the definition of consecrated ground (see below).

Our analysis has enabled us not only to refine the date of the cemetery at Walkington Wold, but also to cast further light on its characteristics and context. We have, for example, been able to demonstrate that the cemetery was used sporadically over a long period of time from the seventh or eighth century to at least the tenth century AD. Most significantly, since the radiocarbon dates for two of the skeletons do not overlap at the 95% confidence level, this indicates that the so-called ‘triple grave’ was reopened for further burial on at least one occasion. It is also notable that these three burials cut through an earlier interment, further emphasizing the longevity of the site for burial. This evidence reveals the importance of acquiring more than one radiocarbon date from supposedly multiple burials, which will permit distinction of genuine instances of multiple burial from successive grave reuse. The length of time over which this grave was reused implies that the grave must have been marked, although no evidence of a post-hole or pit was noted at the time of excavation. Having said this, the site photographic archive reveals that there was a layer of soil between Skeleton 11 and Skeleton 8, with the latter partially placed between the splayed legs of the former, and thus Skeleton 8 may conceivably have been buried without reference to the presence of earlier burials.

Our reanalysis of the human skeletal remains has also produced significant new insight. We have been able to revise the initial impression that one of the individuals buried at Walkington Wold was female. Our analysis suggests that, on the contrary, all were adult males, aged between 18 and 45 years, with the majority of these falling at the younger end of this spectrum. Many older excavation reports on execution cemeteries do not provide details on the sex or age of the skeletons, and those that do generally need to be treated with caution due to recent developments in age and sex determination techniques. Nonetheless, the impression that emerges from these reports, as indeed from more modern analyses, is that the populations of execution cemeteries were overwhelmingly male (Wymer 1996, 89; Hayman and Reynolds 2005). Whether or not men were more inclined to criminal activity than women, the evidence indicates that men were more likely to be executed for their criminal behaviour than women during the later Anglo-Saxon period.

The prevalence of decapitation at Walkington Wold appears to have been higher than at many other execution cemeteries. It is admittedly difficult to be absolutely sure of the numbers of burials at Walkington Wold, since the isolated crania cannot certainly be said to pertain to the various headless bodies, while decapitation can only be securely identified osteologically for

between four and six individuals, but, nonetheless, we can state that between 30.8 and 84.6 per cent of individuals buried at this site had been decapitated. Although this is a wide estimation, it is still significant, since at other execution cemeteries rates of decapitation appear to be rather lower; for example, decapitation has been identified among 19 per cent of the individuals buried at Staines (now Surrey, formerly in Middlesex), 23 per cent of individuals at Ashstead (Surrey) but only 4 per cent of those buried at Guildown (Surrey) (Hayman and Reynolds 2005). The study of execution cemeteries suggests that decapitation was not the principal means of execution, with hanging being, perhaps, more common, although difficult to identify osteologically (Reynolds 1999, 105). The two individuals at Walkington Wold buried with their heads articulated with their bodies, if, indeed, they date to the same period as the execution burials, may have been victims of hanging. However, we must remember that so-called execution cemeteries also sometimes contained the burials of 'outsiders', such as excommunicates, who are known to have been excluded from burial in consecrated ground in later Anglo-Saxon England (Reynolds 1999, 103).

Prior to the availability of radiocarbon dating the only dating evidence produced for execution cemeteries, such as that from Guildown, Meon Hill and Stockbridge Down, was largely in the form of eleventh-century coins and other metalwork of a similar date (Hayman and Reynolds 2005). More recently, however, radiocarbon dating methods have revealed that the earliest examples of separate execution cemeteries can be found in the seventh to eighth centuries, and include sites such as Sutton Hoo (Suffolk), Old Dairy Cottage (Hants) and Staines (Carver 2005, 347–8; Cherryson 2005; Hayman and Reynolds 2005; Nenck *et al.* 1991, 157–8; Reynolds 1997, 37). Prior to this date, deviant burials (including examples of prone burial, decapitation and loss of skeletal extremities), which may represent either execution victims or those who had been mutilated as a form of punishment, are found within larger cemeteries. Examples include the beheaded individual in Grave 26 from the fifth-century cemetery at Alfriston (Sussex), the probably sixth-century male from Grave 32 at Westgarth Gardens (Suffolk) who had had his left hand cut off, and the sixth-century female from Loveden Hill (Lincs) whose feet had been amputated (Reynolds 1997, 35; Griffith and Salzmann 1914, 35; West 1988, 28; Meaney 1964, 158–9). It should be noted that in none of these cases was osteological evidence supporting amputation published. This highlights the need for full osteological analysis in order to confirm that these are, indeed, potential judicial mutilations and decapitations. Otherwise, we cannot rule out misinterpretation of an incomplete skeleton, with the small hand or foot bones not recovered, or from which skeletal parts had been disturbed in antiquity.

Andrew Reynolds has linked the emergence of separate execution cemeteries to the process of state formation, which was consolidated in the later sixth and seventh centuries. The process of state formation, he suggests, 'would have seen the genesis of the institutions necessary for the maintenance and governance of distinct political units. Such institutions would have included means for the punishment of those who contravened the accepted norms of society' (Reynolds 1997, 37). Alongside these processes of state formation, the conversion of the various kingdoms to Christianity and the emergence of a network of ecclesiastical provision led to distinctions between burial in consecrated ground for Christians and burial in unconsecrated ground for non-Christians and excommunicates, among them felons (Reynolds 1997, 37–9). Documentary sources do not refer to the exclusion of certain offenders from burial in consecrated ground until the early tenth century, but archaeological evidence indicates that certain individuals, particularly those who had been executed, *were* excluded from burial in churchyards

from the seventh or eighth century. From the tenth century the Church became ever more influential in judicial matters, and there is little doubt that the trying, execution and disposal of felons was intimately bound up with Christianity, and 'a desire to mark out clearly the non-Christians within society', as Reynolds has suggested (Reynolds 1997, 39).

The radiocarbon dates suggest that the execution cemetery at Walkington Wold was founded in the earliest phases of the development of separate funerary provision for execution victims. However, the site was apparently periodically used for the burial of execution victims at later dates. As such, the cemetery at Walkington Wold also belongs to a small corpus of execution cemeteries that appear to have been in use for a long period of time. For example, a series of radiocarbon dates indicates that the execution cemetery at Staines was in use from the eighth to the twelfth centuries (AD 684 to 893, AD 999 to 1186 and AD 1024 to 1222 at the 95% confidence level) (Hayman and Reynolds 2005), and the cemetery at South Acre (Norfolk) was in use from the sixth to the tenth centuries, and possibly longer (AD 80 to 550 and AD 800 to 1020 at the 95% confidence level) (Wymer 1996, 88). Recently acquired radiocarbon dates for the execution cemetery at Old Dairy Cottage also suggest that the cemetery was in use over a long period of time, with one of the burials yielding a radiocarbon date of AD 775 to 965 and the other AD 890 to 1020, both at the 95% confidence level (Cherryson 2005 and pers. comm.). This evidence has important implications for our understanding of judicial arrangements in the middle and later Anglo-Saxon period. Execution cemeteries of seventh- or eighth-century origins imply that a local system of jurisdiction was in place long before the tenth century, when the local administrative unit known as the hundred is first documented. The fact that many of these cemeteries, including Walkington Wold, are located on the boundaries of hundreds, also suggests that the hundredal boundaries sometimes respected the boundaries of administrative units that date to long before the hundred is first documented as an institution (Reynolds 1999, 108–9; see also Semple 2004 and Pantos 2004). In northern and eastern England the identification of long-lived execution cemeteries such as those at Walkington Wold and South Acre indicates continuity, or at least the re-establishment, of local judicial arrangements following the disruptions attendant on the Scandinavian conquest and settlements of the ninth and tenth centuries (Reynolds 1997, 36–7; Hadley 2006, 91).

The execution cemetery at Walkington Wold conforms to a widespread pattern, but it appears to have been a rare example of a separate execution cemetery from the northern regions of England. Elsewhere in those regions there are certainly Anglo-Saxon cemeteries that contain individuals with some possible evidence for execution, but this is mostly of a tenuous nature. For example, at Lamel Hill, York (also known as Belle Vue House), nine out of the 38 burials excavated by York Archaeological Trust in 1983 were identified by the excavator as being either decapitated or mutilated (Briden 1983; 1984). Five of these burials were reported as decapitated (with the crania placed elsewhere in the grave), two of which were orientated east–west rather than west–east. A further burial was described as not having a cranium (presumably in this case not placed in the grave), one individual was described as having had a foot 'removed', one individual had a hand 'removed' and a further individual had two articulated fingers placed between the femora, away from the rest of their hand (Briden 1984, 7–8). However, a recent reanalysis of the skeletal material from Lamel Hill has indicated that there are no cut marks or evidence of healed amputation visible on the bones that would confirm deliberate mutilation or execution (Müldner 2005 and pers. comm.). This new osteological analysis, thus, casts considerable doubt on the original claim that Lamel Hill contained the burials of executed and mutilated criminals, and reveals the necessity, more generally, of modern and expert osteological

analysis in cases in which execution or mutilation has been inferred from absence of skeletal elements. Elsewhere, recent skeletal analysis has assisted in distinguishing possible cases of judicial execution from the victims of battles: for example, the tenth- to late eleventh-century phase of burial at St Andrew's, Fishergate, in York, included a decapitated individual and another 11 burials with blade injuries (Stroud and Kemp 1993, 153, 157), and it is considered more likely that they died in a battle or fight, given the wide range of both healed and peri-mortem injuries present on these skeletons (Daniell 2001, 223; 2002, 244; Stroud and Kemp 1993). In this context, we have to be cautious in our analysis of the skeletal evidence from similar sites, but where reanalysis of the skeletal material is precluded. For example, a cemetery of *c.*30 individuals excavated in the 1960s at The Island, Barrow-upon-Humber (Lincs), one of which has produced a radiocarbon date of AD 650 to 810 at the 95% confidence level, included one skeleton without a cranium, two without at least parts of the legs, a burial containing two crania and a double burial. However, as no osteological report is extant for these burials, and the bones have since been reinterred, it is difficult to accept that these characteristics result from anything other than post-mortem disturbance of the graves (Hadley 2005).

One additional cemetery from northern England that may conform, to some extent, with the characteristics of execution cemeteries is from the former monastic cemetery at Ailcy Hill, Ripon (N Yorks). In the latest phase of use, dating perhaps to the ninth or tenth century, there were a series of distinctive burials, including a multiple burial of three adult males, three other male burials on diverse alignments and the burial of a young adult male with a pronounced distortion of the lower vertebral column, buried with his head to the east, in contrast to the west–east alignments normal in this period. The excavators suggest that by the tenth century the cemetery was the burial place of the socially excluded (Hall and Whyman 1996, 124), and these burials certainly betray some of the characteristics of execution cemeteries, even if we cannot certainly identify execution. Yet, even if this was an execution cemetery, this provision at Ripon was unlike the pattern found further south as the individuals were seemingly buried outside the confines of the churchyard, but were, nonetheless, still buried within the general vicinity of the rest of the Christian populace, and were not banished to the boundaries of the parish.

We must acknowledge that taphonomic factors may mitigate against the identification of execution cemeteries in many parts of northern England. The soils of northern and particularly north-western England are frequently acidic, causing bone to decay at an accelerated rate and leaving many graves devoid of bone. In the case of smaller cemeteries containing few burials and no artefacts, it is entirely possible that they could be overlooked or misidentified. As a result, relatively few Anglo-Saxon burials unaccompanied by grave goods of any date or nature have been identified in north-western England. In addition, the poor levels of bone preservation in these areas mean that the identification of pathological lesions, including evidence of execution, is problematical, thus increasing the difficulty of identifying late Anglo-Saxon execution cemeteries. Nonetheless, for all the research undertaken in the late nineteenth century by J.R. Mortimer on the Wolds of east Yorkshire, in an area with relatively good bone preservation, no other Anglo-Saxon execution cemetery has been identified, although, again, there may be mitigating factors given the need for specialist osteological knowledge to identify evidence for execution. One of the few plausible cases of an execution burial for the north of England beyond Walkington Wold is an isolated cranium (without mandible) found during the excavation of an Anglo-Scandinavian settlement at Cottam. Radiocarbon dates indicate the cranium was already old when it was deposited in the pit (AD 647 to 877 at the 95% confidence level), as the backfill of the pit contained a coin dating to AD 858 to 862. If the supposition that the weathered cranium

had been displayed before burial is correct, then it is notable that this display occurred close to a contemporary settlement (Richards 1999, 34–7, 92–4), which is not a characteristic of other known late Anglo-Saxon execution cemeteries.

Walkington Wold is unusual in being the most northerly example yet found of an Anglo-Saxon execution cemetery of the type identified further south and is seemingly comparatively isolated. This paper has demonstrated the value of re-examining poorly understood cemeteries, and the importance of the application of modern dating and analytical methods. This reanalysis has shown that osteological analysis, undertaken in conjunction with a contextual study of burials, is a method that is imperative if we are to begin to distinguish patterns of execution and deliberate mutilation from battle trauma and medical amputations, and that the retention of skeletal collections should be continued, to allow reanalysis and further research to be undertaken.

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ABBREVIATIONS

S – P.H. Sawyer, *Anglo-Saxon Charters. An annotated list and bibliography* (London, 1968), numbers refer to specific charters

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