

Excavation of a pre-Conquest Cemetery at Addingham, West Yorkshire

By MAX ADAMS

With contributions by

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EXCAVATIONS at Addingham in Wharfedale uncovered part of a cemetery which, on the evidence of radiocarbon analysis, can be dated to the 8th to 10th centuries A.D. At that period Addingham was an estate of the archbishops of York, and it was to here that Archbishop Wulfhere fled in 867 to escape the Danes. A total of 55 graves were investigated, yielding the remains of perhaps 80 individuals. Of these, about 40 were undisturbed primary interments; the rest had been reburied in whole or part, leaving some graves empty and others containing several individuals. Later features included a ditch and a drying kiln which belonged to a post-Conquest manorial complex. Further details on the layout and components of the settlement have been gleaned from earthwork survey, geophysical prospection and documentary research, as well as from earlier excavations which until now remained unpublished.

Excavations of part of a pre-Conquest cemetery at Addingham, West Yorkshire (SE 0846 4974; Fig. 1), were carried out by the West Yorkshire Archaeology Service on behalf of English Heritage during 1989 and 1990. The site was excavated in advance of an extension to the church hall which lies to the W. of the medieval parish church, a short distance beyond the western boundary of the present graveyard. Church, rectory and church hall occupy a gravel ridge which, on the N. side, slopes precipitously down to the River Wharfe, and on the S., more gently to the Town Beck (Pl. v, A). Its E. end, at the confluence of the Town Beck and the Wharfe, is also marked by a steep slope. This promontory ridge has been a focus for settlement since at least Anglo-Saxon times, and possibly as early as the Roman or pre-Roman Iron Age. The core of the present village of Addingham lies c. 800m further to the W., where there was probably a second medieval settlement focus.¹

Figure 2 shows the main structures and features of archaeological interest on the gravel ridge. St Peter's church, largely a 15th-century structure re-cased in the 18th century,² contains fragments of Norman chevron-decorated stonework,

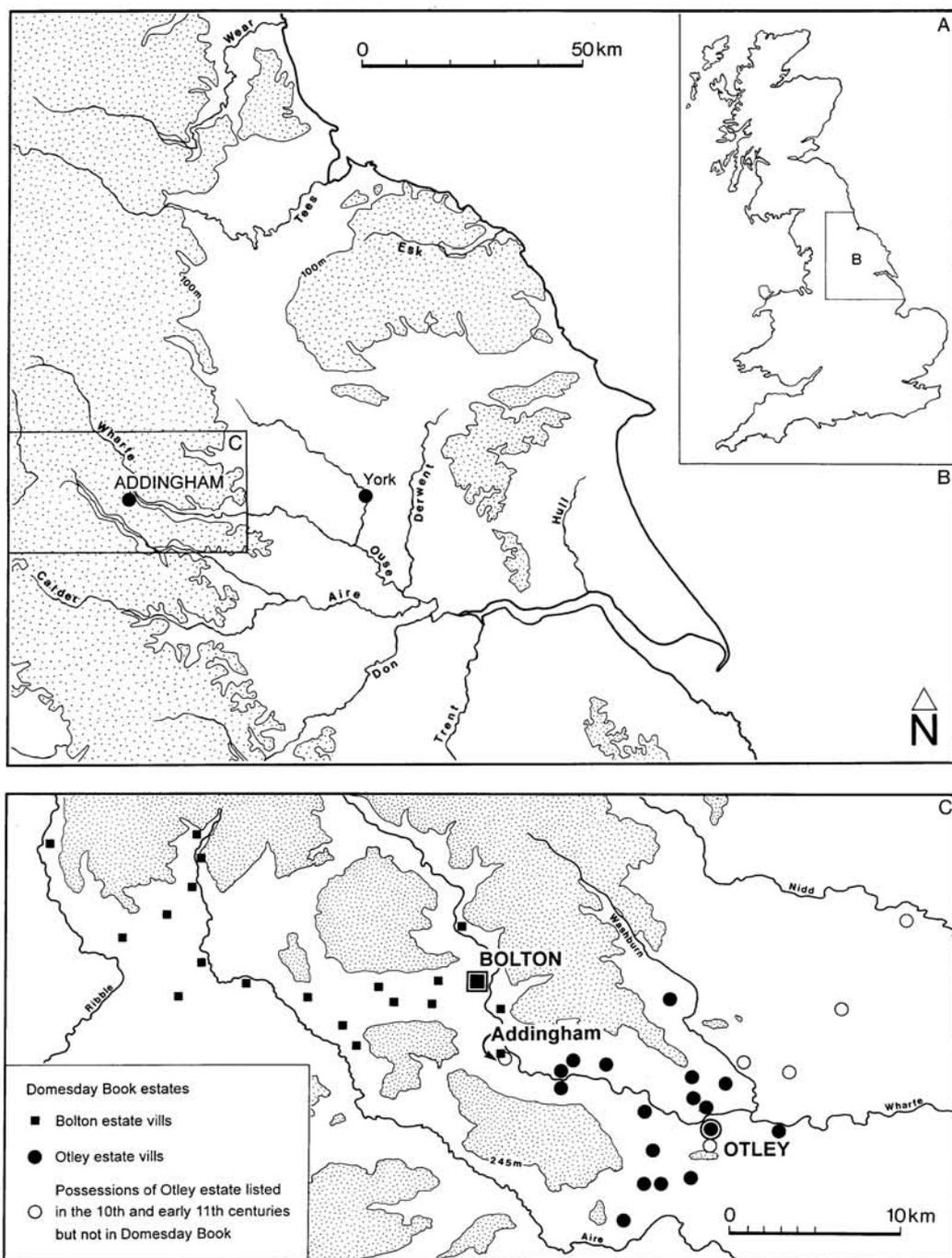


FIG. 1.

The location of Addingham and other villas in the Domesday estates of Otley and Bolton in Craven.

formerly built into the porch, but now set in the inner face of the tower and plastered over.³ Part of a late Anglian, probably 10th-century cross shaft was found in the field S. of the churchyard in the 1940s,⁴ and is now housed in the church. A socket stone, possibly the support for this cross shaft, later refashioned for other purposes, stands in the churchyard in a location it has occupied since at least the late 17th century (see below).

The principal earthwork is a substantial bank which runs S. and W. of the church, cutting through the western end of the present churchyard on a curving alignment. Further W., modified earthworks alongside Town Beck mark a group of former fishponds. Excavations in 1972 E. of the rectory, on the slope marking the end of the ridge, revealed an early ditch and an Anglo-Scandinavian decorated bone plate. The more recent excavations W. of the church hall uncovered part of a pre-Conquest cemetery, together with a ditch and a drying kiln, both dated to the post-Conquest period. Further gullies or ditches are indicated by the results of geophysical prospection, together with a series of parallel linear features which may mark former ridge and furrow, and additional possible grave-cuts immediately W. of the excavated part of the cemetery.⁵

THE DOCUMENTARY EVIDENCE *By* KATE MASON

Documentary sources indicate that Addingham was the westernmost vill of an Anglo-Saxon estate which belonged to the archbishops of York and was centred upon Otley (Fig. 1).⁶ It is named by Simeon of Durham as the place of refuge for Archbishop Wulfhere in A.D. 867, when York fell to the Danes;⁷ the implication is that it contained a residence appropriate to his status. The archbishops were dispossessed of Addingham and a number of other vills in the Otley estate just over a century later.⁸ Most of the others had been recovered by c. 1030,⁹ but not, apparently, Addingham. By 1066 the vill was divided between two quite separate estates which, in 1086, were attributed to different wapentakes. Two carucates in Addingham were soke of the manor of Bolton in 'Cravescire', which TRE had been held by Earl Edwin. Three other carucates had been in the hands of Gamalbarn as a manor; these appear in the Summary as only two carucates, one belonging to the king, the other to Gilbert Tison, and are listed under the wapentake of Burghshire.¹⁰ This division of Addingham persisted throughout the Middle Ages: part of the vill was in the honour of Skipton, successor to the Bolton estate, and part in the Percy fee. It seems probable that the Skipton/Bolton estate encompassed the field next to the church where, as noted below, documents indicate that a manor house stood: in 1315 Robert Clifford, lord of Skipton, was said to have held a capital messuage in Addingham, with 60 acres in demesne and the advowson of the church.¹¹ Both moieties of the vill were, however, in the hands of a single mesne lord, William Vavasour, in 1166.¹² The Vavasours continued to hold manorial rights until they sold the lordship of the manor in 1714.¹³

The field containing the church hall and the excavations (Fig. 2) is now known as Church Orchard. Its northern boundary runs along the centre of the River Wharfe; a strip of land along its W. side was sold for housing in the 19th century,

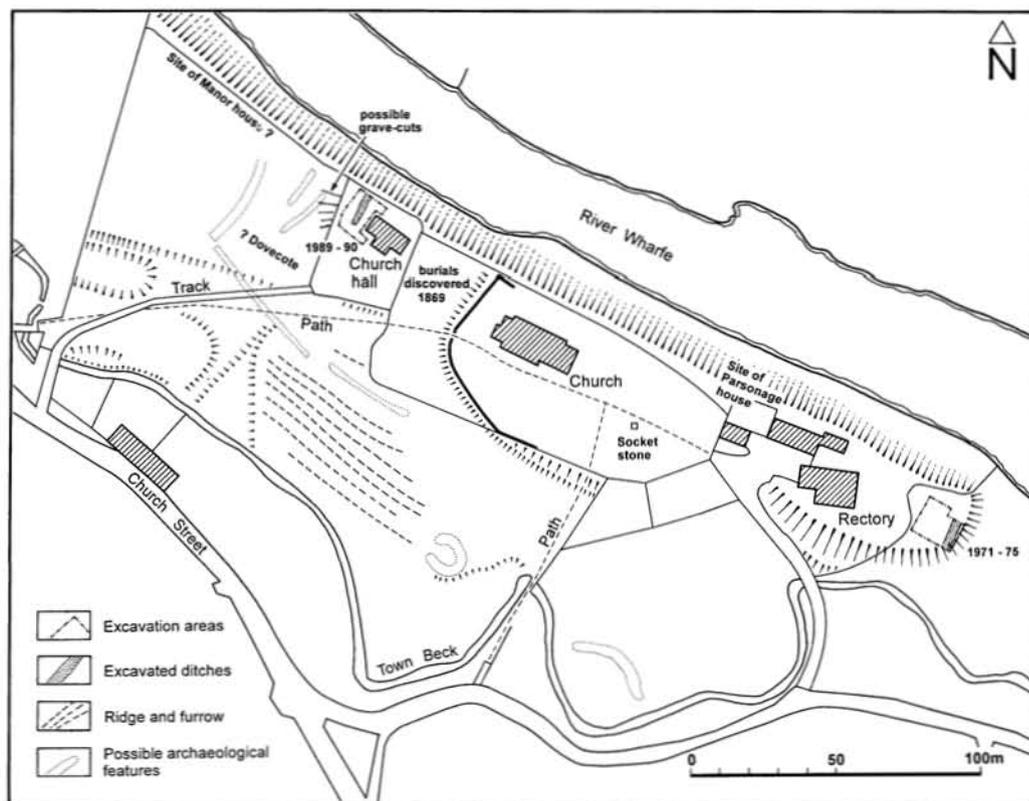


FIG. 2.

The gravel ridge, showing the location of the excavations, of features and structures recorded in documentary sources, and of features recorded in earthwork and geophysical surveys.

and a strip on its E. side became a western extension to the churchyard in 1869.¹⁴ The name 'Orchards' was already attached to this piece of ground in 1622, when it was conveyed, in the form of two closes, by Robert Midgley of Monkroyd (Lancs) to Thomas Hardwicke of Addingham.¹⁵ These closes had been sold three years earlier by the Vavasours when they relinquished all their messuages and lands in Addingham. A survey of the manor in 1612 names the 'Hall Orchards' among the demesne lands,¹⁶ and a lease for 60 years, drawn up in 1547 between Sir Walter Vavasour and Henry Hardwicke, includes the Lord's Orchard.¹⁷

These records therefore provide strong circumstantial grounds for suggesting that the present Church Orchard is the site of the medieval manorial orchards, the name change reflecting a change in ownership. If so, it is probable that the manorial homestead was also in this field, and independent evidence that this was indeed the case is available from two sources. The earlier of these is a map of the lordship of Nesfield, thought to date to *c.* 1600, which appears to show a circular-plan dovecote immediately W. of the church.¹⁸ The later source is an account of

Addingham written by Henry Johnston, brother of the antiquarian Nathaniel Johnston, who visited the place in July 1669. He recorded that 'the maner house stood neer the church, upon Wharfe Brow, and the land being worne away by the River, the Hall fell, so that there is nothing now remaining of it'.¹⁹

The old 'parsonage house', which formerly adjoined the W. end of the present rectory barn, seems also to have suffered from erosion of the river bank; it is sketched (with prominent cracks in its walling) on a plan of 1808 showing its proposed replacement on a site to the SE.²⁰

Johnston's observations in the church and churchyard are also of interest. In both places were 'severall stones with crosses upon them, but wore of, though they be on very hard stone'. He noted and illustrated the Norman chevron-decorated voussoirs, then built into the church porch, and finally, he described and sketched two stones in the churchyard, 'placed about 2 yards asonder. one of them to the eastard, a flat stone and rough. and the other allmost halfe round with a hole in the midst . . . a quater of a yard deepe'.²¹ The socket stone, probably a cross base, remains *in situ*; it has one well-dressed flat face with spirals carved in it, possibly the result of re-use. The socket itself is very worn and rounded, as if used for a water trough, but in its unworn state it would have been an appropriate size to house the extant cross shaft. It was investigated in 1974 by Mrs May Pickles, and was found to be set 0.61m into the ground; some sherds of 19th-century pottery were recovered from close to the base of the stone, but these must be the result of soil disturbance, in view of Johnston's testimony. The other stone described by Johnston, the flat stone *c.* 2.8m to the E., measuring 1.16m by 0.95m by 0.15m 'with some signs of rough dressing' was removed before 1974;²² its present location is unknown.

Finally, there are some valuable records relating to the westward extension of the churchyard in the 19th century. The plan for the purchase of part of Church Orchard shows the pre-existing W. wall of the burial ground.²³ The wall ran approximately on the course of the earthwork bank (Fig. 2). Allowing for probable riverbank erosion on the N. side of the church, and for the conversion of a curvilinear bank to a largely polygonal wall line, the pre-1869 burial ground was oval in shape. Churchyards of this shape have been considered to be candidates for early ecclesiastical sites. It is, therefore, even more interesting to read a report that many human bones were discovered when the churchyard was extended in 1869: that is, the remains were, presumably, discovered outside the western end of the oval churchyard.²⁴ Such a report might seem questionable were it not for the discovery, in 1989, of pre-Conquest burials even further to the W. A former sexton has reported finding skeletons aligned N.-S. rather than E.-W., though whether these were within the oval or in the extension remains unknown.²⁵

THE 1971-75 EXCAVATIONS: A SUMMARY REPORT *By* STUART WRATHMELL

The gravel ridge occupied by the medieval manor, church and parsonage house ends in a steep slope *c.* 35m E. of the present Rectory (Fig. 2; Pl. v,A). In

1971 a trial trench was opened up across this slope; it produced pottery dating from the 12th to the 16th centuries. During the following year an adjacent area measuring 6m by 4m was excavated, and was then extended to include the earlier trench. Subsequent years saw further extensions, resulting in the accumulated excavation area shown on Figure 3. The excavations were directed by Mrs Jean Le Patourel, and were undertaken as practical work by students attending Mrs Le Patourel's extra-mural classes in the University of Leeds.

The following report is a summary of the more significant discoveries. It is based upon surviving site archives, including plans, section drawings, site note book and finds book, and has benefited considerably from discussions with Mrs Le Patourel. The records and finds from 1971-75 will be added to the Site Archive of the more recent excavations. Mrs Le Patourel readily agreed to the publication of this summary report, and gave much valuable assistance and advice. Further help and advice came from Mrs Ann Clark and Mrs May Pickles.

The excavations revealed a number of post-medieval features, including stone surfacing, a cobbled pathway and a drain. An irregular line of postholes running NW.-SE. through the area was thought at the time of excavation to mark an early medieval structure (Fig. 3), but, as Mrs Le Patourel notes, there is no stratigraphic evidence to demonstrate that these or any other of the postholes are of medieval or earlier date. The one feature of undoubted antiquity is a ditch which was found in 1972; it ran from N.-S. along the slope, and a 7m stretch was emptied by hand. The section drawings published here (Fig. 4) are based upon the site drawings; they have, however, been modified in the light of what can be seen on the site photographs.

THE DITCH

The excavation records describe three 'palisade marks' in the bottom of this stretch of the ditch, one above the other, separated by layers of silt; but such an interpretation seems at odds with the ditch fill sequences recorded at both the N. and S. ends of the emptied stretch (Fig. 4; Pl. v,b). One would presumably expect a palisade timber founded in a trench to be packed around with stones and, after withdrawal or decay, to leave behind a silt-filled void within the packing material. Both sections indicate a quite different depositional history.

Each section indicates a V-shaped ditch surviving to a width of up to 3m and a depth of 1.6m. It is assumed that the upcast from the ditch was heaped into a bank on the uphill side; site records refer to bank material, but indications on the section drawings are not at all convincing. The primary ditch deposits were layers of silt, different silting episodes marked by lines of small pebbles. The larger pebbles towards the centre of the fill (layer 7) seem, from their disposition, to have eroded from the putative bank on the uphill side of the ditch, and to have accumulated against the silt on the opposite side. The archive drawing of the S. section clearly indicates, about half-way up silt layer 10, a secondary cut which can be traced westwards as layer 6 (the larger pebbles between layers 5a and 8): this would appear to indicate a much shallower, asymmetrical recutting of the original ditch. There is similar, though far less clear, evidence on the N. side section, where the recut this time impinged upon the E. side of the original ditch. The filling layers of the original ditch seem to have contained only rounded pebbles, whereas the fills of the recut ditch had, in addition, some angular rubble.

Layer 7, the large pebble fill of the original ditch, yielded 4 pieces of iron slag and 4 pieces of burnt daub with wattle impressions. One fragment of daub retained its external

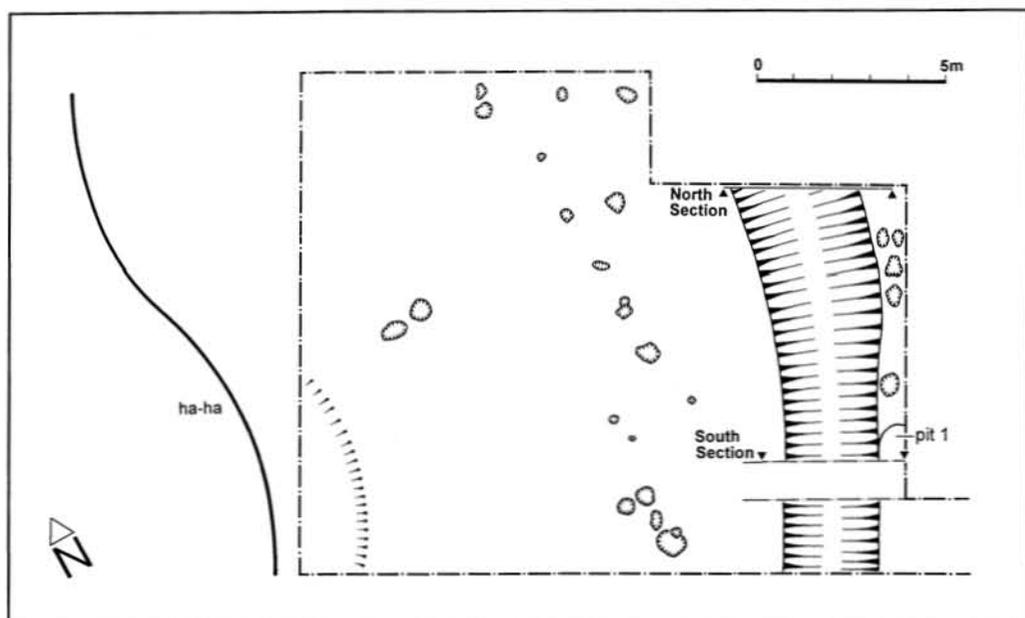


FIG. 3.

Plan of the area at the east end of the ridge excavated in 1971-74, showing postholes and ditch.

surface, and indicated that the layer of clay applied to the wattle structure had been *c.* 30mm thick. The same layer also produced a small quantity of animal bone, discussed below, and possibly one sherd of Gritty Ware pottery (the records are contradictory). Much more pottery came from the fill of the recut ditch, specifically from layer 4 which, though not present in the S. baulk section, is recorded as having been located *c.* 1m N. of the section, overlain by layer 3. It produced ten sherds of pottery. One, which is no longer among the site archive pottery, is identified in an archive report as Roman greyware, of a type commonly found on Roman sites in Yorkshire and dated to *c.* A.D. 160-240. The other nine sherds were Pimply Ware and Gritty Ware sherds dating from the 12th to the 14th centuries. Layer 4 also produced the most spectacular find of the excavations: a decorated bone plate of the Anglo-Scandinavian period which is described and discussed below.

THE ANIMAL BONE FROM LAYER 7 *By* DAVID BERG

Three animal bones were identified as fragments of cattle cervical vertebra and maxilla and a complete horse metacarpal. The small maxilla fragment was of sufficient size to hold *in situ* the upper right fourth premolar and first molar teeth of an adult individual.

The horse metacarpal was a creamy-buff colour showing signs of severe erosion and weathering with longitudinal cracking and loss of surface detail. The bone is complete with a greatest length of 220mm. This measurement gives an estimated withers height, calculated using the conversion factors of Kiesewalter as reproduced in von den Driesch and Boessneck,²⁶ of 1410mm or 13.87 hands. The size of Iron Age and Roman equines has been discussed by Ewert²⁷ and Meek and Gray.²⁸ Their results are broadly similar, creating three groups according to size: a small group described as 'big-boned ponies' between 11-12.2 hands and similar in size to modern Exmoor ponies; a larger group of 'Celtic' ponies between 12-13 hands of a type similar in size to New Forest ponies; and horses

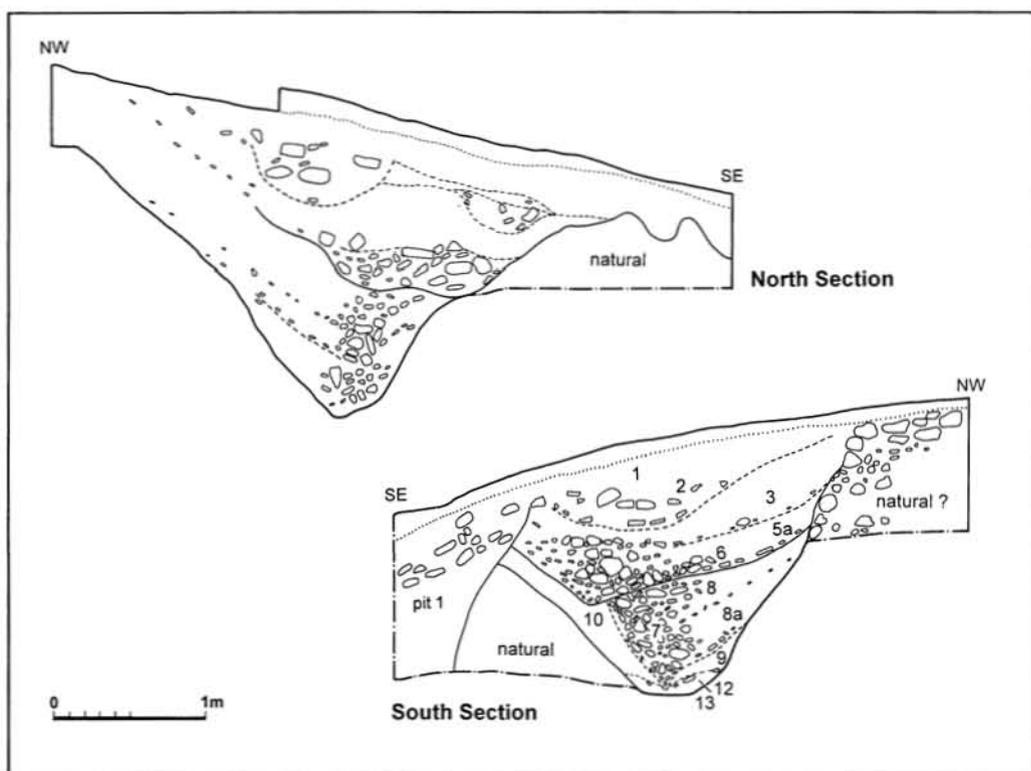


FIG. 4.
Sections of the ditch found in the 1972 excavations.

between 13–15 hands. This would put the Addingham specimen into the large Iron Age pony or small Roman horse categories. The animal would have been small compared to modern horses; the modern division between pony and horse is 14 hands.²⁹

The specimen is adult but it is not possible to assign an absolute age in years. No pathologies or abnormalities were noted.

THE BONE PLATE FROM LAYER 4 (Fig. 5; Pl. VI, A) *By* ARTHUR MACGREGOR

Bone plate, originally rectangular in outline and with a low, plano-convex cross-section; a prominent medial rib, cigar-shaped in outline and curved on the surface to match the cross-section, forms an integral feature of the plate. Towards one end are two rivet-holes, showing no traces of wear or metal corrosion but both broken through. The other end of the plate is missing, as is much of one side.

The more intact end is undecorated, while the remainder of the plate is ornamented symmetrically as follows: on the outer edge on either side is a zone of oblique hatched ornament, terminated by three saw-cut lines set at right-angles to the edge; an incised line delimits the inner edge of this zone, separating it from a row of evenly-spaced ring-and-dot motifs joined by tangential lines; on one side a pair of circular pits has been drilled at some stage after completion, but these seem to be neither functional nor decorative. The ornament on the raised rib is terminated by one transverse saw-cut line and by two bands each delineated by similar lines, notches cut alternately on one side and then the other giving these bands a zig-zag appearance; two similar transverse zig-zag bands mark the

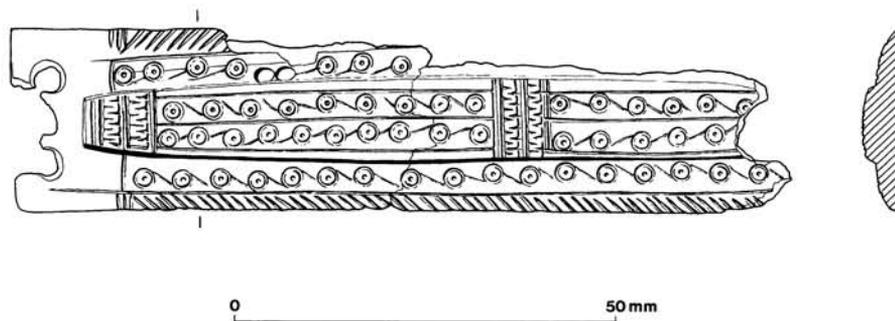


FIG. 5.
The Anglo-Scandinavian bone plate.

centre point of the rib; the intervening fields are divided by medial lines into two longitudinal zones, each enclosing a row of incised ring-and-dot motifs. All of these decorative features show signs of wear.

The back of the plate is plain.

In addition to the edge and end damage mentioned above, the plate has been broken in half and has been reunited with adhesive. Length 104mm (originally *c.* 130mm). Width 25mm. Thickness 7mm.

Neither the date nor the function of this piece can be established with precision. As to function, two possibilities suggest themselves: that it is a decorative plaque as applied, for example, to a box or casket, or that it formed part of a case for a composite comb. The latter possibility might be favoured by the arrangement of the rivet-holes, which could normally align with a spacer-plate inserted at either end of the case; the appearance of the medial rib, so reminiscent of the connecting-plate of a composite comb, also inclines in this direction. However, comb-cases that incorporate flat plates are very restricted in type, being limited to those which incorporate on the opposite side not a matching plate but a pair of narrow bars. The only examples known from England are those associated especially with certain 'barred combs', dated to the late 4th and 5th centuries A.D.,³⁰ although also known with triangular-backed combs of similar date.³¹ On the Continent such cases are known within the Frisian area, associated with combs of a variety of designs but all of early (*c.* 5th- to 8th-century) date,³² and they occur also in association with distinctive combs of the Migration Period on the Baltic island of Gotland.³³ The more common form of comb-case of Late Saxon or Viking date incorporates a pair of bars of asymmetrical outline on either side, symmetry being restored by the back of the comb when housed in the case.³⁴ Given the parallels adduced below for the ornament on the plaque, it is hard to reconcile the form of the plate with comb-cases of the date suggested by its decorative features.

The evidence, therefore, seems to favour the alternative suggestion, that the plate is purely decorative, perhaps attached to the lid of a wooden box. Boxes mounted with bone strips and used for a variety of secular and ecclesiastical purposes are known from the Roman period until the 12th century, with little evidence of stylistic development in the intervening centuries.³⁵

Precision in dating is difficult to achieve on the basis of the simple decorative scheme. The use of ring-and-dot motifs can be measured almost in millennia rather than centuries, although the idea of linking adjacent motifs with tangential lines is more restricted. On the Continent it occurs as early as the 8th or 9th century at Elisenhof,³⁶ and as late as the 11th or 12th century at Schleswig³⁷, both in Schleswig-Holstein. In the British Isles it appears from contexts dating broadly to the Viking period, with examples from York³⁸ and at Freswick.³⁹ The zig-zag bands on the Addingham piece are less widespread in date:

Waterman illustrates a number of examples from early excavations in York,⁴⁰ together with the observation that the technique is common in Viking-age Scandinavia. Coppergate has more recently added two more examples to the corpus, dated to *c.* 930–975 and *c.* 975–1050⁴¹ and Lincoln has yielded another with a date of *c.* 970–1060/70.⁴² The motif appears frequently on side-handled combs of which perhaps the majority are of Late Saxon date,⁴³ although Riddler has recently argued that some could be of Middle Saxon origin.⁴⁴ The fact that some of the combs from Elisenhof bearing this motif could be as early as the 8th century,⁴⁵ lends support to this assertion, as does the occurrence of both motifs in association on certain Vendel period combs from Sweden dated before 750.⁴⁶ The balance of probabilities, therefore, suggests a date between the late 8th and the 11th centuries for the Addingham plate.

DISCUSSION

The excavations produced, in total, over 230 sherds of pottery, of which about 90 were medieval in date, and one Roman. The recut asymmetrical ditch could have been largely filled before the 15th century; there is nothing in the ceramic assemblage which would contradict this. The date of recutting is impossible to determine; the single Gritty Ware sherd from layer 7 in the original ditch fill might be seen to point to a very short chronology for the recut ditch, but it was recovered from a layer comprising large pebbles and voids, and so could very easily have intruded from the recut fills above (layers 5a and 4). In this case, the original ditch may have been cut as early as the pre-Roman Iron Age, the Roman period, or the immediate post-Roman period, as the horse metacarpal discussed above would suggest. This first ditch would seem from its dimensions, profile and location to have been a defensive work, whereas the recut seems more in the form of a boundary.

THE 1989–90 EXCAVATIONS

As a result of Mrs Le Patourel's work, the archaeological importance of the area around the church and rectory was recognized officially by its designation as a Scheduled Ancient Monument (County Monument 1155). In consequence, English Heritage required, in 1989, an evaluation trench to be excavated on the site of a proposed extension to the church hall. This revealed traces of inhumations and evidence of a ditch, and led to a full excavation in 1990. An area 15m by 13m was examined; northern and southern extensions to the main area (see Fig. 6) were stripped, but because of time constraints they were not fully excavated. Stripping of topsoil and excavation of features was done by hand. All features, with the exception of the ditch, were excavated stratigraphically; the ditch was excavated in segments in order to leave standing sections. All graves were planned at a scale of 1:10, both before and after excavation; all primary interments were photographed prior to removal. Contextual recording followed a system based on that of the (then) Central Excavation Unit of English Heritage.

During post-excavation analysis all grave information was converted to the West Yorkshire Archaeology Service's own burial database, which forms the basis of the Research Archive. Samples were taken for environmental and radiocarbon

analysis where appropriate, and the results are summarized below. Copies of the Research Archive have been lodged with the West Yorkshire Sites and Monuments Record, and with the Arts, Museums and Libraries Division of the City of Bradford Metropolitan Council which also curates the finds.

The site was excavated with the permission of the incumbent of St Peter's (then the Reverend Shaw) and the Parochial Church Council. Scheduled Monument Consent was granted by the Department of the Environment, and a licence for the exhumation of human remains was issued by the Home Secretary. The excavation and post-excavation programmes were funded by a grant from English Heritage, although a significant proportion of the project costs were borne by the West Yorkshire Archaeology Service. During the excavation advice on the recording and treatment of human skeletal remains was kindly given by Dr Charlotte Roberts of the Department of Archaeological Sciences, Bradford University. The excavations were supervised by Wendy Fletcher under the direction of Robin Turner. The Research Archive was prepared by the author who is grateful for the advice and assistance given by Mark Whyman of the York Archaeological Trust and members of the excavation team. Finds catalogues for the archive were prepared by Magda Staddon.

THE HUMAN BURIALS (Figs. 6 and 7; Pl. VI,B)

Methods of analysis

The plan of the excavation shows primary and secondary interments, and graves which did not contain skeletons (Fig. 6). The position and completeness of all primary skeletons (unless there was more than one in a grave) are shown, based on analysis of plans, record sheets and information from the report on human bone.

The terms primary and secondary as used in this report need definition, since they have been employed in a variety of ways in other publications. The term 'primary' has been used to describe the status of human bones recovered from positions as if they were still articulated. The term 'secondary' has been used to describe bones which have demonstrably been redeposited after burial, having either been rearranged within a grave, or collected and brought from elsewhere. For example, a skeleton recovered in a supine position with its hands resting on its pelvis would constitute a primary interment, even if decay processes had altered the positions of some of the bones; whereas a group of bones recovered from one end of a grave with many of the small bones missing equally reflects deliberate human interference after the initial disposal of the body, and therefore constitutes a secondary interment. Where there has been doubt about the status of an individual set of remains, a primary status has been assigned, since the burden of evidence lies against disturbance.

Several features which had distinctive grave-like shapes but which, during the excavation, did not yield positive evidence of human remains, have been treated as graves without inhumations; some of them were later shown to have contained small fragments of human bone.

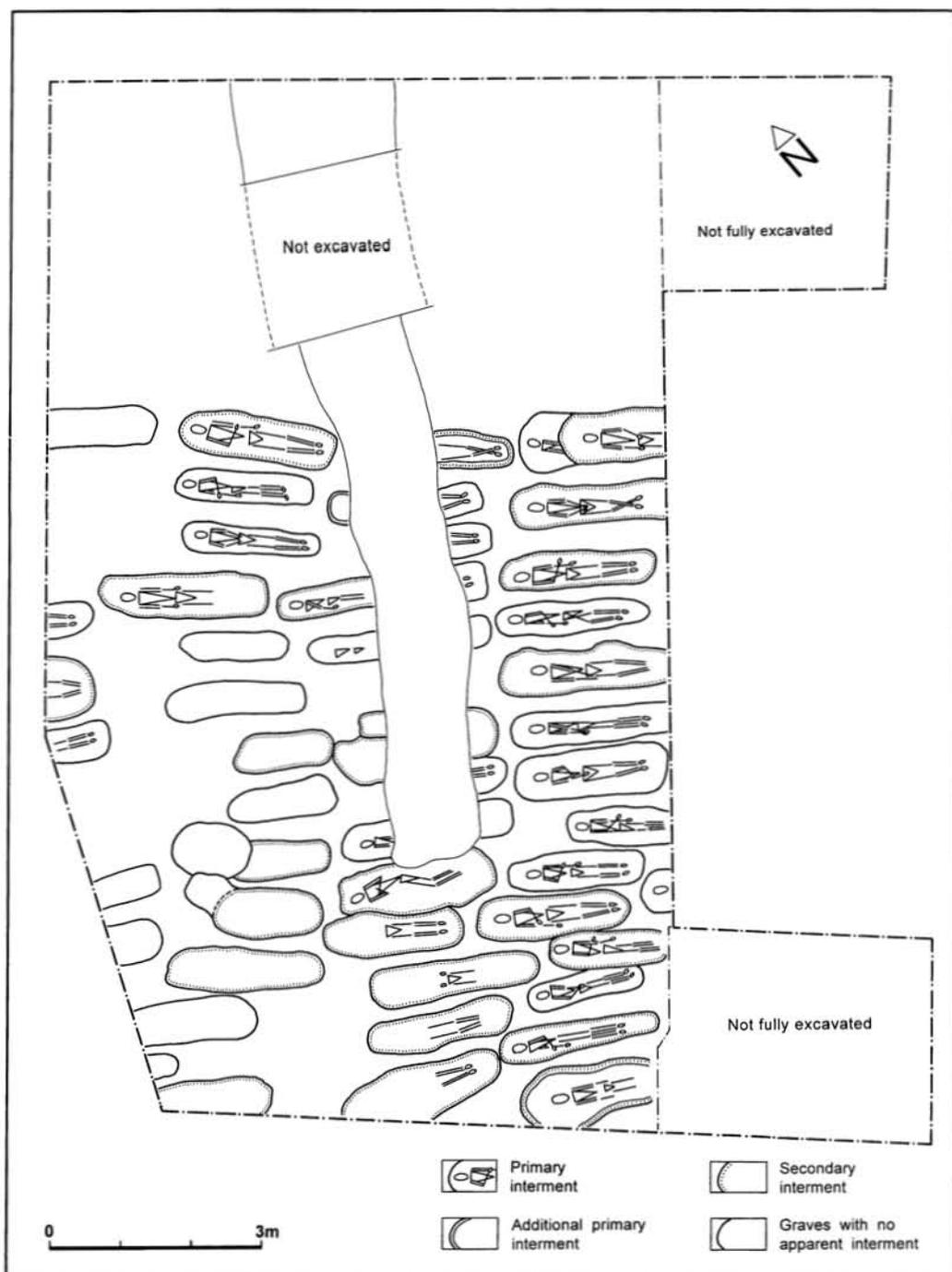


FIG. 6.

Plan of graves excavated in 1989-90, showing primary and secondary interments, and graves with no apparent interments.

Analysis of record sheets has also shown that important evidence of depositional and post-depositional processes was observed, though not always explicitly. This information was integrated into the computerized burial database which forms part of the Level III Archive Report, and has been extensively drawn on for supportive evidence in this report. The burial catalogue thus includes details of skeletal position, presence of skeletal elements, presence of pathology, evidence of crushing, and type of decay. From the iconic representations of primary skeletons in Figure 6 it is possible to determine whether a skeleton was in a supine or flexed position, where the hands lay, whether the feet were crossed, and so on. For example, many of the graves had been cut so narrow (a point which is of some significance) that bodies must have been laid on their side; those lying on their left side, for example, are shown with the point of the pelvis to the right.

It will be noted that the centre row of graves had been heavily disturbed by the later cutting of a ditch (Pl. VI,B). Some graves which had at first been recorded separately were subsequently shown to have comprised a single grave. Where numbers are given in the interment tables (Tables 1 and 2), burials which were assigned more than a single grave number have retained both numbers, to ensure consistency with the archive. 'Empty' graves were assigned burial numbers during the post-excavation phase for ease of identification. These will be described first. Graves were assigned 'F', or Feature numbers, which have been retained here (see Fig. 7). Burials were given the prefix 'A'.

Graves without interments

Some grave-like voids were not recorded as graves during the excavations either because they contained no human bones, or because bones were noted as being present only in the analysis stage. All these are treated here as graves. The possible exception is grave F205 which has a distinctive oval shape, and conspicuously cut another grave (F241); it also contained several horse teeth. It may, however, have been the grave of an infant, since traces of possible immature human bone were also retrieved. If so, it may have been the only separate infant burial excavated at the site; another possible infant, less than one year old, was retrieved along with burial A144, in a fragmentary condition.

A total of nine graves yielded no human remains. Of these, three (F212, F209 and F203) lay only partially within the area of the excavation; it may be that the unexcavated parts did indeed contain interments. A fourth grave, F205 has already been discussed. There remain five graves (F186, F188, F190, F208 and F206) which appear to have been empty when they were filled in. It is possible that a quantity of bone has disappeared due to the acid soil, but this is unlikely to account for the complete absence of bone. It also seems unlikely that so many graves were dug and never used. It seems more likely, given the number of graves containing multiple interments, that individuals were removed from these five graves (and, perhaps, others which have not been located), and redeposited in different graves as secondary interments. A further possibility, perhaps less likely, is that bodies were removed and redeposited while still articulated, in which case they would appear to the excavator as primary interments. All the graves without interments

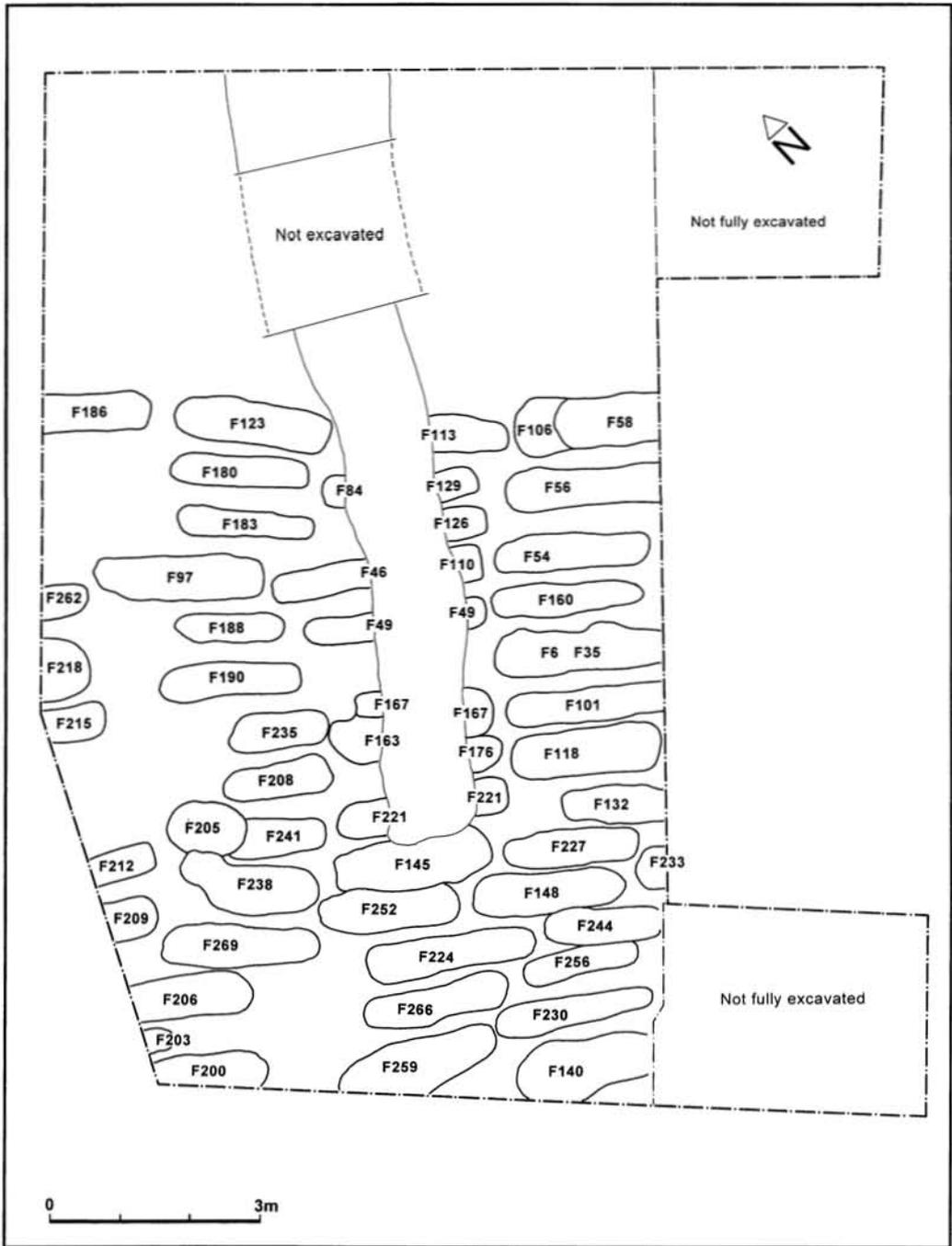


FIG. 7.
Feature numbers of graves shown in Figure 6.

lie towards the NW. edge of the excavated area (Fig. 6). The possibility which will be discussed in more detail below is that this indicates a favouring of graves further to the SE., towards the area where the present church stands.

Primary interments (Table 1)

There are 39 individuals considered to have been primary interments. In Table 1 figures given for 'presence' have been calculated using a method described more fully in the Archive Report, but which may be summarized as follows. One point was given for a skull, 2 for parts of the arms, 4 for the torso (mostly ribs), 8 for the femur, 16 for the tibia and/or fibia, 32 for parts of feet, 64 for hands, and 128 for the pelvis. Added together, any combination produces a unique number between 0 and 255. The code 256 was reserved for those skeletons which were effectively complete. Thus burial A185, for example, with the code 191, was represented by parts of the pelvis, feet, lower legs, femur, torso, arms and skull.

Graves were simple, earth cut features excavated into a mid-brown silty clay loam with very frequent inclusions of water-worn pebbles. With the exception of grave F205 (already mentioned above) they were of similar form, ranging from *c.* 0.3m to *c.* 0.5m in depth. Lengths and breadths varied but the main characteristic was the narrowness of many of the graves, and the closeness of the spacing between them, especially towards the SE. edge of the site. Grave fills were generally identical in composition, though looser than the surrounding subsoil, but with one or two exceptions. There was no evidence of internal structures, although there is some minor evidence for the existence of coffins. This is confined to the presence of iron nails in the fills of four graves (F35, F123, F163/176 and F169). Intercutting of graves occurred in only a very few cases, and the significance of this will be discussed below. In only three cases were primary interments placed in graves after the deposition of secondary interments. In grave F259 it appears that after the deposition of the secondary interment (A265) the grave was filled in, then reopened to accommodate a primary interment A261; the later cut was recognized during excavation, but it was not assigned a different number because of extreme difficulty in differentiating fills. In grave F35 the secondary and primary interments were separated by a distinctive orange/brown silty loam. The upper fill contained, besides the primary interment (A45), the partial remains of at least six other individuals, probably redeposited in a single secondary event. Grave F140 appears to have contained a single fill and the remains of at least five individuals. The fill may, in fact, represent several depositional events: a secondary interment (A166), then two primary interments (A144 and A143), then two further secondary interments. None of the individuals was complete, and the extreme SE. end of the grave was truncated by the edge of the excavation.

All primary interments were laid with the head to the nominal W., although in fact grave orientations varied between 318° and 293° from Grid N. The majority of primary interments were placed in a supine position, although the narrowness of many of the graves resulted in several individuals being laid on their side. Two primary interments are not shown because the graves (F113 and F140) contained more than one primary interment (Fig. 6) Of these, burial A122, represented only by lower legs, was in an extended position and burial A143, represented by a skull, arms and ribs, was extended and lying on its left side. No clothing or adornments were found. There was no evidence of the nature of the burial ritual. Six graves had fills which contained flecks of charcoal, but there was no evidence, such as burning of bone or the sides of the grave, to indicate that the burning could be associated with any pre-burial ritual. Two of these fills were sampled, and the results are included in summary form below.

TABLE I
 DETAILS OF PRIMARY INTERMENTS

Burial	Grave	Age	Sex	Present	Crushed	Decay*	Pathology
45	F35	A	F	255	Y	Y	Y
86/131	F84/F129	A	-	49	Y (A86)	-	Y (A131)
87/275	F49	A	M	155	-	Y	-
93	F56	A	M	256	Y	-	Y
100	F46	A	F	207	-	-	Y
103	F101	A	M	256	-	-	Y
104	F54	A	F	255	-	Y	Y
105	F58	YA	M	207	Y	-	-
108	F106	A	F	23	Y	Y	-
109	F97	A	F	207	-	Y	Y
112	F110	YA	-	36	-	-	-
120	F118	A	F	255	-	Y	Y
121	F113	A	-	56	-	Y	Y
122	F113	A	-	16	-	Y	Y
128	F126	A	-	48	-	-	Y
134	F132	A	M	223	-	-	Y
137	F123	A	M	255	-	Y	Y
143	F140	YA	-	7	-	-	Y
144(x 2)	F140	YA, INF	-	143	Y	-	Y
151	F148	A	F	255	-	Y	Y
162	F160	A	M	255	-	-	Y
178/165	F176	YA	-	55	-	Y	-
179	F145	YA	-	159	Y	Y*	-
182	F180	A	F	256	-	Y	Y
185	F183	A	F	191	-	-	Y
202	F233	A	M	1	-	-	-
211	F244	YA	-	223	-	Y	-
217	F215	A	-	56	-	Y	-
223/279	F221	YA	-	7	-	Y	Y
229	F227	YA	-	223	-	Y	Y
237	F224	A	-	200	-	Y	-
247	F218	A	-	48	Y	-	-
249	F230	A	-	63	-	Y	Y
255	F252	A	-	184	-	Y	Y
258	F256	YA	-	255	-	Y	-
261	F259	A	-	48	-	Y	Y
264	F262	A	-	48	-	Y	Y
272	F266	?	-	24	-	Y	-
273	F274	YA	-	48	-	Y	-

Key: Age is denoted here by A (for adult) or YA (for young adult), and INF for infant. Y = yes; absence of a Y should be taken to indicate absence of evidence. A* in the decay column indicates that mineralization of bone (diagenesis) had taken place in addition to the more widespread breakdown of collagen which was manifested in brittle, crumbling bone.

Secondary interments (Table 2)

Twenty-seven interments are thought to have been secondary depositions, but for reasons given above this is a minimum figure. Analysis of the human skeletal material has shown that at least 14 more individuals are represented. The total number of individuals excavated is, therefore, probably in the region of 80. Many of the secondary interments are represented by very few bones; the codes used in Table 2 showing presence include all the individuals recorded from each burial. Two characteristics of the secondary interments should be clear. First, evidence of general decay was more prevalent, perhaps because of multiple episodes of exposure. Secondly, secondary interments are represented by generally fewer bones. This may be accounted for partly by the greater incidence of severe decay, but also, and perhaps more importantly, by loss of skeletal elements during removal and redeposition.

TABLE 2
DETAILS OF SECONDARY INTERMENTS

Burial	Grave	Age	Sex	Present	Crushed	Decay*	Pathology
8 (*6)	F6	—	—	255	—	—	—
48	F46	YA	—	1	—	—	Y
60	F54	A	M	255	—	—	—
61	F56	YA	F	155	—	—	—
62 (*2)	F58	—	FF	155	Y	—	Y
89	F35	A	M	223	—	—	Y
99 (*3)	F97	—	—	137	—	Y	Y
115 (*2)	F113	—	—	139	—	—	Y
125 (*2)	F123	AA	—	145	—	Y	Y
142 (*2)	F140	A	—	157	—	Y	Y
147 (*2)	F145	AA	—	173	—	Y	—
150	F148	A	M	223	—	—	Y
165/178	F163/F176	YA	—	55	—	Y	—
166	F140	A	—	140	—	—	—
169	F167	A	—	26	—	Y	Y
220	F218	A	F	25	—	Y	Y
226	F224	A	F	137	—	Y	—
232	F230	A	M	137	—	Y	Y
240 (*3)	F238	AAA	—	159	—	Y	—
243	F241	A	—	9	—	Y*	—
246	F244	YA	—	9	—	Y	—
254	F252	A	F	1	—	Y	Y
265	F250	A	M	59	—	—	—
268	F266	—	—	1	—	Y	—
280	F200	—	—	8	—	Y*	—
286	F235	—	—	8	—	Y*	—
287	F269	—	—	8	—	Y*	—

Key: Figures in brackets indicate minimum number of individuals. Extra letters under age and sex indicate the numbers in each case which were identified. Other codes are as for Table 1.

Secondary interments were generally located as scatters of bone within grave fills, but in at least two cases (A150, A8) the bones of an individual had been laid around those of a primary interment (A151, A45). This seems to indicate in the first case that the bones were those of a primary interment which had been rearranged so as to accommodate a new primary interment. In the latter case the remains of at least six individuals had been laid around a primary interment, which itself had been placed in the grave (F6/35) after a secondary interment (A89). A further interment (A147) of two skulls and some other bones was clearly deposited at the foot end of grave F145.

In the excavated area 55 graves have yielded the remains of a minimum of 80 individuals, which would indicate that not enough graves were dug to accommodate burials at a ratio of one per grave. It may, of course, be the case that the rest of the cemetery would exhibit a greater ratio of empty graves to individuals, but there is, at present, no reason to infer this. The implications of this phenomenon are discussed more fully below, but there is a clear suggestion that graves, for whatever reason, were re-used. It is also worth noting here that several graves contained secondary interments but not primary interments.

OTHER FEATURES (Fig. 8)

The medieval ditch

One major linear feature bisected the excavated area, and provides a clear *terminus ante quem* for burial activity on the site. A shallow ditch was constructed at right-angles to the bank of the River Wharfe, and terminated *c.* 3m from the SW.

edge of the excavated area. It had disturbed 18 graves. It was at its greatest depth (0.9m) towards the NE. edge of the excavation where its base was 1.3m below the present ground level; at maximum it was 2.6m wide. In profile it was asymmetrical with a steeper, well-defined SE. side, and a more uneven NW. side (Fig. 9, section 1). It grew shallower towards the SW. and ended above grave F145. Its NE. terminal may have been just outside the edge of the excavation, given the proximity of the steep slope down to the river, though, as noted earlier, there is evidence of substantial erosion of the northern edge of this ridge since the Middle Ages. The bank was excavated in five segments, leaving one section unexcavated.

The segments were excavated under different strategies. Segments F21 and F68 were excavated rapidly in spits and, therefore, finds provenancing from their fills cannot be used to closely date the stratigraphic sequence. Segments F29, F24 and F95 were excavated stratigraphically. With the exception of F68, profiles were drawn on site. These show between five and six fills in each segment, corresponding closely with each other in composition and morphology. The fills of segment F29 will be described here (see Fig. 9, section 1). The base was covered with a light to mid-brown sandy loam (64) with a high concentration of water-worn pebbles, representing gradual collapse from both sides. Above this was a mid to dark brown silt loam with a high concentration of gravel (51). Fill 44 occurred in the centre of the segment, a mid to dark brown silt loam with a high concentration of medium-sized cobbles and water-worn pebbles. It probably represents a dump. Fill 43 is likely to have resulted from further natural slumping of material from the sides of the ditch. The top fill (30), represents final silting up of the ditch.

At the base of segment F68 a canine skeleton was retrieved (A91). It lay along the length of the ditch with its head to the N. Some crushing caused by the weight of soil above seems to have taken place, since the skull was separated from the lower jaw, and many of the ribs had been broken *post-mortem*.

Dating evidence for the creation, use, and abandonment of the ditch is limited. The ditch fills contained mainly sherds of Gritty and Pimply wares. These can only be assigned to the period between the 12th and 15th centuries. The pottery is reported in detail below.

In addition to the partial destruction of many graves, the ditch also cut through a deposit (94) which effectively sealed many of the graves below. This was a friable dark brown silty loam with frequent water-worn pebbles. It overlay graves in the SW. area of the site, and was cut by the ditch. Its formation would appear to post-date the last use of the cemetery and pre-date the later medieval features; it probably represents the development of a thin topsoil after the abandonment of the cemetery. The pottery from this deposit would be consistent with its formation during the 10th to 13th centuries.

The ditch was filled by a combination of deliberate dumping episodes and collapse of material either from the sides or from an undetected bank, with some silting. It is tempting, given the inclusion of domestic pottery and domestic and butchered animal bones in the fills, to associate the ditch with the manorial complex which is thought to have been located on this part of the ridge. Any association with the church or cemetery seems unlikely. The morphology of the ditch suggests an attempt to make passage across it difficult, and there were no apparent recuts to suggest a sustained drainage function. Though its profile was somewhat reminiscent of that of the ditch excavated at the eastern end of the ridge, the latter was much more substantial, and there is nothing to suggest spatial or chronological connections. Indeed, the geophysical evidence for linear cut features in the vicinity of this ditch suggests it was one of several intermittent boundaries (see Fig. 2).

THE CORN DRIER

Towards the centre of the NW. edge of the site feature F18 (Figs. 8, 9) was interpreted as a corn drier. In form it was a sub-circular depression which showed

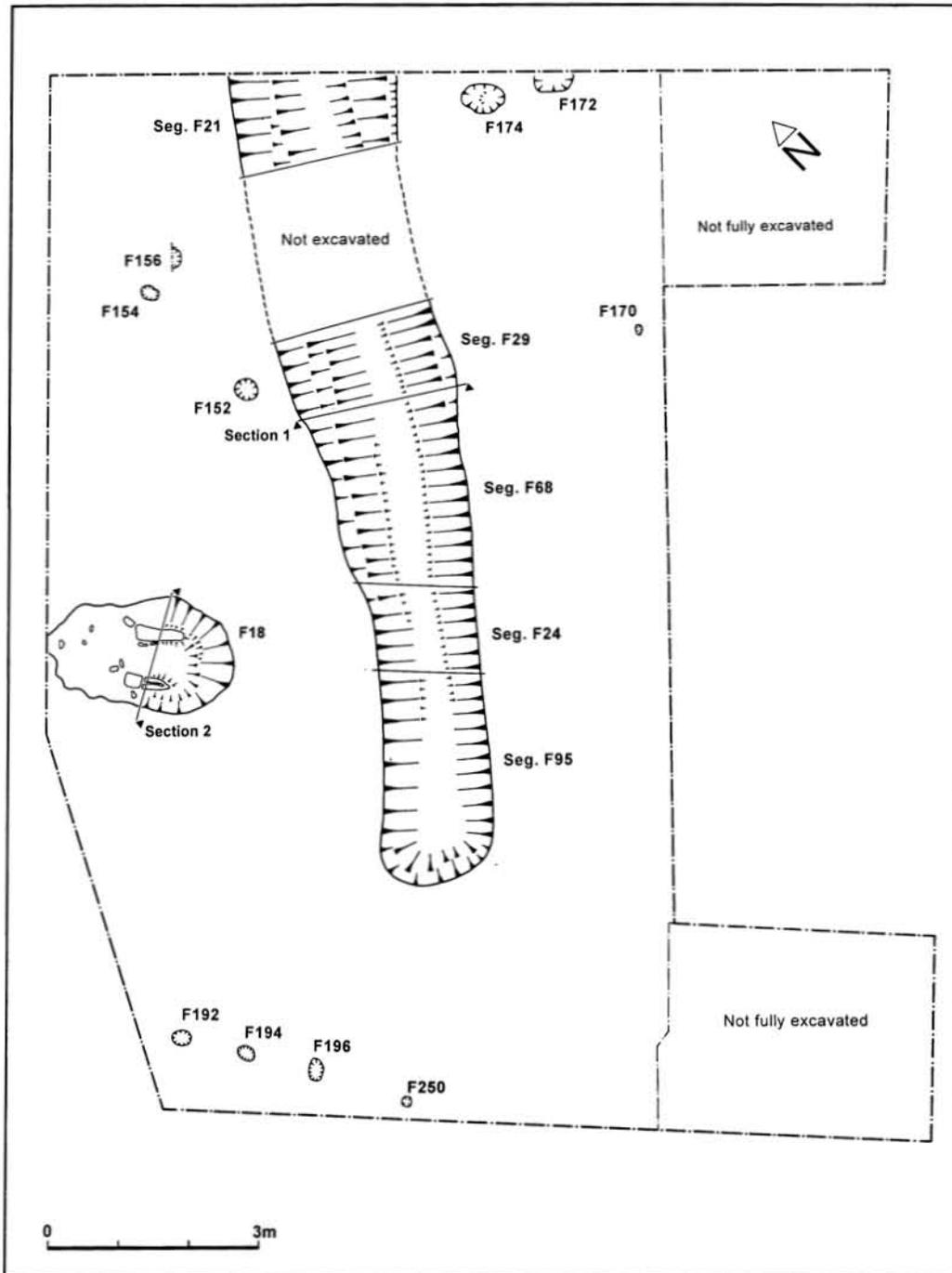


FIG. 8.

Plan of the post-Conquest features found in the 1989-90 excavations.

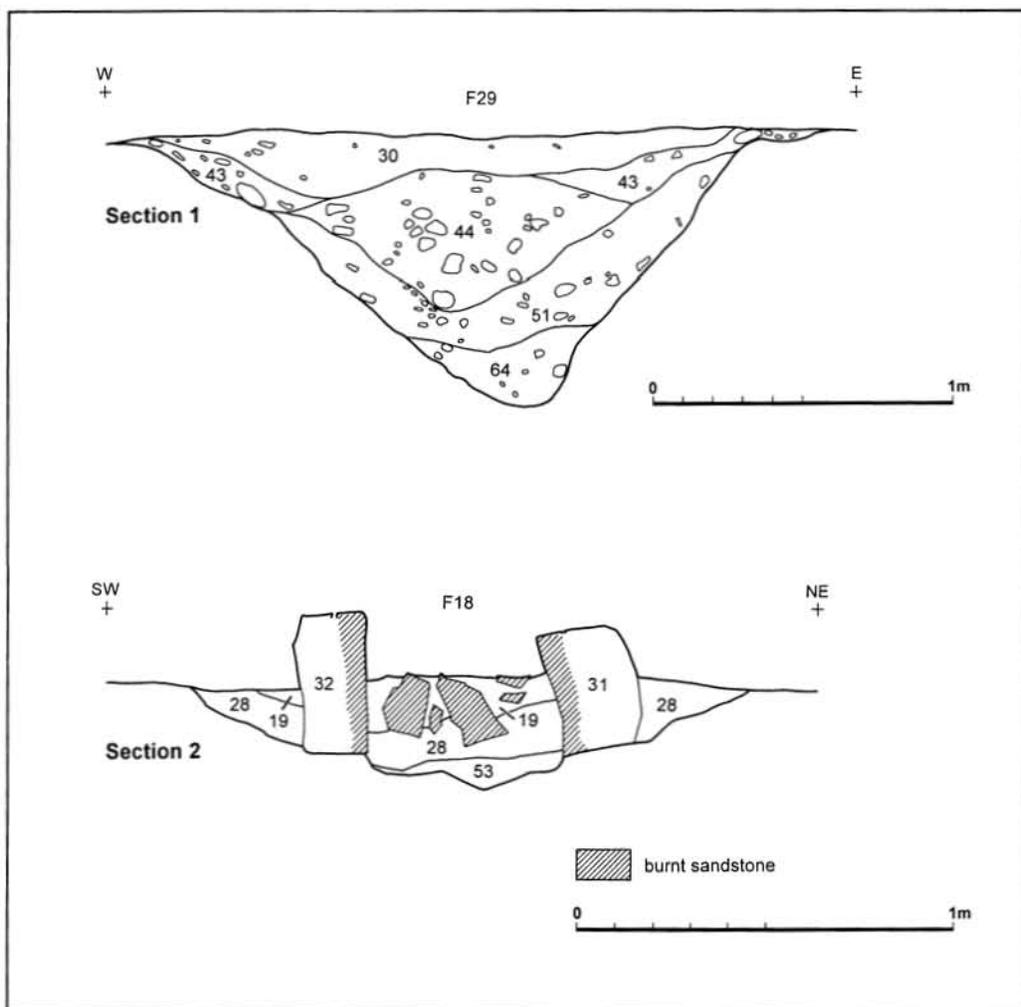


FIG. 9.

Sections through the medieval ditch and drying kiln.

evidence of industrial or processing activity. Five graves had been disturbed during its construction. Within the depression, set stones and a deposit of ash indicated the presence of a flue and fire pit at the south-east end. Carbonized remains from the ash deposit represented predominantly oat grains (*Avena sativa*), with some rye (*Secale cereale*), and it is inferred that the structure was used for either drying or, less probably, malting of grain. A number of voids exposed in the base of the depression were probably caused by the removal of water-worn cobbles, and are not thought to have structural implications.

The depression in which the structure was set was formed by a shallow scoop which partly cut graves F262, 218, F97, F188 and F190. The internal form of the depression was

two circular scoops connected by a narrow channel. The scoop at the SE. end was deeper, and sloped sharply towards the channel. At the NW. end the scoop was even and shallow in form. The channel was lined with two cheek stones, set on their long edges on the base of the depression, but not recessed (Fig. 9, section 2). Both were of sandstone, their internal faces reddened and cracked from repeated heating. Fragments of the two stones had fallen away into the channel, and were included in deposit 19. This was sampled for grain, of which details are included below. The most intense burning had taken place at the SE. end of the channel, where the underlying soil had been scorched. Deposits of burnt soil, ash and charcoal were spread from the channel across the SE. end of the feature, indicating episodes of stoking and raking. The absence of ash and grain from the NW. part of the feature may indicate the former presence of a drying floor, perhaps of wood, on which grain was spread. No datable finds were retrieved from this feature.

Miscellaneous postholes

Six postholes were excavated to the NE. of the graves (Fig. 8). They varied in form, with depths ranging from 0.06m to 0.23m, but with generally flat bases. Diameters ranged from 0.1m to 0.59m. They all lay outside the clear edge of the cemetery, and though it is difficult to assign functions to them, it is tempting to infer the presence of some form of boundary to the NE. edge of the cemetery.

In the extreme SW. corner of the site there was an apparent line of stake holes (F192, F194, F196 and F250). Two of them were cut into grave fills.

BURIED SOIL

A dark, stony layer (17) covered the whole of the site, effectively sealing the latest fill of the ditch, and underlying a layer of cobbles (16) which can confidently be dated to the post-medieval period on artefactual evidence. Layer 17 was a friable, dark brown silty loam with frequent water-worn pebbles, and fragments of coal. It appears to represent the formation of a topsoil after the abandonment of the ditch. One of the artefacts recovered from this deposit was a Roman intaglio (see below). Martin Henig comments that this type of object is often found in post-Roman contexts and is, therefore, likely to have been curated in many cases. This may suggest that it was in circulation during the early medieval period, but that its location in this deposit is due to post-medieval disturbance of earlier layers.

THE ARTEFACTS

POTTERY *By C.G. CUMBERPATCH (Fig. 10)*

Pottery was recovered from a wide range of deposits: from the upper layers of the site (1 and 2); from a cobbled surface (16); from the soil layer sealing the ditch fill (17); from the various segments of the ditch (fills 22, 25, 26, 27, 30, 34, 43, 44, 51, 63, 66, 67, 69, 90, 136, 138 and 139), and from a few pre-ditch contexts (94 and 201). A full analysis appears in the Archive Report; only the pottery from layer 17, from the ditch fills and from the pre-ditch contexts is discussed here.

Context 201 (fill of grave F200)

Fill 201 produced a single sherd of abraded samian ware. This was the only sherd of pottery from any of the grave fills.

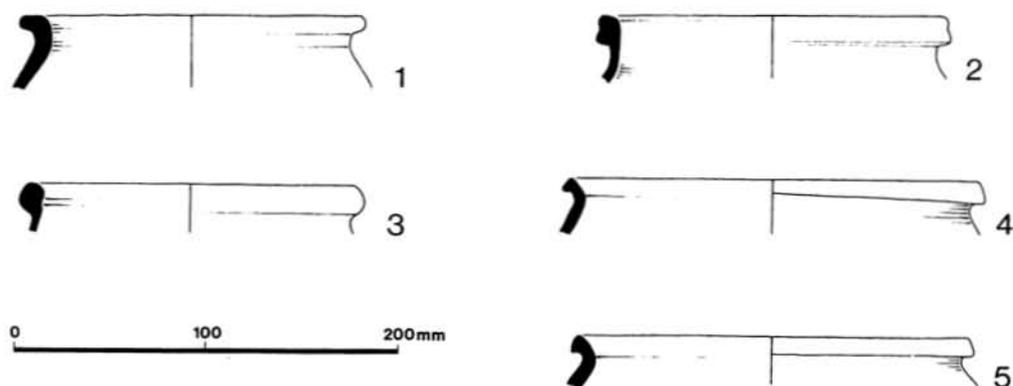


FIG. 10.

Medieval pottery from the 1989–90 excavations: Torksey/Thetford type (no. 1; context 94), Pimply ware (no. 2; context 26) and Gritty ware (nos. 3–5; contexts 36, 17, 22 and 63).

Context 94 (Layer sealing the last use of the cemetery)

Layer 94 produced some of the most interesting sherds from the excavation: two (joining) sherds of an unusual rim (Fig. 10, no. 1) which appears to be a local form derived from the Torksey or Thetford tradition;⁴⁷ a date range of the 10th to 11th centuries is suggested. Other material was of Pimply and Gritty ware type, the normal combination on the site, with date ranges as indicated below.

Ditch Segment F21 (Fills 22, 26, 63, 66, 67, 90)

The fills comprising segment F21 of the ditch produced a total of 30 sherds of pottery, of which 63% are Pimply (e.g. Fig. 10, no. 2) wares and the remainder Northern Gritty wares (e.g. Fig. 10, no. 5). Moorhouse and Slowikowski have suggested that use of the Pimply wares appears to be somewhat earlier than the Gritty wares,⁴⁸ which may suggest that the filling of the ditch took place over a considerable period of time during the latter part of the 12th and early 13th centuries. It should be noted, however, that the rates of replacement of one type by another are far from clear and that it may be hazardous to extend inferences drawn on data from sites such as Sandal Castle and Kirkstall Abbey to more remote and rural places such as Addingham.

Ditch Segment F29 (Fills 30, 34, 43, 44, 51)

These fills produced ten sherds of pottery. Only three of these were of recognizable types: two sherds of Pimply ware and one of Northern Gritty ware. The remainder were of a variety of Gritty types, probably of local origin. A single sherd (from fill 30) appeared unusually fine in texture, and may be of the same tradition as those described from the post-cemetery topsoil (94). If this is the case then it may be amongst the earliest pottery from the ditch, perhaps dating to the 11th century. The remaining material would appear to be of a similar date to that from segment F21.

Ditch Segment F68 (Fill 69)

Fill 69 produced only two sherds of Pimply ware, perhaps of 12th-century date.

Ditch Segment F24 (Fills 25, 27)

Fills 25 and 27 produced only two sherds of pottery. One of these (from fill 27) was unidentifiable, as it bore unusual residues and was preserved for analysis. The other was a body sherd of Pimply ware.

Ditch Segment F95 (Fills 136, 138, 139)

A lump of fired clay from fill 136 did not appear to have formed part of a vessel and it is suggested that it may have been part of a weight. The pottery included a fragment of heavily abraded samian ware. As in other parts of the ditch the medieval pottery was of Gritty ware type. The pottery from the ditch suggests that this feature silted up during the late 12th and early 13th centuries. The pottery is of a generally utilitarian type with fine and imported wares notable only by their absence.

Context 17 (Buried soil)

The precise nature of this deposit is unclear, but the assemblage which it yielded was mainly of late 12th- to 14th-century date. The Gritty wares, some of which bore a general resemblance to Pimply wares (notably the square sectioned rim), suggested a date towards the earlier end of this range. The presence of two green-glazed sherds and of five post-medieval sherds indicated, however, either a later date for deposition or that some contamination had occurred.

IRON OBJECTS

Iron objects have been catalogued in the Archive Report. Most of these belong to levels later than the cemetery, and comprise a typical inventory for a rural site: nails, horseshoes and unidentified fragments. Four graves did, however, yield iron nails, as follows: fill 36 (F35): 1 nail; fill 124 (F123): 3 nails; fill 164 (F163/176): 1 nail; fill 168 (F167): 5 nails. It is tempting to speculate that these nails reflect the use of wooden coffins, or other sorts of containers, but the evidence must be regarded as equivocal at best. It may, however, be significant that all the graves yielding nails contained at least one secondary interment. At Barton-upon-Humber intact coffins were retrieved in which joints were secured by wooden pegs, so that the absence of nails is inconclusive.⁴⁹

OTHER ARTEFACTS

Other artefacts came mainly from post-medieval contexts; they have been catalogued in the Archive Report. The only objects of any direct relevance to the cemetery and later medieval features were an unidentifiable fragment of lead (from the fill of grave F241); a small quantity of unidentified slag (fills of graves F36 and F149), and a fragment of copper alloy (fill of ditch segment F29). One other find of intrinsic interest was a Roman intaglio recovered from a buried soil deposit (context 17). It has a translucent reddy/orange colour and Martin Henig reports that the subject appears to be Mars carrying a spear and trophy. This type of portrayal is often called *MARS GRADIVS*.

THE HUMAN BONE (Pl. VII) *By* ANTHEA BOYLSTON *and* CHARLOTTE ROBERTS*Preservation*

The medieval ditch truncated a number of the burials in the centre of the cemetery. In some cases only the lower legs and feet remained for examination and this presented great problems in ageing and sexing the material. The most reliable indicators of sex and age reside in the skull and pelvis, so these individuals could only be allocated to an adult or subadult category. Altogether, thirteen graves of the 45 which yielded human remains contained only the lower extremities, either because of the ditch or through truncation by the baulk at the edge of the site. Only ten individuals were sufficiently well preserved for substantial numbers of measurements to be taken. These comprised six males, three females and one

possible female. They mainly came from discrete burials that had not been disturbed, although sometimes (as in the case of A60 and A104) there were two individuals in one grave cut. A further four females were sufficiently well preserved for a few measurements to be taken. Three subadult skeletons were in a good state of preservation (A211, A229 and A258).

Twenty-seven interments consisted of redeposited human remains from one or more individuals. Most of these were in a poor state of preservation. Skulls and long bones were most frequently represented, although the latter often showed destruction of the articular surfaces and considerable surface erosion and fragmentation. Some interments consisted of friable bone that included few points of identification (e.g. the three sets of legs in A240). A minimum numbers count relies on preservation of the proximal and distal ends of long bones and this must be borne in mind with reference to the following section.

Throughout the site there was poor preservation of vertebrae, which fell considerably below expected numbers. Therefore, it is impossible to assess the true quantity of vertebral pathology in this population. Bones located on the anterior aspect of the skeleton such as the sternum, manubrium, pubic symphysis and rib ends were also very poorly preserved. This has been the experience of other investigators.⁵⁰ It appears that cancellous bone has been severely affected by diagenesis in this cemetery and this observation is supported by the lightness in weight of some of the long bones. There also appears to be some differential preservation between the sexes. Only three females were sufficiently intact for many measurements to be taken, as opposed to six males despite a relatively even distribution of burials. Female maxillae, in particular, seemed to have been subject to much more severe degradation than male facial bones. This may be a chance finding but it could also relate to the greater robustness of the male skeleton which might cause it to withstand burial more successfully.

Conditions of preservation also dramatically affect the demographic profile of this cemetery. The discrete burials appear to consist mainly of younger adults who died in their twenties and thirties, the vast majority of them males. However, some of the contexts containing redeposited material included bones with joint surfaces showing severe joint disease which would not normally become apparent until after the age of 35 (although occupational stress may cause an earlier onset). Hence there has been no attempt made to apply a life table formula to this cemetery sample, since such an endeavour would undoubtedly be misleading.

The calculation of minimum numbers has been complicated both by extreme disturbance of burials by the cutting of the medieval ditch, and by generally poor preservation of those bones that are usually used to calculate such numbers. Details of the methods used on these interments are given in full in the Site Archive. The separation of individuals by archaeological context, together with subdivision of contexts when substantial numbers of anatomical parts are duplicated (e.g. two skulls or pairs of long bones), suggests that there may be as many as 81 individuals buried in the area under discussion. This can probably be reduced to 79 if, as appears to be the case, two individuals have been bisected by the ditch. A further ten contexts contained one or two additional bones but these probably belonged to

TABLE 3
AGE AND SEX OF ADULT BURIALS

Sex	Young adult*	Young/middle adult	Middle adult	Mature adult	Adult
Male	1	7	2	2	1
?Male	0	0	0	0	1
Female	0	2	2	4	0
?Female	0	2	0	1	1
Indeterminate	2	3	0	0	38

* Approximate ages: young adult 17–25, young/middle adult 26–35, middle adult 36–45, mature adult 46 and over, adult 25 and over (all epiphyses fused).

adjacent contexts. The true number probably lies somewhere between 41 and 81 but it is impossible to be more accurate given the fragmentary nature of the material.

Age

Methods used to age adult skeletons were dental attrition rates,⁵¹ assessment of the pubic symphysis,⁵² the appearance of the ilial auricular surface,⁵³ and study of the sternal ends of the ribs.⁵⁴ No attempt has been made to attribute an exact age to the adults in this study. They have, however, been placed in more general age categories. Thirty-eight individuals were insufficiently complete for age to be assessed. There were fourteen children (less than 18 years) one of whom (recorded with A144) appeared to have died in the first six months of life, two were aged between 2 and 5 years, two were 6–9 years old, four were 10–12 years, two were adolescent (13–17 years) and two could only be aged as subadult. This is surprising in view of the fact that infant mortality in pre-industrial societies was often as high as 40%. There may, however, have been a separate area of the cemetery set aside for infant burial that has not been sampled by this excavation and infants could be under-represented because of diagenesis, i.e. smaller and more fragile bones disintegrate first in certain soil conditions. In the adult categories, there were three young adults, fourteen young/middle-aged adults, four middle-aged adults, and seven mature adults. Table 3 shows the age and sex profile of the adult members of the population.

Powell,⁵⁵ in her report on the Anglo-Saxon cemetery from Raunds in Northamptonshire, reported a peak mortality of females in the 17–35 year age range. She felt that female mortality at this age might be due, in some part, to the hazards of childbirth as these were the main childbearing years. At Addingham, the majority of individuals dying in this age range were young males (ratio of 8:4). Evidence of joint disease and fragments of edentulous mandible (assuming this tooth loss results from old age) in some of the redeposited contexts would suggest that elderly members of the community may have been more numerous than these figures would suggest. However, there was too little material available in these cases for a reliable estimate of age to be made.

Sex

Estimations of sex can be performed accurately in a much higher percentage of individuals than those of age, particularly if the pelvis is available in a relatively complete state. Nevertheless, the constraints of preservation in this cemetery meant that 41 individuals provided too little material for the sex to be estimated. Skulls could not be reliably associated with pelves in much of the redeposited material. No attempt was made to assess the sex of the fourteen subadults. Thus, 26 individuals were considered to fulfil the criteria sufficiently well to be allocated a male or female designation. There were thirteen

males, eight females, four possible females and one possible male. Sex distribution appears to be relatively equal in this cemetery when the possible females are taken into account. This would suggest a 'normal' population living in a village community rather than a war cemetery or a single-sex monastic enclave where more males than females would be expected. The presence of children also supports this view.

Stature and craniometrics

Nine males, three females and one possible female had intact long bones which could be measured for calculations to be made. The mean male value of 1.765m was somewhat higher than that of 1.721m found at North Elmham Park by Wells,⁵⁶ but with such small numbers no important conclusions can be drawn. The female mean was also greater (1.641m at Addingham as opposed to 1.575m at North Elmham Park). They are also greater than Pearson's mean figures for Anglo-Saxon stature in general of 1.709m and 1.560m for males and females respectively.⁵⁷ As Bonser pointed out, these figures are very comparable with Galton and Pearson's statistics for modern English men and women, albeit calculated in the 1950s. Two of the three males, whose crania were complete enough for measurements to be taken, were long-headed (dolichocephalic) as was one probable female. The other male was mesocephalic. These measurements follow the expected norm for this period.

Palaeopathology

Preservation of teeth was generally quite good at Addingham, although in a few cases the enamel was flaking off the crown. However, a few tooth crowns were found (e.g. A226) where the tooth had obviously erupted, because it showed attrition, but the dentine from both crown and root had entirely disintegrated.

Antemortem tooth loss was seen in 6.4% (58) of the 911 adult sockets examined. This is quite a low rate compared with that found at North Elmham Park of 12.1% in females and 9.8% in males,⁵⁸ and may perhaps be explained by the relatively high death rate in the twenties and thirties. It could be a slight underestimate since a few small fragments of edentulous mandible have not been included where the socket positions could not be determined. Antemortem tooth loss was most frequently found in the female mandible (20% of sockets) and in the adult mandible (40.5% of sockets). This undoubtedly reflects the differential preservation rate between mandibles and maxillae, particularly if they are edentulous. Postmortem tooth loss accounted for 111 adult teeth (12.2% of 911 sockets) and 23 deciduous teeth (28.4% of 81 sockets). The rate was highest among the incisors, as one would expect with single-rooted teeth.

Caries involve the progressive demineralization of the tooth by bacteria, normally *Streptococcus mutans* or *Lactobacilli*. Of the 741 permanent teeth 40 were carious (5.4%). Females and probable females were considerably more frequently affected than males (9.3% of 236 as opposed to 4.8% of 292). However, since so many individuals were not able to be allocated to a sex it is considered that the overall rate of 5.4% more accurately reflects caries levels in the cemetery. This compares favourably with Wells' caries rate for North Elmham Park of 6.4% and is normal for the period before sugar was introduced into this country in the 12th century. The tooth most frequently affected was the first molar.

Abscesses, formed when the periapical tissues become infected, were seldom found in this sample. Only eight abscess cavities were observed and all but one of these were found in the mandible. The poor preservation of maxillae at this site may contribute to this under-representation and we are only seeing abscesses that have progressed to sinus formation.

Plaque is constantly being deposited on the teeth by the action of saliva on food during mastication. A total of 198 permanent teeth (26.7%) had deposits of calculus (mineralized plaque) on one or more sides. This is a very low rate compared with findings

for other sites of the same period. Unfortunately, calculus is easily detached during post-excavation processing and the poor condition of some of the enamel, which flaked off easily at the slightest touch, may have led to the loss of some deposits. However, when calculus was recorded it was mainly of medium severity and there was little evidence of the very heavy deposits sometimes found during the medieval period.⁵⁹

The term hypoplasia applies to *amelogenesis imperfecta* where the enamel of the tooth crown fails to develop properly and horizontal lines or grooves are left permanently on the tooth as a record of an episode of malnutrition (e.g. an insufficient vitamin intake), childhood fever, or even psychological stress.⁶⁰ It is theoretically possible to determine the age at which the incident occurred because of the fairly regular pattern of tooth crown formation. It is therefore considered a useful marker of health stresses in the community. Many individuals from this cemetery were affected by this condition. There were three very severe examples (A93, A125 and A137) where multiple teeth were involved with deep grooving of the enamel surface. Males appear to have been much more severely affected than females (57.7% of 97 hypoplastic teeth). As at North Elmham Park, the canine is most commonly affected (29 or 29.9%) which would indicate an episode occurring in the 2-4 year age group, according to Wells.⁶¹

Two individuals had impacted third molars (A89 and A134). The only other dental anomaly recorded was crowding of the anterior teeth in a few individuals. A cusp of Carabelli was found in one juvenile M¹ and one male maxillary M². A notable feature of dentitions from older individuals from this site was the high degree of incisor, canine and premolar attrition that was observed. The possibility that this was culturally induced was considered but rejected on account of the evenness of the wear across all the anterior teeth. It probably reflects the coarse nature or high grit content of flour and an edge-to-edge bite, which is the most common type of occlusion found in Anglo-Saxon burial populations.

Congenital and developmental abnormalities

Spina bifida occulta is a developmental anomaly that is frequently found in archaeological populations. There is normally no accompanying developmental abnormality of the spinal cord or meninges as there is in spina bifida cystica and no paralysis or malfunction results. There were two cases of spina bifida occulta at Addingham. The sacrum of A104 displayed a gap in the posterior neural arch of the second to fifth sacral vertebrae and the first sacral vertebra had a small defect in the right lamina of a deflected neural arch. A45 demonstrated a smaller degree of spina bifida with involvement of only the fourth and fifth (also possibly the third) sacral vertebrae.

Spondylolysis is another spinal anomaly in which the posterior element of the neural arch becomes totally detached from the body of the vertebra and superior articular process. It is thought to result from a hereditary predisposition and an element of trauma, possibly a congenital weakness at that point. This abnormality was recorded in one individual from this site, namely A134. Sacralization, where the fifth lumbar vertebra fuses to the sacrum, was seen in the case of A150.

Stress indicators

Environmental stresses reflected in pathological alterations to the skeleton may result from malnutrition and poor hygiene, among other things. These may lead to suboptimal growth rates in some children who then become more susceptible to infectious diseases or normal childhood illness.

Four cases of cribra orbitalia — probably the result of iron deficiency anaemia in childhood, which is thought to be related to an interaction between diet, intestinal parasites and infectious disease⁶² — were found among the fourteen juvenile skeletons, a prevalence of 28.6%. None of the adults was affected. Two of the four (A48 and A229) were affected in both orbital roofs equally, one involved only the left orbit (A143) and one the right (A144). One individual had severe cribra with diffuse pitting of the entire orbital roofs

(A48), one (A229) lesions of moderate severity and the other two (A143 and A144) were relatively slightly affected. A48 could be aged only as 'subadult', A143 was estimated as 3 years \pm 6 months, A144 as 2 years \pm 6 months and A229 as 9-12 years.

No evidence of rickets (vitamin D deficiency) was found at Addingham although a few of the forearm bones did exhibit an unusual degree of bowing of the shaft.

Trauma

Fractures were uncommon, although numbers may be unrealistically low due to poor preservation. Three individuals had sustained fractures to the metatarsals — two had fractures of a fourth metatarsal (A131 and A142) and one of a fifth (A99). They were all well-healed but alignment was poor. Indeed the metatarsal from one of the individuals in context A142 was severely distorted. Such injuries may be received by dropping a heavy article on to the foot, being trampled on by a horse or falling from a height.⁶³

Burial A105 included fragments from two skulls, that of a male (A105) and fragments from a thinner skull that matched fragments found in context A62. The latter was composed of two possibly female skeletons. One of these individuals had sustained numerous blows from a very sharp, straight-edged weapon. They were mainly situated on the left parietal and would thus have been delivered by a right-handed person from the front or a left-handed person from the back. One blow had taken a superficial slice out of the bone. The final thrust appeared to have been made when the individual was on the ground.⁶⁴ These injuries would not have been survivable and, indeed, no evidence of healing was found.

Infection

Tuberculosis is a specific infection caused by a mycobacterium. Normally, the primary infection occurs in early childhood but, because symptoms are relatively insignificant, passes unnoticed. It is the reactivation of the disease in adults whose immunity has become impaired that leads to chronic illness. This may produce an inflammatory bone reaction that is appositional as opposed to the osteoclastic rib lesions produced by blood-borne spread of the mycobacteria.⁶⁵

Three individuals exhibited signs of a chronic chest infection suggestive of tuberculosis: A134, A223 and A99 displaying periosteal new formation on the visceral surface of the ribs. Burial A134 (Pl. VII,A-C) was particularly notable since thick deposits of layered new bone formation on the left ribs (5th-12th) were associated with lytic lesions affecting the 8th to 10th thoracic vertebral bodies. Since only 5-10% of those with tuberculosis progress to the stage of bony involvement, three cases of the disease in a cemetery would suggest that the prevalence in the community was high.⁶⁶ This is surprising in view of the fact that Addingham was a rural community and pulmonary tuberculosis tends to be associated with overcrowded living conditions since it is spread by droplet infection like influenza. However, the *Leech Book* of Bald and other Leechdoms refers to the 'body wasting and cough of phthisis and the glandular swelling and skin ulceration of the scrofulous child',⁶⁷ which suggests that the disease was present at that period in England. Five individuals showed non-specific infection (periostitis) of the tibiae (A8, A109, A249, A265).

Neoplasia

Evidence of malignant neoplastic disease in palaeopathology is, almost invariably, based on the bone-destructive lesions of cancer, spread to the bone via the blood stream from a distant soft tissue primary malignant growth. The only example from this cemetery involved one of the skulls from context A8, which contained the remains of at least six individuals. The fragments from this skull (A8a; Pl. VII,D) contained multiple small circular perforations, many traversing both internal and external tables and varying in size from

1mm to 10mm in diameter. On X-ray, many more areas of rarefaction were seen in the diploe or bone marrow. Similar lesions were found in two rib fragments and a scapula from the same pit. The diagnosis has been proposed as multiple myeloma,⁶⁸ which is a tumour developing in the plasma cells of the bone marrow. It normally occurs between the ages of 50–70 years and males are more often affected than females. It is nearly always fatal and causes great pain to affected individuals. Multiple myeloma is relatively rare in the palaeopathological record.

Joint disease

Individuals from fifteen contexts had spinal joint disease, which begins to affect vertebrae progressively after the mid-30s. Schmorl's nodes were quite a common finding which would suggest that stress on the lower back was a feature of the lifestyle in Addingham at this period. Eburnation was not seen on any of the apophyseal joints in this population, probably because most older individuals were found in the redeposited contexts where vertebrae were not preserved.

Osteoarthritis is also an age-related condition that may affect one or more of the 190 synovial joints in the human body. After the age of 55 over 80% of people are affected to some extent although the extent to which they are disabled varies greatly, as does the perception of pain from arthritic joints. Only one individual (A89) had severe osteoarthritis of one humeral head (of 41 humeral heads available for study). Three individuals (A100, A103 and A125) showed mild to moderate porosity or osteophytes of the rotator cuff insertion (subscapularis) of the humeral head. These changes may be connected with age or injury. One left hip (of 31) and four right (of 35) were affected by osteoarthritis (A89, A115, A122, A125). There were two cases of temporomandibular joint disease (A100, A125). In general diarthrodial joint disease was confined to a relatively small number of individuals in this population, perhaps reflecting the early age at death of many people in the cemetery.

DISCUSSION

The picture that emerges from this study is that of a population subjected to considerable life stresses. Over 38% of the burials were those of people who had died before the age of 35, not counting those who could not be aged or neonatal infants who were probably buried in a particular part of the cemetery. The relatively equal distribution of the sexes and the presence of children among the burials suggests that the cemetery was serving a normal rural community and not a particular group of individuals such as a single-sex monastic community or war cemetery.

Dental health in the population was relatively good with low rates of caries and calculus (with the one proviso mentioned below). This would suggest a diet that was not high in unrefined sugars, although the attrition of incisors, canines and premolars indicate that the flour was probably quite coarse with gritty inclusions. Periodontal disease was present even in the younger adults to a moderate degree but this is quite a common finding in archaeological populations.

Enamel hypoplasia was also a common finding suggesting that the population was subject to considerable stress. This evidence is supported by the frequency of cribra orbitalia in this population. A total of 28.5% (4 of 14) of children were affected by this condition that has been linked with iron-deficiency anaemia.⁶⁹ The high frequency of subperiosteal rib lesions would also suggest that chronic

pulmonary infections such as tuberculosis threatened the health of the community. As these lesions take a long time to develop, an individual dying earlier in the course of the disease would show no osteological evidence of it. Osteoarthritis, however, was not a major health problem for this community, although a few individuals had severely affected joints.

SEEDS *By* MARGARET E. BASTOW

Eight samples were examined for the presence of botanical remains. The soil in the area of Wharfedale tends to be of a type which is not generally suitable for the preservation of botanical material unless carbonization has taken place. The samples from the graves (F227:228; F224:245), including stomach areas and a control, were disappointing: apart from stray seeds of grass and moss, the only organic remains were frequent small charcoal fragments, indicating that the soil used for backfilling the two sampled graves had come from an area where there had been a fire.⁷⁰

The fills of the corn drying structure (F18:19) produced almost exclusively grain in carbonized form. In decreasing order of importance, oats (up to 80%), rye (up to 10%), wheat, and a very small quantity of barley were recovered from the samples. There were two seeds from arable weeds species, and many small fragments of charcoal representing hazel, hawthorn and oak. Apart from the relative importance of oats and rye as arable crops, indicating adaptation to a cooler climate, the chaff on some grains had blistered, others had burst, and some had sprouted prior to carbonization. These factors indicate wet harvesting conditions (the grain had not been winnowed), rather than an attempt to create an alcoholic beverage. Support for the theory of a wet and cold climate, and therefore marginal growing conditions, comes from the narrow growth rings observed on the charcoal fragments.

The most significant result of the investigations is that oats were the predominant crop, but rye was also important. Some wheat does appear to have been produced, but very little barley. Oats require well drained conditions and grow well on silty soils which would occur in the river valley. Although the grains need more water for development than other temperate cereals, the plants have a lower demand for sunshine. Rye can tolerate a cooler climate and grows best on light soils, but it requires good drainage.

ANIMAL BONE *By* KATHLEEN KEITH

A small assemblage of 418 animal bones was recovered, of which 218 were identified by species or element type. Of these, 135 were retrieved from a single, near complete dog skeleton (ditch segment F68: A91). Three graves yielded animal bones, and there were substantial assemblages from each of the ditch segments. Grave F54 contained part of a pig ulna, grave F58 parts of a pelvis and femur of a horse, and Grave F205 (the possible infant burial) twelve horse teeth. The ditch yielded 226 fragments that were generally well preserved. Cattle (28 fragments), sheep or goat (one) and pig (five) are represented, as well as small numbers of domesticates (cat and dog), and wild fauna (rabbit, roe deer and unidentified bird). The buried soil deposit (17) contained fragments of cattle femurs, teeth and one small rib.

The small quantity of material precludes even a tentative attempt to assess the nature of activities on the site, although it is clear from butchery marks and the presence of domestic species such as cat and dog from the ditch fills that here, at least, there is supporting evidence for localized domestic activity, perhaps associated with the manorial complex. The butchery evidence points to a varied diet from domesticates to wild species in the medieval period, and although ageing data are limited, the presence of an unfused cattle femur and pig ulna demonstrates that some animals were slaughtered before reaching maturity. It is tempting to draw conclusions from the presence of horse elements in three grave fills, but the evidence is insufficient.

TABLE 4
DETAILS OF RADIOCARBON ANALYSIS

Skeleton	Grave	Sample	Calibrated range	
			(1σ)	(2σ)
A93	F56	GU 5112B	A.D. 880-990	A.D. 790-1020
A104	F54	GU 5113B	A.D. 670-790	A.D. 660-880
A120	F118	GU 5114	A.D. 670-860	A.D. 660-890
A182	F180	GU 5115	A.D. 720-900	A.D. 670-980

RADIOCARBON ANALYSIS

Radiocarbon samples were obtained from samples from four of the graves. The analysis was carried out by S.U.R.R.C. in Glasgow. The resultant calibrated date ranges, supplied by Ancient Monuments Laboratory, English Heritage, are shown in Table 4.

The importance of the figures rests in their wide range: at 1σ, the maximum range is A.D. 670-990, and the GU 5112B and GU 5113B ranges are separated by a gap of almost a century. It will be suggested below that on formal and spatial grounds a short chronology for the use of the excavated part of the cemetery would be appropriate, and that the wide range of dates for the skeletons relates to the evident redeposition of human remains.

DISCUSSION (Fig. 11)

THE DATE AND PHASING OF THE CEMETERY

There are no independently datable artefacts from grave fills, apart from the skeletons themselves. The presence of sherds of a Torksey or Thetford-type vessel in the soil (94) which developed above the graves does not in itself suggest more than generalized late Anglian activity near the site, which is in any case demonstrated by the cross shaft. The cutting of the ditch provides a *terminus ante quem* for the use of the cemetery (or at least part of it), but the cutting of the ditch cannot, of itself, be dated. Pottery from its fills would be consistent with its use in or before the 12th or 13th century. There is even less evidence to provide a *terminus post quem* for the cemetery, since no activity prior to the cutting of graves was identified. Dating must therefore rely on radiocarbon dates from four of the graves, which give a possible span of more than 300 years, the 8th to the 10th centuries, and on analogies with other cemeteries from the early medieval period.

A SPATIAL AND TEMPORAL ANALYSIS OF THE GRAVES

The cemetery has a number of internal chronological and spatial characteristics which are of considerable interest. In the first place, it is clearly well laid out with little evidence of intercutting; there is a marked respect for other graves. There is also a possibility that the graves were laid out in such a way as to focus on a single point. In addition, and perhaps of most interest, is the occurrence

of both empty graves, and graves containing the remains of more than one individual. There are several reasons for suggesting that these phenomena may be interdependent.

It has already been noted that there is a clear, though possibly unmarked, boundary to the cemetery on the NE. side. Graves are roughly parallel to each other, in four rows. Four graves (F58, F145, F205 and F244) had cut underlying graves, but in only one case (F58) did this involve substantial destruction. Elsewhere, especially to the SE., there were evidently attempts to avoid intercutting of graves even when this involved cutting a grave too narrow to accommodate an interment in a supine position. Further to the NW. the rows become less well defined with more generous spacing. This sense of organization suggests two aspects of funerary behaviour.

First, some form of marking enabled rows to be regularly laid out, and provided for a clear north-eastern boundary. There may have been equally clear boundaries on other sides, but this is not yet known. Secondly, the lack of intercutting, and general respect for other graves, imply a relatively short chronology for at least this part of the cemetery. This view is supported by other stratigraphic evidence; there appears to have been no deposition of topsoil or refuse material during the period in which the cemetery was in use, and there was a single, homogenous build-up of topsoil (94) clearly sealing all the graves. This seems to discount the possibility of a life span for the cemetery amounting to several centuries (that is, spanning the full date range of the radiocarbon analysis).

There is some evidence, though it is by no means unequivocal, that the graves were aligned towards a specific point. Figure 11 shows the distribution of orientations, by distance from the NE. edge of the cemetery. In this type of chart, the general slope of the distribution from top left to bottom right indicates the tendency for graves to be focused. The steeper the distribution, the greater that tendency. A cemetery in which graves are all aligned E.-W., for example, would show a horizontal distribution.

There could be several reasons for this apparent trend at Addingham: it might, for example, have developed from the relative widths of head and feet ends of graves, with graves inclining to each other at the foot end; but simple visual comparison of grave outlines suggests that this is not the case. The phenomenon might alternatively be generated by aligning the graves radially to the oval enclosure which later contained the burial ground. If, however, the focal trend is real, it is interesting that the focal point (calculated from lines drawn through graves F186, F123, F113 and F58 at the NE. edge, and through graves F206, F224 and F244 at the SW. end) would lie close to the NW. (nominally W.) end of the present church. Such a phenomenon is unknown to the author in the context of Anglo-Saxon cemeteries, although it does have parallels with Early Christian monastic sites.⁷¹ The geophysical survey indicated further possible graves to the W. of the excavated area (Fig. 2), but if the readings are correctly interpreted, these would indicate a much closer focus on the basis of radial alignments.

A much more certain phenomenon, though again without apparent parallel, is the occurrence of both empty graves and others with multiple burials. Graves

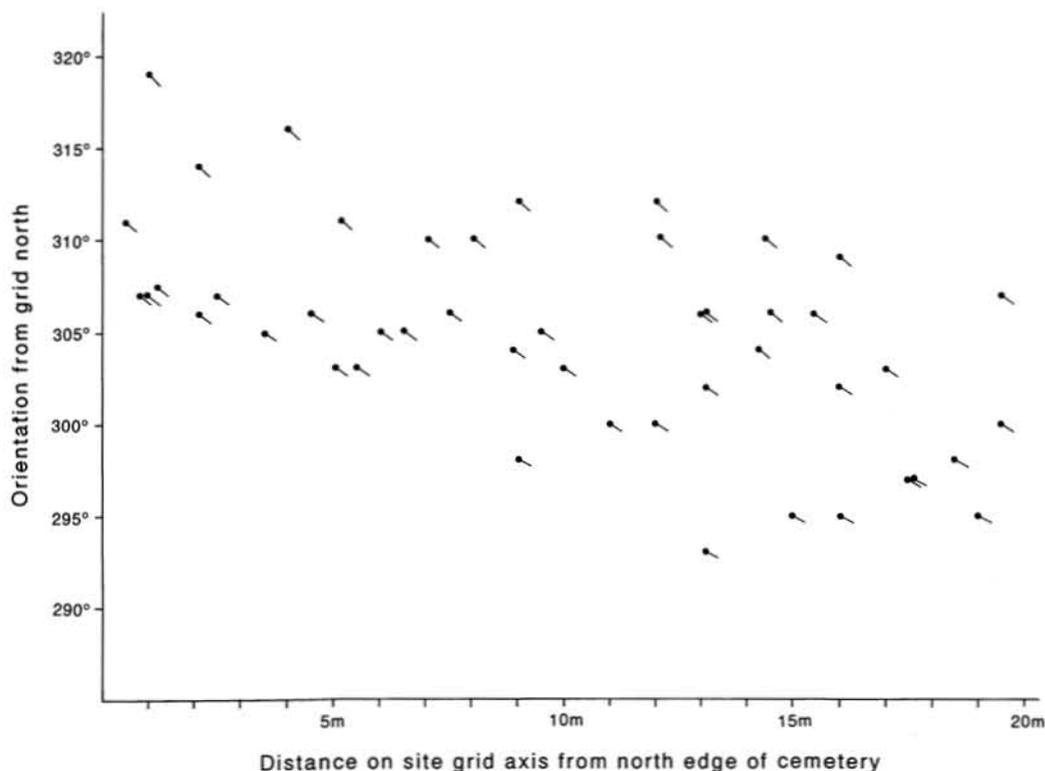


FIG. 11.

Chart showing the distribution of grave orientations. The graves have been distributed by distance from the north-east edge of the site; orientations are in degrees from Grid North.

with either no interment or with only secondary interments are situated in the western part of the excavated area (Fig. 6). Those with both primary and secondary interments are to the S. and E., where the graves are set closest together. The redeposition of bones to make way for new interments is a common enough phenomenon in cemeteries associated with churches,⁷² where there are successive generations of graves in a single cemetery. At Raunds this occurred when stone coffins were reused, and the former occupant was reinterred.⁷³ However, the cemetery at Addingham appears to have been a single generation cemetery, given the lack of intercutting. The orderly layout, close spacing, possible focal alignment and reinterment in graves to the E. all suggest strongly that there was competition for space in this cemetery, and that a position as close as possible to something which lay to the E. was desirable.

It is possible to envisage a series of practices to account for these phenomena, although there must be other alternative explanations. In the first place, it may be suggested that graves towards the E. were dug first as they occupied a desirable position in the cemetery. As space was used up, new rows were added to the W., each row being decreasingly well organized. At a stage after the disarticulation of

the body, bones were collected, though not always very carefully, a grave to the E. was selected and reopened, and a bundle of bones added to the primary interment. This would account for the sequence in graves F6/35, F56, F148 and F58, and perhaps for several others. It must have occurred at least nine times to account for the empty graves, but probably more often. Grave 58 contained the remains of two secondary female interments, one of which showed signs of multiple sword blows to the head. In other cases, it appears that graves were carefully opened, the occupant's bones collected at one end, and a new interment inserted (perhaps graves F140, F224 and F266, for example).

The frequency with which these practices appear to have occurred within a sample of only 50 or so graves is notable. Human remains were being disinterred and reburied, presumably in some way for the benefit of the deceased. Again, the impression is of a relatively short chronology for this activity, since it must have been easy to identify pre-existing graves and reopen them without disturbing neighbouring graves.

Such a use of space in a rural context raises obvious questions. There is likely to have been some form of monument lying to the E. of the cemetery — a church, cross, or special grave. There must certainly have been some form of domestic chapel or oratory at least, in the 9th century, when Addingham was Archbishop Wulfhere's residence, and there was a cross here in the 10th century.

THE DEVELOPMENT OF SETTLEMENT ON THE GRAVEL RIDGE (Fig. 2) *By* STUART WRATHMELL

The evidence for pre-Anglo-Saxon settlement in the vicinity of the cemetery is slight but reasonably convincing. The Roman intaglio could have been brought to Addingham as a curio during the Anglo-Saxon period; it may have come from Ilkley where the Roman fort was superseded by an ecclesiastical centre which is now marked by mid 9th-century and later crosses, and by architectural fragments from a pre-Conquest church.⁷⁴ The sherds of Roman pottery, however, and the horse bone from the eastern ditch, all point to some kind of occupation in the Romano-British period. In addition to the greyware sherd from the 1971–75 excavations, the investigations of 1990 produced samian sherds from grave F200 and from the medieval ditch fill, as well as a fragment of greyware from topsoil; all were very abraded. The first phase of the ditch at the eastern end of the ridge could represent a defensive or at least protective boundary to the putative Romano-British settlement. Its course westwards along the southern, more gentle slope of the ridge has not been established; nor can we point to an obvious W. side for such an enclosure among the N.–S. ditches and gullies located W. of the churchyard. The site is located *c.* 900m N. of the trans-Pennine Roman road from York to Ribchester.⁷⁵

On the evidence of Simeon of Durham, Addingham was an archiepiscopal possession by the mid 9th century, presumably as a member of the Otley estate (which it certainly was a century later). The core of this estate has been postulated as one of the donations to Bishop Wilfrid in or before 678,⁷⁶ though perhaps

without Addingham at that stage.⁷⁷ Professor G. R. J. Jones has argued that this Anglo-Saxon estate had a British precursor, and further that the British estate, by analogy with examples in Wales, had a secular *caput* at the site of the archbishops' later manor house at Otley, and a distinct church settlement in the vicinity of Otley's parish church.⁷⁸ Some of the assumptions previously made about the early history of the archbishops' Otley estate, and Addingham's relationship to it, have been questioned by Dr I. N. Wood,⁷⁹ who has undertaken a critical re-examination of the evidence. Nevertheless, it seems to be an acceptable working hypothesis that Otley and its members, including Addingham, were in the hands of the archbishops from the 8th century; that the Otley estate's importance was partly vested in its geographical location, controlling an important routeway, the Roman road from York westwards across the Pennines; and that it was a centre of pastoral care for the middle stretch of the Wharfe valley.⁸⁰

Archbishop Wulfhere's withdrawal from York to Addingham was brief, and may have been occasioned as much by conflicts between rival English claimants to the Northumbrian throne as by the Viking capture of the city.⁸¹ The choice of this vill as his refuge presumably signifies that it already contained a residential complex appropriate to archiepiscopal status. The location of this complex is unknown, but it may be signified by the oval enclosure which became the medieval churchyard; alternatively, it is possible that Wulfhere's residence lay outside the oval, perhaps to the E. near the ditch which yielded up the bone plate. To the W. of the oval enclosure, the excavated segment of the cemetery may be only a small part of a graveyard (or a series of burial groups) which extended right up to the enclosure, given the recorded discovery of skeletons throughout this area in the 19th century. There is no record of skeletons having been found when the present church hall was built in the 1970s, though human remains must have been encountered at least on the W. side, where a drain had clearly cut some of the graves. Therefore the absence of a record cannot be taken as an absence of burials on the site of the hall.

The cemetery may have been focused, as suggested already, upon a feature within the oval enclosure or on its boundary; the curious pattern of reburial has been discussed above. The graves were roughly arranged in lateral rows which extended southwards for an unknown distance. Northwards, the edge of this cemetery is clearly visible on the graves plan, though there is no evidence that it was marked on the ground. We cannot assume that this boundary existed because of the proximity of the steep slope down to the Wharfe; as already noted, there may have been substantial subsequent erosion of the river bank. Westwards, gaps in the rows begin to appear, and the geophysical evidence suggests that the outer end of the cemetery may be a few metres beyond the edge of excavation. Only one grave, F106, had been cut by a later grave (F58) in a manner which might suggest a superimposed second phase of burial activity of the kind recorded at Nazeingbury.⁸² It is possible that at Addingham there was not simply one continuous area of ground devoted to burial, but that discrete cemeteries were opened at different periods,⁸³ or perhaps for different sectors of the population during the same period.

Assuming that the Addingham burials extended as far as the churchyard boundary, and that there were no other cemeteries on the ridge, then the excavated

part can represent no more than one-fifth of the total cemetery, and probably much less than that. With these qualifications in mind, we can note that the recorded burials seem to represent a 'normal' rural population, with relatively equal representation of the sexes and the presence of children, and a significant proportion of deaths of individuals below the age of 35 years. The kind of skew in population data which has led to the interpretation of Nazeingbury as having a monastic context (a hospice run by nuns)⁸⁴ is not apparent at Addingham.

Addingham is not the only place where middle and/or late Saxon burials have been found outside known churchyards, and a review of some comparable discoveries may be a useful way of providing further definition to its settlement structure. The first two locations to be considered are in urban contexts: Aylesbury in Buckinghamshire and Pontefract in West Yorkshire. At Aylesbury, a late Saxon royal vill where a church was recorded in Domesday Book, the medieval parish church of St Mary is credited with pre-Conquest origins, on the grounds that dues were paid to it from an area covering almost half the county; it has been identified as a 'minster' church with an extensive *parochia*.⁸⁵ Late 8th- to early 10th-century burials — part of an ordered row cemetery — were discovered c. 150m SE. of St Mary's in an area which had, by late Saxon times, ceased to be used for burial, and where, by the 12th and early 13th centuries, rubbish-pits indicate domestic urban activity. The interpretation offered for this sequence is that the middle Saxon minster needed a very large burial ground to serve the population of its extensive *parochia*, but that the subsequent development of parish churches with burial rights within this territory meant that such a large cemetery could no longer be sustained in the context of urban intensification and expansion.⁸⁶

Much the same sequence has been postulated at Pontefract, where the royal vill of Tanshelf, visited by King Eadred in 947, and the place called *Kirkby* may have been separate settlement foci (comparable to those proposed at Otley), which were later absorbed into the 11th-century urban and administrative centre. It has been suggested that *Kirkby* was the name of a settlement associated with All Saints' church, over 100m E. of the castle.⁸⁷ Excavations in 1985–86 uncovered a large burial ground beyond the western boundary of All Saints' churchyard, in the area of the town known as The Booths. The first phase of the cemetery, which seems on the evidence of a radiocarbon date to have been established by the 7th or 8th century, comprised ordered rows of burials; later phases, accompanied by the erection of a previously unknown late Saxon church, were represented by less orderly burial in the same area.⁸⁸ The burial ground appears to have extended westwards up the hill, and into the area of the Norman castle; burials pre-dating the castle have been found in the vicinity of its Norman chapel.⁸⁹ While the western end of this extensive cemetery was superseded by the castle, the eastern part seems to have been overtaken by urban development in the 12th century.

Other cases of pre-Conquest burial grounds outside known churchyards have a rather different emphasis. Brixworth, Northants, was again a royal holding at Domesday and possibly the site of an early royal residence; it was also the location of a monastic community founded in the late 7th century. Excavations in 1972, W. of the Vicarage and nearly 100m W. of the church, uncovered burials dated to the

monastic period, and a ditch which was interpreted as part of the *vallum monasterii*. Secular reuse of this part of the monastic precinct was dated to the early post-Conquest period: the ditch was infilled, and a 12th-century building was placed on top of it.⁹⁰ At Whitby, North Yorkshire, recent evaluation trenches have revealed a pre-Conquest cemetery and probable enclosing ditch in the vicinity of Abbey Lands Farm, c. 200m S. of the Abbey church. The remains were sealed by 13th-century and later boundary features and ridge-and-furrow.⁹¹ Finally, the village of Crayke, also in North Yorkshire, is the probable location of another early monastic community. The *Historia de Sancto Cuthberto* identifies the vill as one given to Cuthbert, when he was elected bishop of Lindisfarne, to provide him with a dwelling place which he could use on journeys to York. Cuthbert is said to have established a monastery there and ordained an abbot. The monastery may have continued into the early 10th century.⁹² Trenches excavated N. of St Cuthbert's church, just outside the graveyard which had itself been extended northwards in the 19th century, revealed what has been interpreted as a single phase cemetery, with well-spaced burials on a common alignment; the population was mixed, and radiocarbon dates cover the late 8th to early 11th centuries.⁹³

It is difficult to envisage Addingham as a 'minster' in Aylesbury or Pontefract-*Kirkby* terms. It was not, as far as we know, an estate centre in pre-Conquest times; nor does it appear to have had an extensive *parochia* attached to it. On the contrary, the documentary evidence points to Otley as the administrative centre of an estate which contained Addingham, and the sculptural evidence also points to Otley as the estate's ecclesiastical centre.⁹⁴ It has, perhaps, more in common with the other places cited above. The precinct ditch at Brixworth, for example, seems to have been similar in dimensions and profile to the ditch E. of Addingham Rectory; and the reuse of earlier defensive ditches for monastic precinct ditches, as could be the case at Addingham, is recorded elsewhere.⁹⁵ The full significance of the discoveries at Whitby cannot be assessed without definitive excavation, but the cemetery at Abbey Lands Farm might conceivably mark a satellite burial ground established on the outside of the southern monastic precinct boundary. Finally, the status attributed to Crayke — an episcopal residence for use during long-distance journeys — immediately invites comparison with Addingham.

It seems reasonable to speculate, therefore, that a small monastic community was established at Addingham, associated with the archiepiscopal residence located there by the mid 9th century. Parochial ministry in the Otley estate was probably organized from Otley itself, but the community at Addingham may have attracted a satellite burial ground for the surrounding population in a manner which may also explain the Whitby discoveries. The dissolution of the Addingham community may have led to its church becoming a parish church, drawing burials into its immediate vicinity and causing the outlying cemetery to be abandoned.

Whatever the status of the bulk of its inhabitants, Addingham's archiepiscopal connections were severed in the last quarter of the 10th century, when it was one of a number of vills in the Otley estate taken from Archbishop Oswald.⁹⁶ It is probable that the archiepiscopal holding was that part of Addingham which became assimilated into the pre-Conquest estate of Bolton in Craven, precursor of

the honour of Skipton. This is suggested by the Cliffords' acquisition of the advowson of Addingham church when they were granted the honour in the early 14th century.⁹⁷ The 10th-century cross-shaft, which is in a late Anglian rustic style,⁹⁸ might post-date Bolton's acquisition of the vill; but archiepiscopal control provides a better context, especially given the stylistic links of its double-stemmed scroll with Ilkley and Guiseley, other members of the Otley estate, and the recognition of one of the Otley crosses as a possible prototype for this kind of scroll.⁹⁹

The post-Conquest history of the site is very fragmentary, but a combination of archaeological and documentary information of various kinds indicates that the manorial enclosure lay W. of the church from the 12th century at latest; the excavated ditch and drying kiln can be most readily interpreted in such a context. Their disregard for the location of burials does not, however, necessitate a lengthy hiatus between the closure of the western cemetery and the establishment of a manorial focus in this part of the site. What it may indicate, instead, is that an earlier manorial nucleus expanded eastwards in the 12th century, at a time when the present parish church had been founded (witness the chevron-decorated fragments), and when the burial ground had been confined — or transferred — to the oval enclosure.

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Figures 5 and 10 have been drawn by Chris Philo; the remaining illustrations are by Michael Fossick. The text was edited by Stuart Wrathmell and prepared by Alison Whawell.

NOTES

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- ¹⁵ *Ibid.*
- ¹⁶ West Yorkshire Archives: Leeds 2161.
- ¹⁷ West Yorkshire Archives: Leeds 342.
- ¹⁸ The map is among the Devonshire (Chatsworth) MSS. I am most grateful to Dr R. T. Spence for this information.
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- ²⁶ A. von den Driesch and J. A. Boessneck, 'Kritische Anmerkungen zur Widerristhöhenberechnung aus Längenmassen vor- und frühgeschichtlicher Tierknochen', *Säugetierkundliche Mitteilungen*, 22 (1974), 325–48.
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