# IRON AGE, MEDIEVAL AND RECENT ACTIVITY AT WHITEGATE FARM, BLEADON, NORTH SOMERSET

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## SUMMARY

Excavations in the historic village of Bleadon, North Somerset, revealed significant evidence of previous human activity during the late prehistoric and medieval periods. A series of pits, some planned to a deliberate layout, reflected a phase of Middle Iron Age ritual activity culminating in the burial of two crouched inhumations in reused pits during the Late Iron Age. Carbonised cereal grains dated to the Late Saxon period pointed to cultivation in the vicinity. A series of tenement ditches and stratified soil deposits and cobbled yard surfaces indicated medieval activity during the 12th–14th centuries. The tenements subsequently were incorporated into a single large post-medieval enclosure occupied thereafter by the modern Whitegate Farm.

## INTRODUCTION

The village of Bleadon lies on the edge of the North Somerset Levels *c.* 5km to the south-east of Weston-super-Mare. It lies on sloping ground between the 10m and 40m contours at the foot of Bleadon Hill, and is situated on Dolomitic Conglomerate overlain by undifferentiated Keuper Marl and, locally, Mercian Mudstones (Fig. 1). Excavation in 1997 at Whitegate Farm in the centre of the village was undertaken in advance of residential development (Fig. 2). The site (centred on NGR ST33995692) was located on a small plot of land, formerly a farmyard attached to the farm. The excavation provided the first opportunity to investigate the archaeology of Bleadon using modern methods and techniques. Bleadon parish had enjoyed significant antiquarian interest, generated by Colt Hoare's search in the early decades of the 19th century for a purported Roman road linking Old Sarum and Uphill and his (incorrect; Clarke 1998) identification of earthworks on Purn Hill as the remains of a Roman military station 'Ad Axium'. An SMR (or HER – Historic Environment Record) trawl (available in the project archive) highlighted the archaeological potential of the parish, as indicated by a varied range of records, from Pleistocene tools and animal remains (NSHER 37) found during quarrying on Bleadon Hill to a medieval sea wall on Bleadon Moor (NSHER 0009).

In November 1996, an archaeological trial excavation was undertaken by Avon Archaeological Unit as part of the planning process prior to residential development in the former farmyard at Whitegate Farm, for which outline planning consent had been granted. The development site was located *c.* 150m to the west of the medieval church and on the opposing side of the undated, but presumably early, main north–south route through the heart of the historic village. It was suspected that archaeological deposits relating to the medieval settlement were present, but unexpected prehistoric deposits were discovered, in particular a human burial. This discovery led to a second stage of trial

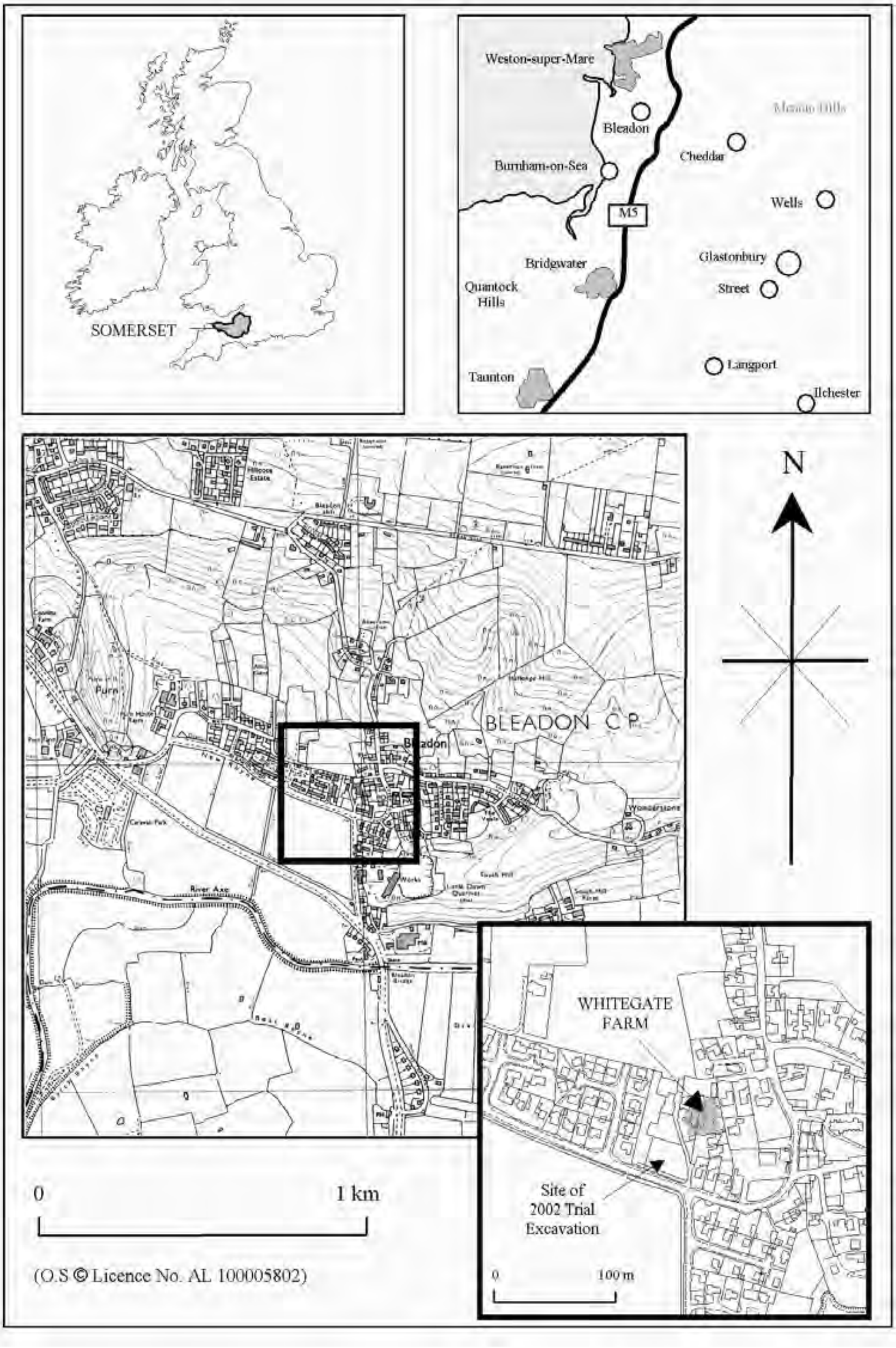


*Fig. 1 Location and landscape setting*

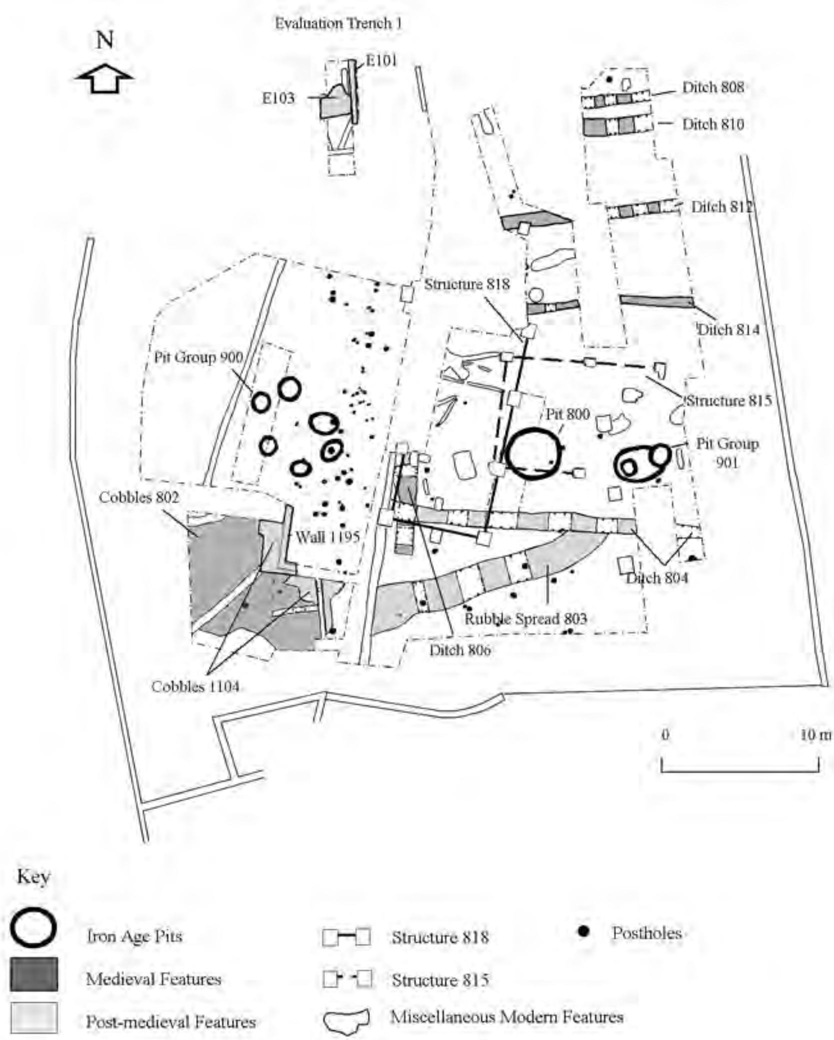


*Fig. 2 Excavation area*

excavation in December 1996, during which an open area investigation, focusing on the previously identified burial pit, revealed a second pit burial in one of a group of six pits. In view of the importance of these features, English Heritage, North Somerset Council and the site owner, Ware New Homes of Bristol, agreed to jointly fund an archaeological excavation encompassing a significant proportion of the total development. The area of excavation covered *c.* 1050m$^2$ and was investigated over a period of eight weeks between March and May 1997.

The principal objectives of the excavation were to fully excavate and record, in accordance with PPG16 *Preservation by Record*, the archaeological remains preserved on the site in advance of their destruction, and to recover further archaeological evidence that would elucidate the date, character and environmental setting of the prehistoric funerary activity. To that end, the site was carefully cleared of overburden by machine under archaeological supervision, and archaeological deposits exposed were cleaned by hand. Prehistoric features were

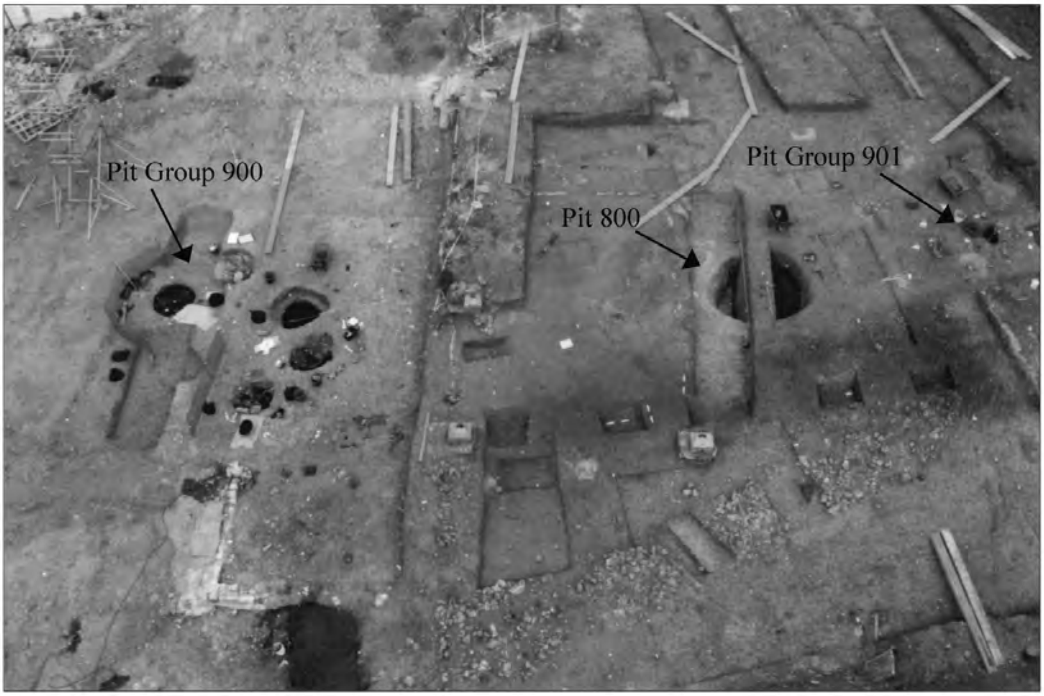


*Fig. 3 The site during excavation*

entirely excavated, all artefacts recovered were located three-dimensionally and, where appropriate, deposits were 100% sampled for environmental analysis. Medieval and later features were bulk-sampled by context for environmental analysis and selected artefacts were recorded three-dimensionally.

Prior to the commencement of the excavation, it was agreed with Dr Julian Richards and the BBC that the project would be filmed for an episode of *Meet the Ancestors*, a new series of archaeological programmes being developed for BBC2 at that time. The programme followed the excavation of one of the burials, an adult male, and commissioned a facial reconstruction of the skull, a copy of which is displayed in the village hall at Bleadon.

## THE EXCAVATION

In all, five periods of activity were identified.

### Period I: Late Bronze Age/Early Iron Age

The earliest activity was represented by an extensive prehistoric soil horizon and by a small collection of residual pottery sherds largely recovered from cut soil features located in the centre and west of the site. The prehistoric soil (1021) was preserved below the subsoil in the centre and east of the excavation area, but had been destroyed to the west during historic terracing. It was tentatively dated to the Late Bronze Age/Early Iron Age transition based on the dating of the residual pottery. No related structural activity was identified.

### Period II: Middle Iron Age

Middle Iron Age activity on the site was represented by an episode of pit-cutting activity recorded at three distinct locations (Figs 2 and 3), several of the pits initially having been located during the preceding stages of trial excavation. The Period I prehistoric soil horizon (1021) was cut by a group of three intercutting pits (Pit Group 901) located close to the eastern site boundary, and by a large isolated pit (pit 800) located in the centre of the area. A further six pits were revealed in the terraced area to the west, apparently constructed to a deliberate plan (Pit Group 900). The pits were either circular or oval in plan and all were broadly cylindrical in profile.

A series of radiocarbon determinations were obtained from securely stratified finds (articulated

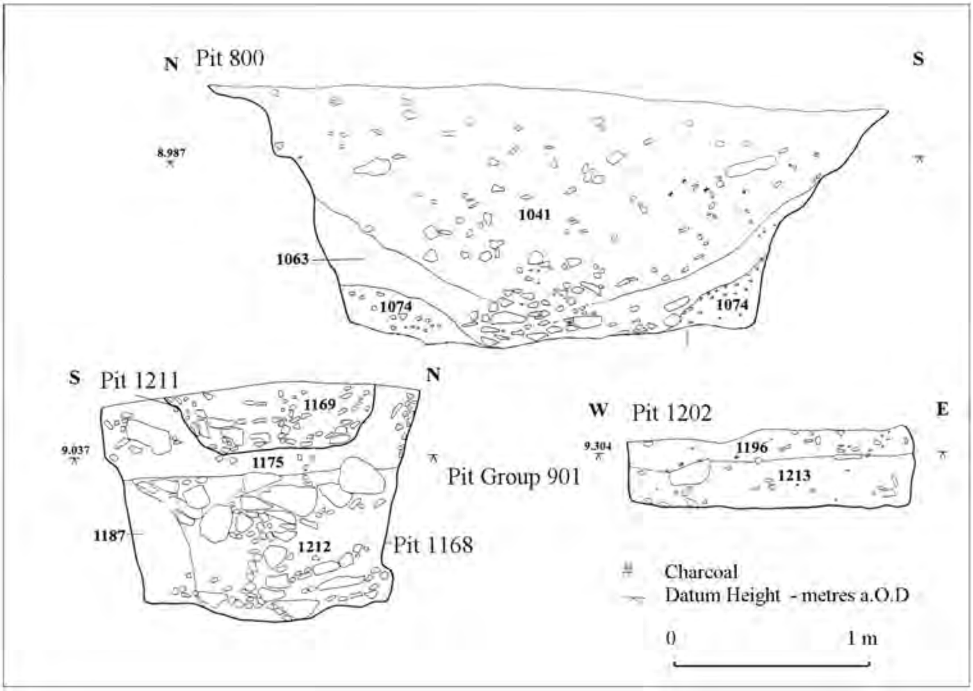


*Fig. 4 Sections of pit 800 and Pit Group 901*

animal bone and carbonised grain) recovered from specific pit fills. The determinations were then statistically manipulated in order to provide a '*posterior density estimate*', i.e. a refined date range for the occurrence of the pit-cutting activity represented. The results of the statistical analysis provided an overall date during the later Middle Iron Age period for the activity, some time between *380–175 cal BC (95% probability)*, a chronology that agrees with the pottery dates.

PIT GROUP 901

Pit 1168 was the earliest feature in the group and was cut by pits 1202 and 1211 after it had been filled. The pit (1168) was roughly oval in plan and, at 1.4m, was deeper than the others (Fig. 4). It was filled with a sequence of three deposits (1187, 1212 and 1175), the later two containing varying quantities of limestone rubble. The skull of an immature horse (SF 7243) had been laid in the base of the pit at the west side before the primary fill (1187) was deposited, and a second juvenile horse skull (SF 7238) was located in a similar position at the base of the secondary fill (1212). Several sherds of Middle Iron Age pottery were recovered from the primary fill (1187), and rim fragments from two small cups of the same date were retrieved from 1175 during environmental processing. Pits 1202 and 1211 differed in plan, as pit 1202 was circular whilst pit 1211 was oval. At *c*. 0.45m deep, both were somewhat shallower than pit 1168. Both pits appeared to have been deliberately backfilled with deposits of mixed soil and limestone rubble (Fig. 4). Over 200 sherds of Middle Iron Age pottery and a significant quantity of animal bone were retrieved from the fills of pit 1202 (1213 and 1196), but few finds were recovered from 1169 filling pit 1211.

PIT 800

This was the largest of the pits recorded on the site, at *c*. 3.2m in diameter and *c*. 1.4m deep (Figs 5 and 6). It was located in isolation in the centre of the site and was investigated in two archaeological cuttings with a central baulk initially left in-situ. The baulk was removed thereafter revealing a steep-sided cut with a flat base (Fig. 4). The base of the pit was lined with a carefully laid surface of large, flat limestones (1146) bedded in a thin silted deposit and was filled thereafter with a sequence of sandy clay deposits (1074, 1063 and 1041 respectively) containing varying quantities of small to medium

*Fig. 5 Pit 800 during recording*

limestone rubble and redeposited natural gravels (mudstones). Prehistoric pottery sherds were present in all the pit fills and included a number of residual sherds dating to the Late Bronze Age/Early Iron Age transition alongside Middle Iron Age types. Animal bone was also recovered throughout, particularly from fill 1074, where the partial skeleton of a juvenile sheep/goat (SF 7233, Section 4) had been placed on the stone floor in the base. Bones from the articulated right limb of this individual were submitted for AMS radiocarbon dating and provided a calibrated date range of cal BC 360–160 (95 % confidence – OxA 12378 and OxA 12379). A similar determination, cal BC 370–120 (95% confidence – OxA 12380), was obtained from the dating of a cattle limb (SF 7206) recovered from the base of the tertiary fill.

PIT GROUP 900

This group of six pits (Fig. 7) was preserved directly below the hardcore bedding of a modern concrete yard surface that covered a terraced area in the west of the site. The pits (pits 1056, 1059, 1089, 1092, 1107 and 1133) formed a symmetrical oval group in plan, orientated north-west to south-east. All were either circular or oval in plan and five of the six (pits 1056, 1059, 1089, 1092 and 1133) were of similar depth (*c.* 0.4–0.5m; Fig. 8). The sixth pit (pit 1107) was significantly deeper at 1.4m and cut the underlying natural gravels with a varying profile. Each pit contained a differing sequence of fills, although some similar characteristics were noted, and two pits (pits 1089 and 1092) were reused in the Late Iron Age (Period III below).

*Pit 1056*

A few fragments of animal bone were the only finds recovered from the simple sequence of mixed silty clay and limestone rubble deposits (1062, 1061 and 1058) filling the pit. Two large flat limestone stones bedded in the thin primary fill (1062) possibly represented the remnants of a stone floor.

*Pit 1059*

The base of this pit was lined with limestone slabs (1179) bedded in a thin layer of puddled clay (1189), and was overlain by further deposits of puddled clay and limestone rubble (1111 and 1148 respectively). The upper part of the pit was filled with a sequence of sandy clay fills (1147, 1099 and 1068), the latest of which (1068) contained a significant quantity of large limestone rubble. No dating evidence was

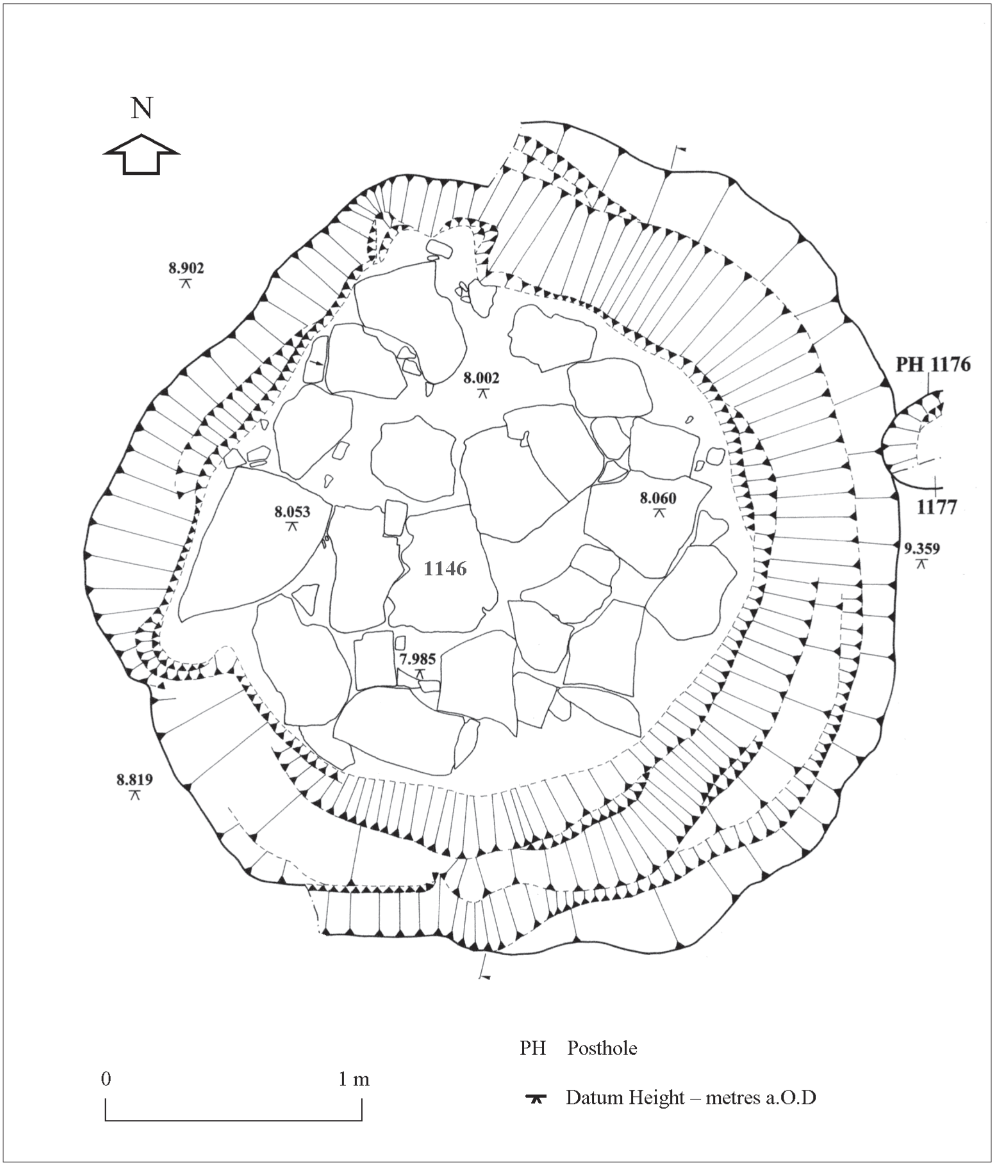


*Fig. 6 Pit 800 – stone floor*

recovered from any of the pit fills, but most produced small quantities of animal bone.

*Pit 1089*
This pit was cleaned out and reused as a grave during the Late Iron Age period (Period III below) and the majority of the fills related to this later activity. Only an aceramic primary fill (1178), a compacted deposit of mixed silty clay and medium to large limestone rubble, appeared to relate to the original filling during the Middle Iron Age period.

*Pit 1092*
This pit was also cleaned out and reused as a grave during the Late Iron Age period (Period III below). A sequence of three primary deposits (1194, 1193 and 1188) sealed in the base by a Late Iron Age skeleton (skeleton 4000) appeared to represent

*Fig. 7 Pit Group 900 excavated*

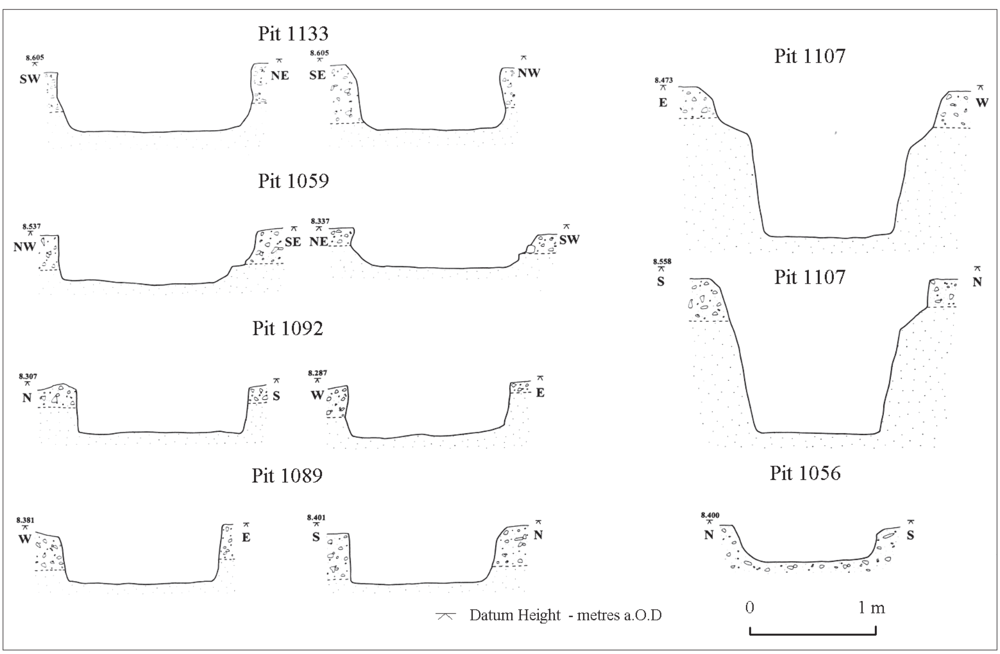


*Fig. 8 Pit Group 900 - profiles*

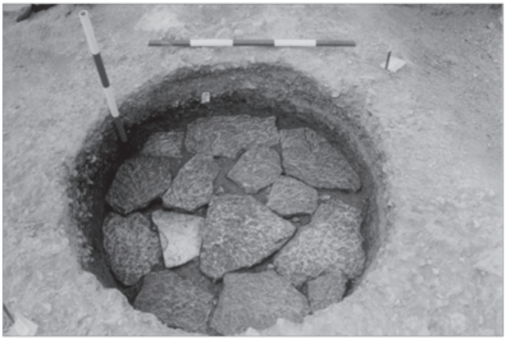

*Fig. 9 Pit 1092 - stone floor*

Middle Iron Age activity. The base of the pit was lined with a limestone floor (1194) composed of irregularly shaped but closely fitting stones bedded in a thin silted deposit (Fig. 9). The floor was sealed with further thin silts (1193) and mixed sandy clay and medium limestone rubble (1188). A few small fragments of prehistoric pottery were recovered from each of the fills, and a broken whetstone (SF 8030) was recovered from the rubble in fill 1188. Two carbonised rye grains retrieved from this fill (1188) during environmental analysis were submitted for AMS radiocarbon dating. The resulting determinations at 770–980 cal AD and 1020–1220 cal AD (95% confidence - OxA 11452 and OxA 11453) indicated that both grains were intrusive.

*Pit 1133*

This pit was partly filled with deposits of mixed soil and limestone rubble (1149 and 1152). Bone from several foetal and neonatal sheep (SF 7137) were deposited against the northern side of the pit thereafter, and sealed with a charcoal-smeared deposit of mixed soil, clay and smaller limestone rubble (1134). The upper pit fills were cut by a modern posthole in the approximate centre of the pit, at which time some intrusive artefacts were introduced into the prehistoric assemblage. Carbonised cereal grains retrieved from the primary fill (1149) and articulated bone from two separate foetal sheep/goat deposited in fill 1134 provided broadly similar AMS radiocarbon determinations, dating the filling of the pit to sometime between cal BC 410 and cal BC 170 (95% confidence – OxA 11423, OxA 11424, OxA 11450 and OxA 11451).

*Pit 1107*

This deep pit was filled with a sequence of 13 fills, of which the primary deposits (1167, 1143, 1154, 1156 and1157) comprised waterlogged silts. Above this, lay a discontinuous lens of mineralised silts (1141) sandwiched between thick deposits of mixed soil and limestone rubble (1142 and 1139 respectively). The seventh fill (1131) was composed of a layer of closely set flat limestones, very like the limestone floors lining the base of pits 1059 and 1092. Here, the stone surface (1131) occurred at a similar depth (*c*. 0.4m below the surface) and sealed the lower shaft-like part of the pit. A discrete lens of redeposited clay and natural gravels (1119) was incorporated into the secondary sequence of rubble deposits (1125, 1124, 1122, 1120 and 1106) sealing the stone surface (1131) and filling the remainder of the pit. The waterlogged second fill (1143) yielded the only sizeable Middle Iron Age pottery sherd (SF 6096).

**Period III: Late Iron Age**

Late Iron Age activity was restricted to the reuse, as graves, of two Period II Middle Iron Age pits (pits 1089 and 1092 in Pit Group 900) located in the terraced area in the west of the site. That the two pits had been later reused as graves was not immediately apparent during excavation, until the discovery of an iron penannular brooch (SF 8026) in one burial. The typological dating of the brooch to the 3rd to 1st centuries BC contradicted the apparent Late Bronze Age/Early Iron Age date for the filling of the pits indicated by the assessment of pottery recovered during the preceding evaluation stages of the project. (The final Middle Iron Age date attributed to the pits was not established until the analysis of the total prehistoric pottery assemblage after the excavation stage was completed and the earlier pottery types identified were recognised to be residual.) In order to resolve this contradiction in dating and include the results in their programme, the BBC agreed to fund AMS radiocarbon dating of samples of bone from both skeletons, the results of which confirmed their deposition during the Late Iron Age period (OxA 7193 and OxA 7207).

BURIAL PIT 1089

An adult female crouched inhumation (skeleton 4001), positioned with the spine resting against the east side of the pit and the head to the south, had been placed on the Period II primary fill (1178) in the base (Figs 10 and 11). Two large blocks of limestone rubble were placed close to the head and the arms were folded across the chest. The right hand rested under

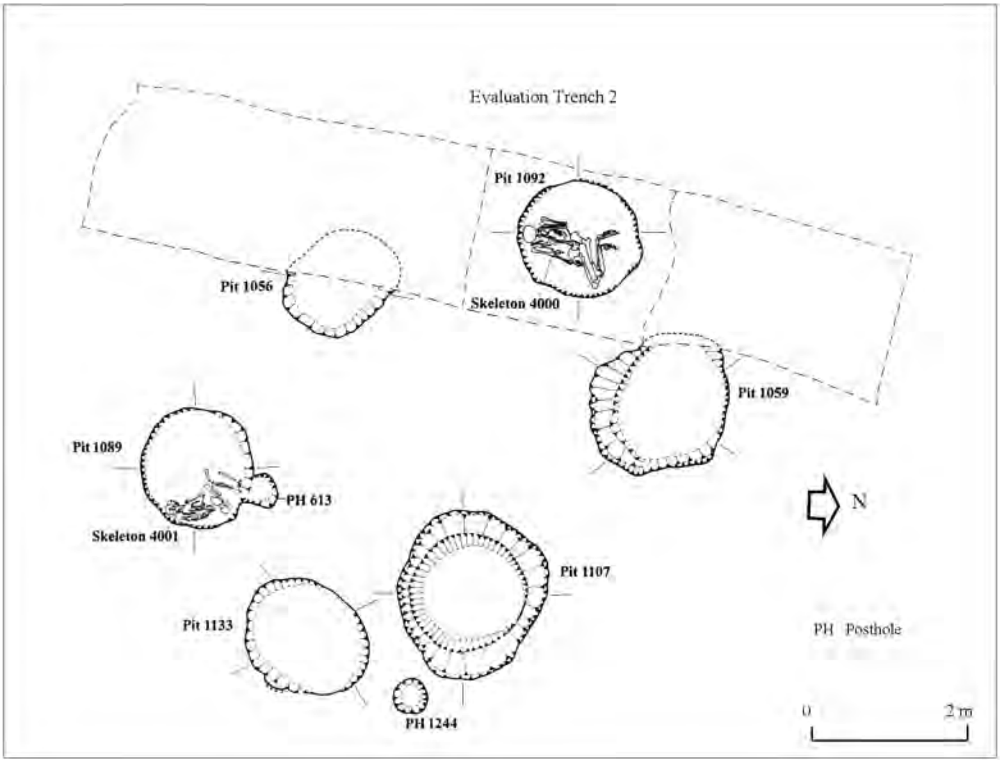


*Fig. 10 Pit Group 900 - location of burials*

the chin, obscuring the only grave good, an iron Fowler type A penannular brooch (SF 8026) pinned at the left shoulder. The skull was crushed and many of the ribs and long bones were broken by the weight of the medium and large limestone rubble incorporated in the sequence of overlying fills (1098, 1097, 1091 and 1090). Analysis of the skeleton revealed that the woman was aged between 35–45 years when she died and suffered from osteoarthritis and osteophytosis of the spine. An AMS radiocarbon date for the skeleton provided a calibrated date range of cal BC 210–1 cal AD (95% confidence – OxA 7193) for the burial.

BURIAL PIT 1092

An adult male (skeleton 4000) was buried in this pit above a sequence of three Period II fills (1194, 1193 and 1188). The body had been laid on its back with the head to the south and legs flexed, knees pointing to the east (Figs. 10 and 11). The left arm was folded onto the chest, whilst the right arm was fully extended alongside. No grave goods accompanied the skeleton, although a (?curated) large rim sherd from a jar with upright neck (Fig. 13.4) was located between the feet of the individual, and a large rectangular limestone appeared to have been deliberately placed on the chest, compacting the spine and ribcage. Patches of redeposited clay and mudstones were incorporated in the sequence of mixed soil and rubble deposits (1114, 1113, 1112, 1093, 1095 and 1076) that filled the pit. The man was aged *c*. 50 years when he died and had suffered from abscesses in some teeth. His stocky build and a healed spinal compression fracture, together with evidence of osteophytosis and severe osteoarthritis in the spine and joints of the right leg, indicated a well muscled individual used to heavy manual labour. AMS radiocarbon dating indicated that the man died sometime during the period cal BC 400–70 cal AD (95% confidence – OxA 7207).

**Period IV: Medieval**

The archaeological record indicates a prolonged period of diminished activity after the Late Iron Age, until a series of enclosures associated with the medieval settlement were established during the 12th–14th centuries (see Discussion below). No structural

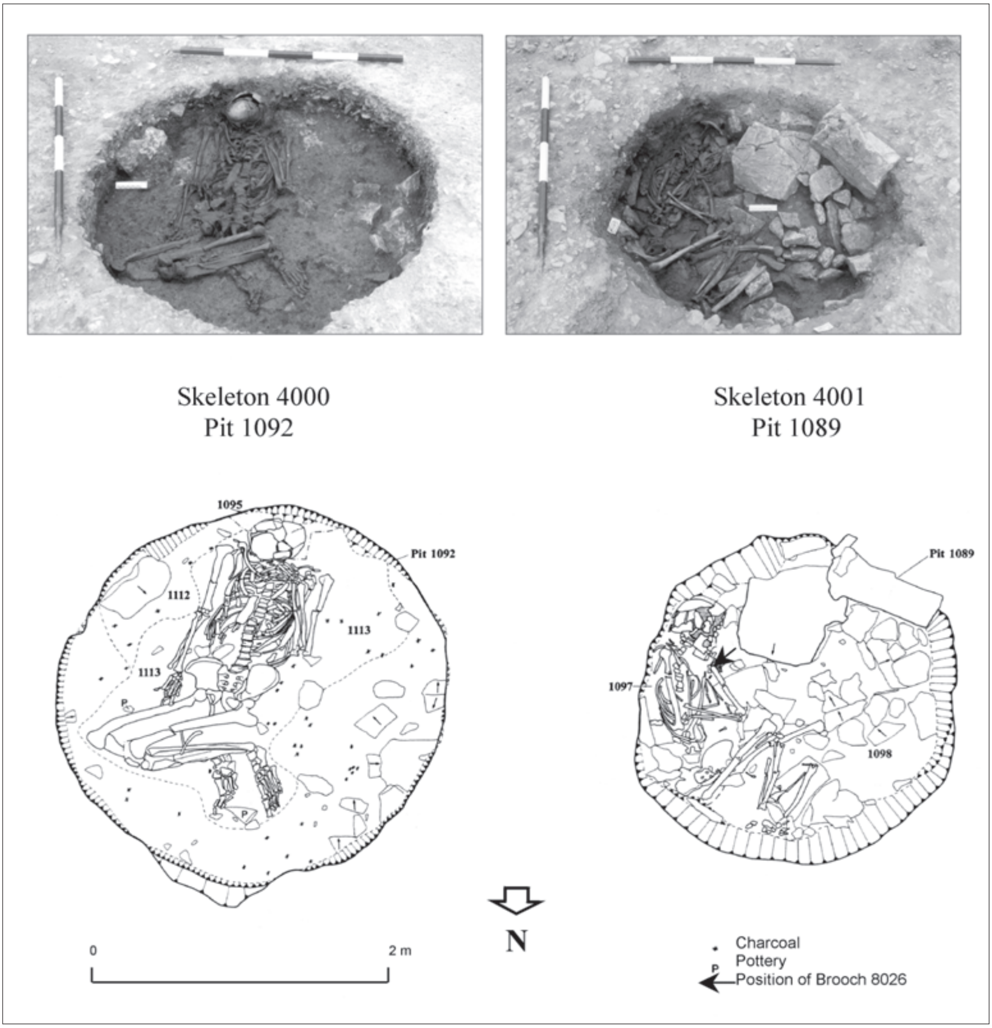


*Fig. 11 The late Iron Age inhumations*

evidence of activity during the intervening period was identified on the site, but a glimpse of some activity at least was afforded by the dating of one of the intrusive rye grains recovered from the Period III burial pit 1092. The dating of the grain to 770–980 cal AD (95% confidence – OxA 11452) indicated that the surrounding landscape was being farmed during this period, although the focus of settlement at that time lay elsewhere.

A series of medieval enclosures were defined by four east–west orientated ditches (ditches 808, 810, 812 and 814) constructed in the north-east of the site and by a fifth, perpendicular ditch (806) located to the south (Fig. 2). The ditches represented a series of rectilinear fields or enclosures laid out down the western side of the main road that runs through the village. The ditches were investigated in a series of archaeological cuttings and shared the same U-shaped profile (Fig. 12). Each was filled with a similar silted fill, except for the paired ditches (808 and 810) defining the northernmost boundary. Here, the ditches were filled at the base with dumped deposits of mixed limestone rubble and burnt material (1083 and 1075) overlain by later silts. Environmental analysis of samples from the burnt primary fills identified carbonised cereal grains and weed seeds, as well as hazel nutshells and the remains of cultivated pulses.

Further medieval activity was recorded in the extreme south-west of the site where an east–west aligned gully (1190), possibly a beamslot or land drain, was sealed by successive soil deposits and finally by a surface of densely compacted small and medium cobbles (802) laid during the 12th or early 13th centuries.

**Period V: Post-medieval/modern**

Much of the post-medieval activity identified probably related to the establishment of the modern Whitegate Farm and the continuing use of the site as a farmyard thereafter. Amongst the earliest post-medieval features recorded was a rubble spread (803; Figs. 2 and 12) delineating a former trackway that extended north-east to south-west across the south of the site. Pottery sherds from the rubble matrix revealed the trackway was certainly in use some time during the 17th and 18th centuries, before being destroyed at the north-east end by ditch 804, which defined the southern side of a post-medieval enclosure also established during the period 1600–1800. The western side of the enclosure was delineated by a drystone wall (1170) built using limestone rubble and constructed (in cut 1209) over the silted Period IV medieval boundary ditch (ditch 806).

The remnants of a 19th-century farm building and an associated cobbled yard surface were revealed in the extreme south-west of the site. Only the mortared limestone foundations (1195) of the western and southern walls of the building survived and were butted by an external surface of dense medium and large cobbles (1104) that sealed the Period IV medieval deposits at this location. The foundations of a similar stone-built structure (El01), with an internal cobbled floor (El03), had been identified previously in the north of the site during the initial trial excavation stage of the project. Demolished post-built farm buildings, probably barns or animal houses, were also located during the excavation, including an east–west orientated rectangular building (Structure 815) that predated a modern Dutch barn (Structure 818) constructed on a perpendicular alignment.

Related modern features included various service trenches and field drains, as well as scattered pits, some of which had been used for the disposal of livestock, as indicated by the skeletons of two modern sheep previously revealed in a shallow trench in the east of the site and by an adjacent single sheep burial.

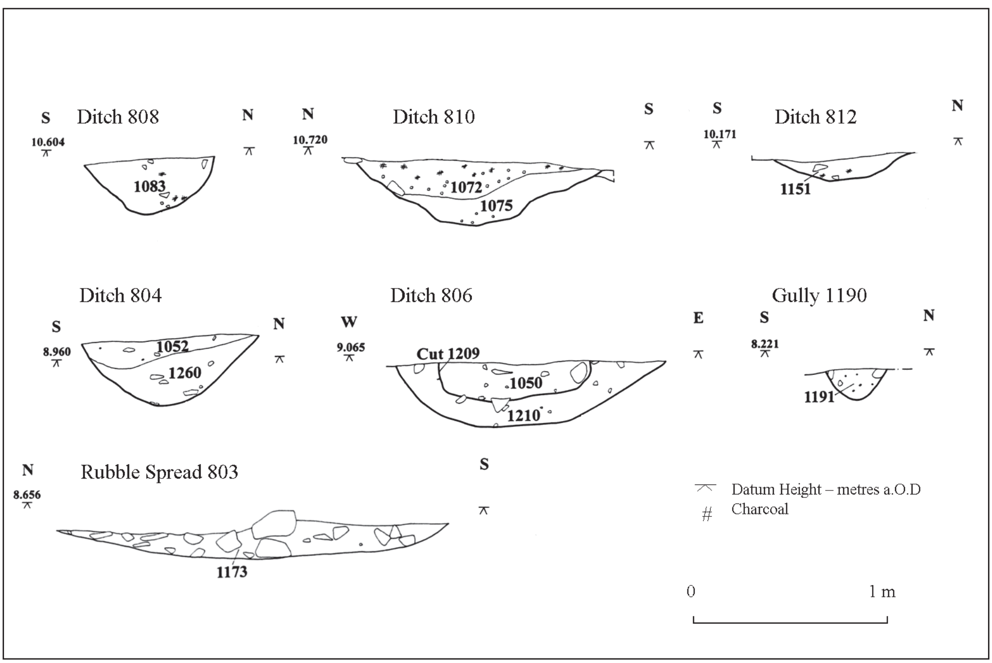


*Fig. 12 Sections of medieval and post-medieval features*

### Undated postholes

A large number of undated postholes were recorded over the site, the majority concentrated in the terraced area to the west. Whilst some postholes, such as those filled with yellow sand, were obviously modern, dating for the remainder, particularly those filled with soil and limestone rubble, was less easily determined. It is possible that some relate to the prehistoric or medieval activity, although none could be attributed with certainty based on their spatial configuration alone.

## PREHISTORIC POTTERY *Ann Woodward*

An assemblage of medium size was recovered from a series of pits. Most of the diagnostic material dated from the Early or Middle Iron Age, although some of the earlier material may have been made in the Late Bronze Age. A total of 528 sherds, weighing 3032g, was analysed. Most were medium or small in size, with an average sherd weight of 6g. A small assemblage of fired clay fragments (total 36) was also recorded. A significant proportion of the material (12%) derived from the processing of soil samples.

A large proportion of the pottery came from stratified contexts. Most contexts were the fillings of a series of pits that occurred in two pit groups. Individual pit assemblages ranged in size from 3 to 212 sherds (Table 1, final column). Most pottery came from Pit Group 901. Many of the sherds were small in size, but only 28% were highly abraded. Indeed, 37% of them were completely unabraded, so it can be suggested that the degree of residuality, although undoubtedly present, was relatively low.

Much of the material comprises plain wall sherds from coarseware jars. A fair number of rim sherds (from 16 vessels) and base angle fragments (from six vessels) were recovered, but decoration was extremely rare. Some specific treatments, especially finger-smearing and some burnishing, occurred occasionally. The pottery was recorded using the standard Birmingham Archaeology Unit system; this is based on the guidelines provided by the Prehistoric Ceramics Research Group (1997). The range of form and rim types represented was limited, with few examples that can be dated closely.

### Fabrics

The fabrics can be divided into six groups, characterised by varying quantities of the following inclusions: clay pellets, calcite, shell, other calcareous inclusions, mica and quartz sand. Samples from five of the groups were examined petrologically by David Williams (below).

- F1 clay pellets and sparse calcareous (Carboniferous Limestone) inclusions, plus some calcite and sand.
- F2 as F1, but with slightly more dense Carboniferous Limestone.
- F3 shell inclusions.
- F4 sand and sparse calcareous (fossil shell) inclusions; a harder fabric.
- F5 sparse large inclusions of calcite and fine calcareous (Carboniferous Limestone) material.
- F6 fine sand and rare limestone inclusions.

The overall occurrence of fabrics and the incidence of fabrics in each pit group are shown in Table 1. The figures indicate that F1 was the most common fabric by far in most of the pit assemblages. The only significant occurrence of the fine sandy fabric F6 was in Pit 1092. The only assemblage that appears to have diverged from this pattern is that from Pit 1133, which, when examined in the evaluation stage (Pit E618, fill E615), was dominated by the sherds from a vessel in fabric F3. This is the only fabric that displays no calcareous or sand inclusions. Examination of the occurrence of the different fabric types in the successive layers of the most complex pit (800) shows that there was no clear pattern of change during the process of deposition within the pit (Table 2). There were, however, two pieces from the primary fill that contained grog and may have been of Early Bronze Age date.

### Form

All diagnostic pieces are described below and most are illustrated in Figure 13. Five rim forms were defined as follows:

A. Simple, upright
B. Simple, upright, tapered
C. Simple tapered, with slight neck
D. Flattened
E. Flat with diagonal incisions on top of rim

The feature sherds were recovered from six pit assemblages only and are described within the pit groups.

TABLE 1: OCCURRENCE OF FABRIC TYPES AMONGST THE PIT GROUPS (BY SHERD COUNT)

| Pit | F1 | F2 | F3 | F4 | F5 | F6 | Daub, grog or scraps | Total |
|---|---|---|---|---|---|---|---|---|
| *Pit group 900* | | | | | | | | |
| 1092 | 36 | 4 | 1 | 1 | 3 | 15 | 6 | 66 |
| 1089 | 1 | | | 1 | | | 1 | 3 |
| 1133 | 15 | | | 1 | 4 | | 41 | 61 |
| 1107 | 1 | | | | 1 | | | 2 |
| E618 | 1 | 20 | | | | | | 21 |
| *Pit group 901* | | | | | | | | |
| 1211 | | | 3 | | | | | 3 |
| 1202 | 200 | 2 | | | 10 | | | 212 |
| 1168 | 9 | | 3 | | 7 | | | 19 |
| 800 | 80 | 12 | 6 | 14 | 4 | 1 | 37 | 154 |
| *Unstratified* | 14 | | 1 | | 3 | 1 | | 19 |

PIT GROUP 900

*Pit E618, fill E615*

Rim form A from an ovoid vessel with inturned rim. Fabric F2. Fig. 13.1

Base angle: four fragments, of which three join, representing altogether 42% of a base with a pinched-out profile. Fabric F2. Fig. 13.2

Base angle from a simple base, 9% of diameter represented. Fabric F2. Fig. 13.3

*Pit 1092*

Fill 4 (= context 1114). Rim of form D from a large thin-walled jar with an upright neck, 8% of diameter represented. Fabric F1. Fig. 13.4

Fill 4 (= context 1114). Rim of form D, 10% represented. Fabric F4. Fig. 13.5

Top fill (9) (= context 1076). Rim of form A. Fabric F6. Fig. 13.6

*Pit 1133*

Fill 2 (= context 1152). Rim of form B. Fabric F5. Not illustrated.

Upper fill (= context 1134). Rim of form B form a thin-walled ovoid jar, 11% represented. Fabric F1. Fig. 13.7

PIT 800 AND PIT GROUP 901

*Pit 1202*

Lower fill (= context 1213) and a further sherd from the upper fill (= context 1196). Rim of form C and shoulder from a globular jar with short neck, 15% of rim represented altogether. Fabric F1. Fig. 13.8

Cleaning top of pit fill. Rim of form B from a high-shouldered jar. Fabric F1. Fig. 13.9

Upper fill (= context 1196). Rim of form D. Fabric F5. Not illustrated.

Upper fill (= context 1196). Base angle from a large vessel, 8% represented. Fabric F1. Fig. 13.10

Upper fill (= context 1196). Base angle form a small vessel, 15% represented. Fabric F1. Fig. 13.11

*Pit 800*

Primary fill (= context 1074). Rim of form E, 11% represented. Fabric F1. Fig. 13.12

Primary fill (= context 1074). Rim of form A. Fabric F1. Fig. 13.13

Primary fill (= context 1074). Base angle with vertical striations on the exterior. Fabric F4. Fig. 13.14

Fill 2 (= context 1063). Wall sherd from large jar

TABLE 2: OCCURRENCE OF FABRICS IN THE STRATIFIED SEQUENCE OF PIT 800 (BY SHERD COUNT)

| Fill | F1 | F2 | F3 | F4 | F5 | F6 | daub, grog, or scraps | Total |
|---|---|---|---|---|---|---|---|---|
| top | 47 | | 5 | | 2 | | | 54 |
| fill 4 | 11 | 3 | | 7 | 2 | | 7 | 30 |
| fill 3 | 9 | 1 | | 2 | | | 16 | 28 |
| fill 2 | 8 | 1 | | 3 | | 1 | 8 | 21 |
| primary | 4 | 7 | 1 | 2 | | | 6 | 20 |
| under slabs | 1 | | | | | | 1 | |
| TOTAL | 80 | 12 | 6 | 14 | 4 | 1 | 37 | 154 |

with applied handle. Fabric F4. Fig. 13.15

Fill 3 (= context 1041). Rim of form A, inner surface missing. Fabric F1. Not illustrated.

Fill 3 (= context 1041). Base angle. Fabric F1. Fig. 13.16

*Pit 1168*

Upper fill (= context 1175). Rim sherds of forms A and B, both from very small vessels of cup size. Both of fabric 5. Not illustrated.

### Date and parallels

Although there are relatively few diagnostic items and only one decorated piece, it can be suggested that two distinct phases of deposition are represented, one dating from the Late Bronze Age/Early Iron Age period and one during the Middle Iron Age. These can be defined initially through comparison with features of the large ceramic assemblages from two nearby sites, the Late Bronze Age horizons (Unit 4) at Brean Down, situated 5km to the west of Bleadon, and the Early to Middle Iron Age pit groups from Christon, 4km to the east.

The earlier group of pottery at Bleadon comes from Pit Group 900 (pits E618, 1133 and 1092) and from the primary filling of pit 800 in the centre of the site. The main form represented in this earlier ceramic group is the ovoid jar with simple or flattened rim (Fig. 13.1, 7 and 12). These are common in phase 1 at Christon (Morris 1988, fig. 7,69 and 73), dated there to a late stage of the Early Iron Age. However, this form was long-lived, and also occurs in the much earlier Late Bronze Age deposit at Brean Down (Williams and Woodward 1990, fig. 95, 92–5 and 103). The version with diagonal incisions on the top of the rim (Fig. 13.12) is also found at Brean Down (ibid fig. 95, 96) and at Christon (Morris 1988, fig. 7, 79). The fragment from a tall-necked thin-walled jar with flat rim (Fig. 13.4) can also be matched at Christon (ibid fig. 3, 22). A similar range of vessel forms was also found in pit 2 at Pickwick Farm, near Maes Knoll Camp (ApSimon in Barton 1969, fig. 16). At Christon, the absence of haematite-coated vessels suggested that the pits were filled after the currency of that distinctive Early Iron Age class of pottery (ibid, 39–40). However, within the very much smaller assemblage from Bleadon, the absence of haematite-coated wares may be accidental and the early assemblage may therefore date from the Early Iron Age or even the Late Bronze Age period. The occurrence of the rim from a large bipartite bowl, from surface cleaning over pit 800 (Fig. 13.9), certainly suggests that there was activity on the site during the Late Bronze Age. This form is a diagnostic Late Bronze Age vessel shape and can be matched in Unit 4 at Brean Down (Williams and Woodward 1990, fig. 94, 82).

The later phase of pottery identified at Bleadon is represented by diagnostic material from the later filling of pit 800 in the centre of the site. The main forms present are the globular jar with short straight neck (Fig. 13.8) and the applied handle (Fig. 13.15). The globular jar form is typical of the phase 2, mid to later Iron Age groups at Christon (e.g. Morris 1988, fig. 4, 29). No handled jars were found in that assemblage, but they occur commonly in Middle Iron Age phase 2 groups at Gussage All Saints, as well as sporadically there in phase 1 (Wainwright 1979, fig. 57, 694 and fig. 58, 138 and 190). The globular jar form and an applied handle both occur in the assemblage from Blaise Castle, Bristol (Rahtz and Brown 1959, fig. 37, 18 and 30).

### Vessel function

There was no evidence in the form of sooting or surviving residues that might have informed the question of specific vessel function. In terms of size, the Middle Iron Age bowl was of a similar size to the plain and decorated bowls in phase 2 at Christon. These bowls were fine vessels which may have been used for the presentation and serving of food. The ovoid jars of the earlier phase at Bleadon are consistently small in size, with rim diameters of 100mm (two examples), 120mm and 190mm. This size range compares well with the series of similar vessels from the Late Bronze Age horizon at Brean Down (Williams and Woodward 1990, figs 93 and 95), while the size range of ovoid jars at Christon is much wider, with several larger jars represented. This may provide further evidence for a Late Bronze Age date for the earlier assemblage at Bleadon. The ovoid jars probably were general purpose vessels used in food storage and preparation. The two rim fragments from very small vessels of cup size, found in pit 1168 (not illustrated), were probably employed as drinking vessels.

### Production and exchange

Of the six fabric types defined at Bleadon, F1, F2, F5 and F6 can be matched by fabrics at Christon and all could have been made locally (Morris 1988, 29–31). The shelly fabric F3 could have been produced within 10km of the site, while the fine and

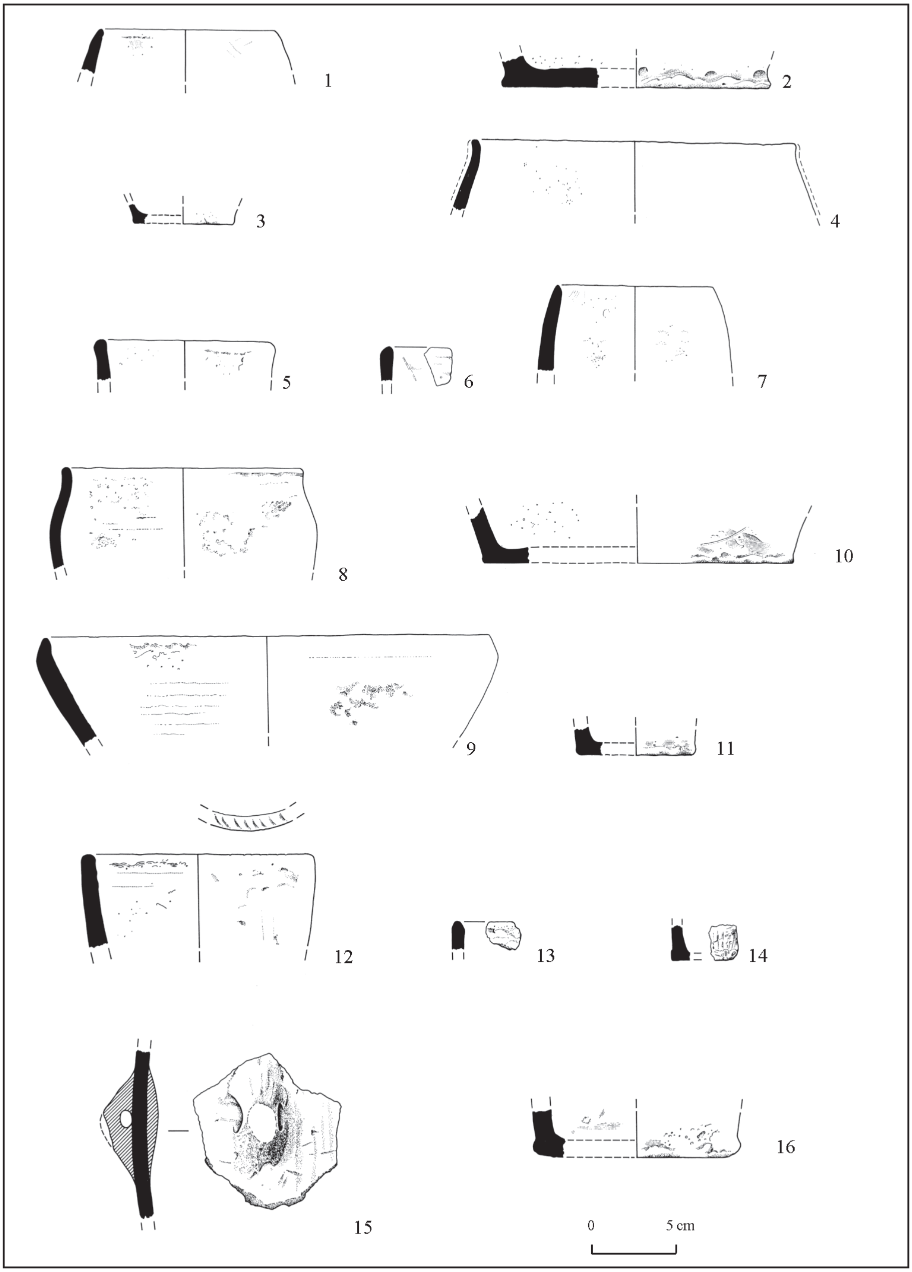


*Fig. 13 Prehistoric pottery; scale 1:5*

harder sand and shell fabric F4 may relate to pots that were brought in from further afield (see Williams below).

**A note on the petrology of the Early to Middle Iron Age pottery** D.F. Williams

Six pottery sherds of Early to Middle Iron Age date were thin-sectioned and studied under the petrological microscope. In addition, two small fragments of fired clay recovered from the site were also examined. The site at Bleadon is situated on Carboniferous Limestones and Sandstones, close by to Dolomitic Conglomerates, Keuper Marls and Alluvium (Green and Welch 1965). The main point of the analysis was to discover the range and frequency of the non-plastic inclusions present in the fabric of each sample. The results are listed below. This shows that all six pottery sherds contain a predominance of calcareous material. In five of the sherds this is made up mainly of small pieces of Carboniferous Limestone, while in the sixth sample it consists of frequent small pieces of fossiliferous shelly limestone, particularly broken fragments of echinoderms. It is interesting to note that the two fragments of fired clay contained no visible calcareous material, but had instead a high quartz content.

The range and texture of the inclusions present in sample nos 1–5 are very closely matched by the fabrics of Iron Age pottery of a similar date from the nearby site at Dibble's Farm (Morris, 1988, 29–31). This site lies a few miles to the east of Bleadon and is situated on Dolomitic Conglomerate with Carboniferous Limestones and Sandstones close by and a local source was suggested for the majority of the pottery recovered from the site (ibid, fig. 2). Earlier Bronze Age pottery from Brean Down, on the coastal headland just to the west of Bleadon, also produced fabrics with prominent inclusions of limestone thought to have been made locally (Williams and Woodward 1990, Groups 3 and 6).

The fossiliferous shelly limestone fabric of no. 6 does not seem to be present at Dibble's Farm. The echinoderms noted in this fabric are widely distributed in the geological system, including the Carboniferous (Green and Welch 1965), so a local but different source to nos 1–5 is possible. However, it is worth noting that a somewhat similar fabric is described by Peacock (1968, Group B1) in a review of Iron Age pottery from Western Britain and a Malvernian origin suggested in that case. The Mendip Limestone was also one of the suggestions made for the only obvious non-local fabric from Dibble's Farm, FT 11, which contained inclusions of fresh calcite within the fabric (Morris 1988, 30). A sandy fabric with no calcareous inclusions was also recorded at Dibble's Farm, FT 5 (ibid, 29) where a non-local source was tentatively suggested.

PETROLOGY

*Calcareous*

1 1143; SF 6096; Fabric 1.

2 1134; Fabric 1.

3 1076; SF 6047; Fabric 6. Scattered throughout the clay matrix are pieces of Carboniferous Limestone of variable size, some discrete grains of calcite, quartz, the odd fragment of fine-grained sandstone and small clay pellets.

4 E615; Fabric 2. This fabric has a similar range of inclusions to nos 1–3 but with slightly more Carboniferous Limestone present.

5 1049; Fabric 5. This sherd has a lime-rich clay matrix, which contains frequent small pieces of Carboniferous Limestone and angular pieces of calcite. Also present are some fairly well rounded argillaceous inclusions, almost certainly clay pellets, a little quartz, including a large polycrystalline grain and a small fragment of fine-grained sandstone.

6 1164; SF 6139; Fabric 4. This fabric is different from the five sherds described above as it contains a clay matrix crowded with small broken fragments of fossil shell. These consist mainly of echinoderms, including several echinoid spines.

*Non-calcareous*

7 1022; SF 6107 (fired clay). Scattered throughout the clay matrix are frequent grains of fairly well sorted quartz, mostly monocrystalline but with a few polycrystalline grains as well, and small clay pellets. Also present is a little quartzite, chert, the odd discrete grain of feldspar and some opaque iron oxide.

## THE VERTEBRATE REMAINS *Lorrain Higbee*

### Introduction

The total quantity of animal bone recovered from the site was 4898 fragments. Assessment of the assemblage (Ingrem and Mulville n.d.) recommended further, more detailed analysis of the Iron Age component (4699 fragments from Periods

TABLE 3: NUMBER OF SPECIMENS IDENTIFIED TO SPECIES (OR NISP) BY FEATURE

| | Pit Group 900 | | | | | | Pit 800 | Pit Group 901 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Taxa** | 1056 | 1059 | 1089 | 1092 | 1107 | 1133 | 1073 | 1168 | 1202 | 1211 | Total |
| *Mammals* | | | | | | | | | | | |
| Cattle | - | 1 (1) | 2 (2) | 1 (3) | 1 | (2) | 10 (3) | 2 | 2 (2) | 3 | 22 (13) |
| Sheep | - | 1 | 1 | 1 | - | 11 | 5 (1) | - | 1 | - | 20 |
| Sheep/goat | (1) | 14 (3) | 3 (2) | 15 (6) | 8 (2) | 71 (22) | 18 (10) | 1 | 12 (2) | - | 142 (49) |
| Pig | - | - | - | - | - | 1 | 3 | 2 | - | - | 6 |
| Horse | - | - | - | - | - | - | (1) | 2 (2) | (1) | - | 2 (4) |
| Dog | - | - | - | - | - | - | - | 3 (4) | - | - | 3 (4) |
| Wood/Yellow-necked mouse | - | - | - | 1 | - | - | - | - | - | - | 1 |
| House mouse | - | - | - | - | 1 | - | - | - | - | - | 1 |
| Water vole | - | - | - | 1 | - | - | 1 | - | - | - | 2 |
| Field vole | - | - | 3 | 6 | - | - | - | - | - | - | 9 |
| Rodent n.f.i. | - | (2) | (16) | (48) | (2) | - | (9) | - | (3) | - | (80) |
| *Birds* | | | | | | | | | | | |
| Passerine | - | - | - | - | - | - | 1 | - | - | - | 1 |
| Bird n.f.i. | - | - | - | - | - | - | (1) | - | - | - | (1) |
| *Amphibia* | | | | | | | | | | | |
| Frog | - | - | - | 10 | - | - | 1 | - | 2 | - | 13 |
| Toad | - | - | - | 2 | - | - | - | - | - | - | 2 |
| Frog/Toad n.f.i. | - | - | - | (66) | - | - | (4) | - | (5) | - | (75) |
| *Total* | (1) | 16 (6) | 9 (20) | 37 (123) | 10 (4) | 83 (24) | 39 (32) | 10 (6) | 17 (13) | 3 | 224 (226) |

II and III). The main objectives of the faunal analysis were to investigate how the animal bone deposits relate to the burials; identify any deliberate deposits of articulated bone groups; determine the speed of burial by assessing taphonomic and micro-faunal evidence; and assess the significance of the mortality profile for sheep.

## Methods

A detailed method statement is provided in the archive version of this report. In summary, a selective suite of mammalian skeletal elements were recorded as standard and used in counts (termed POSAC) following Davis (1992, 2–4). In addition, the occipital part of the cranium was also counted. Non-countable bones are shown in parenthesis in Table 3. These include elements from less common species, vertebrae (centra), ribs (vertebral extremity) and elements displaying butchery, taphonomic changes or of anomalous size. The recording of microfaunal remains was limited to single elements that allow species distinction.

Caprine species (i.e. sheep and goat) were distinguished using the criteria of Boessneck (1969) and Payne (1985). Only sheep were positively identified, the term 'sheep' will therefore be used throughout this report to refer to all undifferentiated caprine bones. Frog and toad were identified on the basis of the illium (Böhme 1977). Voles were identified on the basis of the occlusal pattern and size of the lower first molar.

The following age data and methods were employed to record epiphyseal fusion of the post-cranial skeleton and mandibular tooth eruption/wear for livestock species: Silver (1969), O'Connor (1989), Payne (1973 and 1987) and Grant (1982). A complete list of tooth eruption/wear and mandible wear stages for mandibles retaining two or more cheek teeth (i.e. dp4/p4-m3) can be found in Appendix 1 of the archive to this report. In general, measurements of mammalian bones follow Von den Driesch (1976) and Davis (1992) and are presented in Appendix 2 of the archive.

Preservation was recorded using a modified version of Behrensmeyer's (1978) weathering stages; this information is detailed in the archive. Carnivore and rodent gnaw marks are rare (*c.* 1%) suggesting that bone was rapidly buried out of the reach of scavengers.

Butchery was recorded by type, position and orientation (using standard anatomical terms and orientation). Butchery marks are also quite rare (4%) and all are cut marks on sheep bones. No pathological conditions were observed, but a few non-metric traits were noted.

## Results

Twenty-six per cent of the Iron Age assemblage was recovered by hand during the normal course of excavation and 74% from sample residues. The assemblage includes a large number of small bone splinters that cannot be identified to either species or skeletal element. Only 17% of fragments could be identified. Differences in the composition of the hand-collected and sieved fractions, in terms of taxa and skeletal element representation, suggest that hand-collection was extremely good but sieving was necessary to recover micro-faunal remains.

In general, the bones from Whitegate Farm are in a good state of preservation, cortical surfaces are intact and surface details were easily observed. Poorly preserved fragments are rare (*c.* 15%) and most are bones from foetal and neonatal lambs, which are generally more susceptible to deterioration in the burial environment.

The number of identified specimens (or NISP) for each pit is given in Table 3. Sheep bones are common, accounting for approximately 72% of POSACs and the majority (*c.* 51%) are from pit 1133 in Pit Group 900. Bones from the other two main livestock species, cattle and pig, were also identified, but are much less numerous. Other taxa represented include horse, dog, at least four species of rodent, frog, toad and a small number of bird bones.

### SHEEP

Sheep bones were identified from nine of the ten pits and the majority are from the secondary and tertiary fills of pit 1133 in Pit Group 900. All parts of the sheep skeleton are present in the assemblage, indicating local slaughter and consumption, and at least seven individuals are represented. Multiple partial skeletons were noted from several features, in particular from pit 1133, which included the remains of at least four individuals. Mandibles and distal humeri are the most common skeletal elements; pelvises and distal tibiae are also fairly common. In general, these bones show a good survival and recovery rate compared to most archaeological bone assemblages. There are no concentrations of particular carcass parts in individual pits or fills to suggest the differential disposal of waste from particular processes (e.g. primary butchery), rather the spatial distribution of body parts appears to be fairly random.

Age data based upon epiphyseal fusion of postcranial elements is presented in Fig. 14. The data

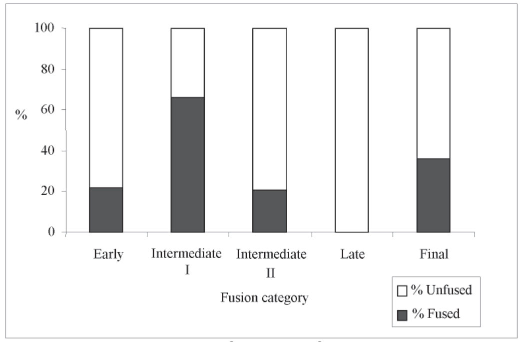


*Fig. 14 Epiphyseal fusion of the post-cranial skeleton for sheep. Fusion categories after O'Connor (1988)*

illustrates a high mortality rate of sheep under 10 months of age (early fusion category), indeed over half (*c.* 56%) of the unfused bones in this category are from foetal or neonatal individuals and most are from pit 1133 (1134) in Pit Group 900. A significant proportion (*c.* 66%) of bones in the intermediate I fusion category (13–16 months) are fused, but the majority of bones in the intermediate II category are unfused suggesting a second peak of mortality of sheep early in their second year of life. All bones in the late fusing category are unfused and once again, a high proportion (*c.* 55%) is from foetal and neonatal individuals. Age data based upon vertebrae suggests that a little over a third of the sheep survived into adulthood. The mortality profile provided by analysis of tooth eruption and wear suggests a similar kill-off pattern.

Analysis of mandibles retaining at least two teeth with recordable wear, in the dp4/p4-m3 row, suggests that *c.* 43% of sheep mandibles are from lambs aged 6–12 months (mandibular wear stage C after Payne 1973). The remaining 57% of mandibles are from sheep aged 1–2 years (stage D). In addition, a non-countable fragment of anterior mandible from pit 1059 is from a lamb aged less than 6 months (Silver 1969), Payne's mandibular wear stage A or B, and the presence of other young lambs is apparent from a review of the data available for loose teeth. In addition, Barber (1997) noted the presence of 3–6 month old lambs amongst the evaluation assemblage. Overall, the data available from tooth eruption and wear indicates that only sheep under 2 years of age are represented, many are lambs under 1 year, and some are only a few weeks or months old.

Withers (or shoulder) height estimates (after Teichert, see Von den Driesch and Boessneck 1974) for the Iron Age sheep range from 46.2cm to 59.2cm with a mean value of 50.5cm. Butchery evidence was observed on only ten sheep bones, mostly transverse cut marks on the distal articulation of astragali, these marks probably result from disarticulation of the lower limb. The only non-metric trait observed was the presence of premolar foramina on two (out of 13) mandibles.

#### CATTLE

Cattle bones were identified from all pits with the exception of pit 1059. The largest concentration of cattle bones was from pit 800 and includes an articulating forelimb and a fragment of proximal metacarpal from a calf. The only other possible association of articulating elements are a metatarsal and astragalus from pit 1211 (Pit Group 901). Age data is very limited but suggests the presence of both immature (under 12–18 months) and adult cattle.

#### PIG

Only six pig bones were identified from the assemblage. Pit 1133 (Pit Group 900) contained a single radius from a foetal animal; the bone was recovered from fill 1134, which also included the majority of foetal and neonatal sheep bones. Pit 1168 (Pit Group 901) included two loose teeth, both of which were in a fragmented state, whilst Pit 800 included an incisor, (?male) canine tooth, and proximal fragment of metacarpal.

#### HORSE

The horse bones were recovered from pit 800, and two pits (1168 and 1202) in Pit Group 901. Of these, pit 1168 is of interest since it included two skulls from immature individuals and a small number of foot bones. One of the skulls was from primary fill (1187) and the sequence of tooth eruption and attrition suggests an age between 1–2 years (Levine 1982). The other skull is from the secondary fill (1212) and is from a slightly older individual. The maxilla contains the complete permanent dentition and both the m2 and m3 show only slight wear indicating an age of approximately 3½–4 years.

#### DOG

All of the dog bones from the site were from pit 1168 in Pit Group 901. The bones are from the primary and secondary fills of this feature and although not directly associated, probably represent the mandible and lower forelimb from the same individual. The relationship of these bones with the two horse skulls is discussed below.

#### SMALL MAMMALS AND AMPHIBIANS

A large number of rodent and amphibian bones were recovered from the site and are considered to represent individuals that have fallen into open features. The vast majority are from pit 1092 (Pit Group 900) which contained the inhumation of an adult male. The main concentration within this pit is from the tertiary fill (1188) below the burial. This indicates that the pit was open for a period before the burial took place.

The species of rodent identified include wood/yellow-necked mouse; house mouse, water vole and field vole. Both common frog (*Rana temporaria*) and common toad (*Bufo bufo*) have been identified amongst the amphibian bones. The presence of this small range of species gives some indication of environmental conditions local to the site. The rodent species suggest a mosaic of open countryside and arable fields broken up by hedgerows and woodland, whilst the amphibian remains indicate the presence of stagnant water.

In addition to the environmental evidence, the presence of large numbers of adult frogs and toads suggests a degree of seasonality. Frogs spend the winter in the mud at the bottom of ponds or in ditches absorbing oxygen through their skin and usually spawn in March, whilst toads migrate in spring from dry areas towards ponds and lakes to breed. This evidence suggests that pit 1092 was open during the spring prior to the burial of the adult male.

#### BIRDS

Only two bird bones were identified and both are from Pit 800. They include one unidentifiable fragment of phalanx and the complete tarso-metatarsus from an indeterminate species of passerine.

### Summary of the main characteristics of pits and pit groups

#### PIT GROUP 900

The spatial organisation of the six pits in this cluster suggests that they are related features and therefore contemporary. However, radiocarbon dates and certain aspects of the faunal assemblage suggest that they were backfilled at different times (Periods II and III). A number of pits in the cluster include relatively large quantities of sheep bone, in particular pit 1133, which contained a little over 50% of all sheep bones recovered from the site. The secondary and tertiary fills of this pit include the remains of at least two perinatal and two neonatal mortalities as well as a large number of bones from young lambs. The age structure suggests that they were deposited between spring (i.e. the lambing season) and late autumn. No micro-faunal remains were recovered from this feature suggesting perhaps that it was cut and backfilled over a relatively short period. Radiocarbon dates suggest that this occurred before the burials took place and the microfaunal evidence from pits 1089 and 1092 substantiates the notion that these pits were open for a longer period.

PIT 800

This pit occurred as an isolated feature in the centre of the site and whilst certain characteristics of its faunal assemblage are similar to other pits, the main difference is a concentration of cattle bones including an articulating forelimb from the tertiary fill. A small number of rodent and amphibian bones were also recovered and the majority are from the secondary fill indicating that this feature, like the two pits containing burials, was also left open for a period before the cattle bones were deposited.

PIT GROUP 901

Pit 1168 is the earliest feature in this small group of intercutting pits and it also has the most unusual assemblage of bone. The skulls of two immature horses were recovered from the primary and secondary fills together with the only dog bones from the site. Very few bones from domestic livestock species were incorporated and no microfaunal remains were recovered suggesting that the pit was backfilled relatively quickly. Of the other pits in the cluster, pit 1211 produced a small number of cattle bones, some of which were found to articulate, and in this regard, the assemblage is similar to pit 800. Pit 1202 on the other hand produced a similar assemblage to the majority of pits in Pit Group 900.

**Discussion**

The first question to be considered is what the relationship of the faunal remains to the two inhumations within Pit Group 900 is, and whether these deposits have special significance. All of the pits in the group have broadly similar faunal assemblages dominated by sheep bone (Table 3), and it is clear from their spatial organisation that they are contemporary. However, radiocarbon dates and the accumulation of rodent and amphibian bones within some pits, notably those containing inhumations (pits 1089 and 1092), indicate that they were backfilled at different times. The radiocarbon dates obtained from the large sheep bone deposit in pit 1133 and from the two inhumations suggest that pit 1133 was backfilled before the burials took place. Following logically on, it would therefore seem that these deposits are unrelated, however, it is interesting to note that the majority of sheep bones from pit 1092 are from fill 1114, which directly overlies the inhumation. Therefore, although the various pits appear to have been backfilled at different times, there is an obvious degree of continuity in the selection of faunal material, notably sheep from particular age classes. Similar deposits associated with inhumations have been recorded at other Iron Age sites, for example at Greenhouse Farm, Cambridgeshire (Higbee 1997) and they are generally considered to have special significance.

There has been much discussion about the nature and significance of special animal bone deposits from Iron Age sites (Hill 1995, 1996; Grant 1984a, 1989, 1991; Grant *et al*. 1991; Wilson 1999), but most agree that deposits of the type from Whitegate Farm are symbolic of the importance of the annual sequence of routines linked to agricultural life (Giles and Parker Pearson 1997; Parker Pearson 1996). The age of the sheep represented in these deposits indicates that death/slaughter occurred at certain times of the year, spring and autumn, which correspond to intense periods of activity associated with herd/flock management and arable cultivation (i.e. sowing and harvest). The successful completion of these activities would almost certainly have been key points in the year.

The high incidence of sheep bones from the assemblage is perhaps not too surprising given the topographical suitability of the site for sheep husbandry (Grant 1984b; Hambleton 1999), however the available age data is of considerable interest. It suggests significant natural losses of foetal and newborn lambs, and a deliberate policy of culling lambs in their first, and early in their second years of life. The mortality profile is in keeping with a scenario whereby flocks were kept on or close to settlements during the winter months and into the spring lambing season, a management system that compliments arable cultivation (Hambleton 1999, 70). The 6–12 month age group may represent animals that failed to survive their first winter, or were culled as part of a deliberate policy to maintain flock size and reduce economic losses due to loss of condition over the winter months (Jewell *et al*. 1974). Such a policy would also reduce the flock to a sustainable size for winter grazing or fodder. The second peak kill-off of sheep in their second year probably reflects deliberate selection for prime meat.

A similar mortality profile was recorded for Meare Village West in the Somerset Levels (Bailey *et al*. 1981). The mortality profile at this site is bimodal with 59% mortality of sheep before their first winter and a second peak cull of animals aged between 3–4 years. This kill-off pattern suggests that the flock was managed primarily for secondary products (e.g. milk and wool) and the culling of yearlings is seen as a necessary response to the problems of over-wintering, in particular the need to move flocks to higher ground during the winter months. This last point would account for the lack of foetal and neonatal sheep bones from the Meare assemblage, since lambing would have taken place away from the settlement. A high mortality rate amongst juvenile and immature sheep has also been noted at Dibble's Farm, Christon (Gamble 1988) to the east of Bleadon.

The assemblage from pit 1168 (Pit Group 901) stands out from the other pits since it includes most of the horse bones and all of the dog bones recovered from the site. Two horse skulls and a number of foot bones were recovered, and whilst these remains may result from normal (i.e. secular) carcass processing activities (Hill 1996, 18–19; Wilson 1992; Maltby 1985) it is the age of the animals that is significant. Both of the skulls are from juvenile individuals, and, as the occurrence of young horses from British Iron Age sites is relatively rare, this has led to the suggestion that feral animals were periodically rounded up and trained (Harcourt 1979). If this is the case then perhaps the two individuals represented in pit 1168 proved unsuitable for training purposes and were subsequently culled for their meat and hides. Deposits of horse skulls within pits is well documented from Iron Age Britain, at Danebury, for example, *c*. 20% of skulls deposited within pits were horses, although horse bones comprised only 4% of the total number of identified bones (Grant 1984a, 223). Furthermore, it has been suggested that horses were deliberately selected as special offerings, particularly during times of hardship, because they were less significant as food animals (ibid., 225; Grant *et al*. 1991, 476). There also appears to be a significant correlation between horse and dog bones from Iron Age pit assemblages (Grant 1991).

In addition to the above, two articulating groups of cattle bones were identified, a forelimb from pit 800 and an ankle joint from pit 1211. The significance of these is uncertain, but it is not unusual to recover such articulated elements from features of this type and date.

Hill's (1995) work has highlighted the need to be cautious when judging the significance of particular deposits as 'special' or 'ritual' in nature, and has stressed the importance of 'structure' within ritually deposited artefact groups from pits. The Whitegate Farm faunal assemblage includes a number of deposits that appear structured with regard to which fauna, skeletal elements, age classes or faunal combinations were selected for deposition within pits or pit groups. These patterns of deposition may therefore be seen as having special or ritual significance; they certainly have parallels on other British Iron Age sites.

## RADIOCARBON DATING Alex Bayliss, Christopher Bronk Ramsey and Donna Young

Eleven samples were dated by Accelerator Mass Spectrometry at the Oxford Radiocarbon Unit between 1998 and 2003. The four carbonised cereal grains were processed according to methods outlined in Hedges *et al.* (1989). The two bone samples dated in 1998 (OxA-7193 and OxA-7207) were processed as described by Bronk Ramsey *et al.* (2000a). Those processed in 2002 (OxA-11423–4) were prepared as described by Bronk Ramsey *et al.* (2000b) and Brown *et al.* (1988), with the other bone samples being processed according to methods described in Bronk Ramsey *et al.* (forthcoming). All samples were dated using methods outlined by Bronk Ramsey and Hedges (1997).

The results are listed in Table 4. They are conventional radiocarbon ages (Stuiver and Polach 1977), and are quoted in accordance with the international standard known as the Trondheim convention (Stuiver and Kra 1986). The calibrated date ranges for the samples are also given and have been calculated using the maximum intercept method of Stuiver and Reimer (1986). They are quoted in the form recommended by Mook (1986) with end points rounded outwards to 10 years. The probability distributions shown in Fig. 15 have been calculated using OxCal (v3.5) (Bronk Ramsey 1995) and the

TABLE 4: RADIOCARBON DETERMINATIONS

| Lab No. | Context | RC age (BP) | $d^{13}C$ (‰) | Calibrated date range (95% confidence) | *Posterior density estimate (95% probability)* |
|---|---|---|---|---|---|
| OxA-7193 | bone from articulated crouched inhumation of an adult human female (4001) in pit 1089 | 2095±35 | -20.4 | cal BC 210 – 1 cal AD | – |
| OxA-7207 | bone from articulated crouched inhumation of an adult human male (4000) in pit 1092 | 2130±90 | -19.7 | cal BC 400 – 70 cal AD | – |
| OxA-11423 | foetal sheep/goat bone from (1134), the latest fill in pit 1133; probably part of a complete foetus | 2290±40[1] | -20.4 | cal BC 410 – 200 | *cal BC 320 – 200* |
| OxA-11424 | foetal sheep/goat bone from (1134), the latest fill in pit 1133; probably part of a complete foetus (different individual to OxA-11423) | 2260±40 | -20.4 | cal BC 400 – 200 | *cal BC 320 – 200* |
| OxA-11450 | carbonised grain of *Hordeum* sp. from (1149), the primary fill of pit 1133 | 2222±31 | -24.0 | cal BC 390 – 170 | *cal BC 380 – 235 (94%) or cal BC 225 – 215 (1%)* |
| OxA-11451 | carbonised grain of *Triticum* sp. (cf emmer) from (1149), the primary fill of pit 1133 | 2198±31 | -22.8 | cal BC 380 – 170 | *cal BC 370 – 235 (92%) or cal BC 230 – 215 (3%)* |
| OxA-11452 | carbonised grain of *Triticum* sp. (bread-wheat type morphology) from (1188), the rubble fill of pit 1092 beneath skeleton 4000 | 1153±30 | -21.1 | 770 – 980 cal AD | – |
| OxA-11453 | ditto | 915±30 | -22.8 | 1020 – 1220 cal AD | – |
| OxA-12378 | right radius of articulated limb from juvenile sheep/goat (SF. No. 7233) from (1164), the secondary fill of pit 800 | 2152±30 | -20.8 | cal BC 360 – 160 | *cal BC 360 – 280 (83%) or cal BC 260 – 245 (3%) or cal BC 235 – 215 (7%) or cal BC 210 – 195 (2%)* |
| OxA-12379 | right ulna from same skeleton as OxA-12378 | 2185±30 | -20.8 | – | – |
| OxA-12380 | right ulna of articulated cattle limb (SF. No. 7206 probably found articulating with humerus (SF. No. 7207) from (1132), the tertiary fill in pit 800 | 2182±31 | -20.1 | cal BC 370 –120 | *cal BC 345 – 175* |

usual probability method (Stuiver and Reimer 1993). The results have been calibrated using data from Stuiver *et al*. (1998). All date ranges are cited at 95% confidence (or probability) unless otherwise specified.

Although the simple calibrated radiocarbon dates are accurate estimates of the dates of the samples, more refined estimates for the chronology of the site can be provided by integrating the radiocarbon results with other dating information known from archaeological stratigraphy. This can be done quantitatively by adopting a Bayesian approach for the interpretation of the data (Buck *et al.* 1996). The distributions and ranges produced by this approach are not absolute - they are interpretative *posterior density estimates*, which take account of both archaeological evidence and the radiocarbon determinations. These estimates are given in italics in Table 4, and are shown in black (with the simple calibrated dates in outline) in Fig. 15.

The technique used to calculate these chronological estimates is a form of Markov Chain Monte Carlo sampling and has been applied using the program OxCal v3.5 (http://units.ox.ac.uk/departments/rlaha/), which uses a mixture of the Metropolis-Hastings algorithm and the more specific Gibbs sampler (Gilks *et al.* 1996; Gelfand and Smith 1990). Details of the algorithms employed by this program are available from the on-line manual or in Bronk Ramsey (1995; 1998; 2001), and fully worked examples are given in the series of papers by Buck *et al.* (1991; 1992; 1994a; 1994b). The algorithms used in the chronological model for the site are defined by the large square brackets and the OxCal keywords shown down the left hand side of Fig. 15. The model includes the relative sequence of samples from Iron Age pits 800, 1133 and 1092 (Figs 6 and 10).

In pit 800, two articulating animal bone samples were dated, which must have been fresh when deposited in their contexts because otherwise they would not have remained articulated. The two measurements on a limb from a juvenile sheep/goat (SF 7233) are statistically consistent (T'=0.6; T'(5%)=3.8; ?=1; Ward and Wilson 1978). A weighted mean of these measurements has been taken before calibration. These radiocarbon measurements are also in good agreement with the relative dating provided by the stratigraphy (A=95.5% and A=96.7%; Bronk Ramsey 1995).

In pit 1133, two carbonised cereal grains were dated from the primary fill (1149). These must be earlier than the articulated sheep/goat foetuses from the later fill above (1134). The radiocarbon results are also in good agreement with this information (Fig. 15).

The sequence from pit 1092 did not turn out as expected. The two carbonised cereals from fill 1188 produced dates, which fall in the medieval period. However, this context must be earlier than skeleton 4000, which lies directly over it. This skeleton was a complete, adult male, crouched inhumation and dates to the mid-to-late Iron Age. For this reason, the relative chronology provided by the stratigraphic sequence has not been included in the model. The most convincing explanation of the anomalous dates is that the cereal grains are intrusive from later agricultural activity on the site. As the base of modern hardcore was only 0.3m above this context, this is by no means surprising.

The final radiocarbon sample was taken from skeleton 4001 another articulated crouched inhumation. This burial was also in a pit (pit 1089) and was accompanied by a penannular iron brooch (Figs 11 and 16).

The chronological model is shown in Fig. 15. The radiocarbon results are in good overall agreement with the archaeological sequence ($A_{overall}$ =85.4%).

The evidence suggests that the Period II pits fall into the middle Iron Age between *c.* 400 and *c.* 200 cal BC. Formal mathematical estimates of the start and end dates of this activity are shown as probability distributions in Fig. 15. Comparison of these distributions suggests that this phase of activity lasted for about a century. There is some evidence that Period III may be a distinct, slightly later, episode of activity. The female burial certainly falls in the later Iron Age; cal BC 210–1 cal AD (OxA-7193). The measurement on the male burial has a rather large error term, but may also be later than the period of pitting. The ratio of stable carbon isotopes in these samples does not suggest a significant input of marine carbon into the individuals' diets, and so the radiocarbon results should provide accurate dates for the burial of these people (Mays 1998, fig. 9.2).

The radiocarbon programme has also identified medieval activity, represented by intrusive cereal grains in Pit 1092. At least one of these is of pre-Conquest date, suggesting some agricultural activity in the vicinity at this date.

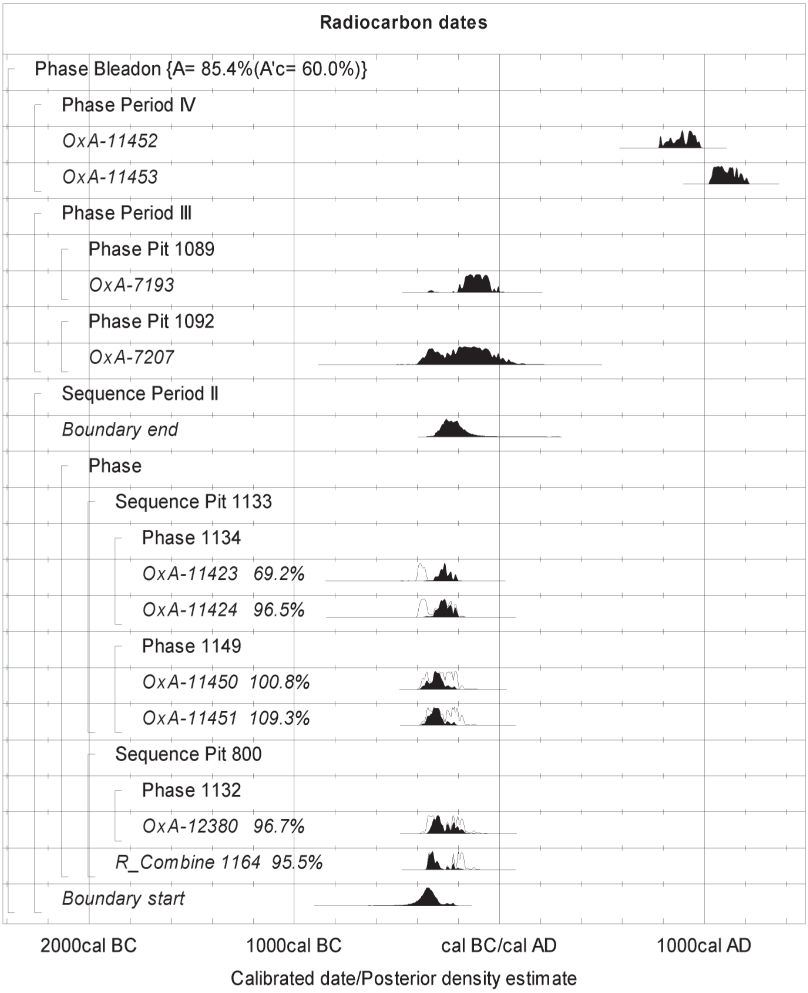


*Fig. 15. Whitegate Farm: probability distributions of radiocarbon dates from Bleadon. Each distribution represents the relative probability that an event occurred at a particular time. The distributions in Periods III and IV, and those in outline in Period II, are the result of simple radiocarbon calibration (Stuiver and Reimer 1993). The distributions in black in Period II are* posterior density estimates *and derive from the chronological model described in the text. The large square brackets down the left hand side and the OxCal keywords define the overall model exactly*

## IRON AGE HUMAN SKELETAL REMAINS
*Simon Mays*

### Osteological data

SKELETON 4000

*Skeletal material*
The skeleton is near-complete and generally well-preserved. The bones have been stained brown by the soil in which they lay.

*Sex*
Male (pelvic and cranial morphology – Brothwell 1981).

*Age*
Approximately 50 years (dental wear – Brothwell 1981; Mays *et al.* 1995).
*Stature*
168.1cm (5’6’’) (long bone length – Trotter and Gleser 1952; 1958, reproduced in Brothwell 1981).
*Remarks*
The dentition shows some ante-mortem tooth loss and the remaining teeth are heavily worn. Some molars show pulp exposure due to excessive wear, with consequent formation of periapical abscesses. A lower thoracic vertebra shows a healed compression fracture. The sites of muscular attachment are large and rugose, and the long bones have thick cortices. There is osteoarthritis, particularly severe in the spine and the right hip and knee. The spine also shows osteophytosis. Taken together, the osteoarthritic changes, the spinal fracture and the general body build suggest a stocky, well-muscled individual used to heavy physical labour. The orbital roofs show lesions suggestive of healed cribra orbitalia. This probably indicates previous episode(s) of iron deficiency anaemia. Most iron deficiency anaemia is due to gut infections or parasites rather than to a diet deficient in iron (Stuart-Macadam 1989).

SKELETON 4001

*Skeletal material*
Skeleton fragmentary, but fairly complete. Bone less well preserved than skeleton 4000. Bones stained brown.
*Sex*
Female (pelvic morphology – Brothwell 1981).
*Age*
Approximately 35–45 years (dental wear – Brothwell 1981; Mays *et al.* 1995).
*Stature*
158.6 cm (5’2’’) (long bone length – Trotter and Gleser 1952; 1958, reproduced in Brothwell 1981).
*Remarks*
The dentition shows some ante-mortem tooth loss and some dental caries. The spine shows osteoarthritis and osteophytosis.

**Carbon and nitrogen stable isotope data**

Carbon and nitrogen stable isotope determinations were carried out on collagen extracted from bone samples from skeletons 4000 and 4001 (see Bayliss *et al*. above for methodologies). The results are summarised in Table 5.

Human bone collagen carbon and nitrogen stable isotope determinations provide evidence regarding protein sources in human diets. In a north-west European context, carbon stable isotope ratios give an indication of the relative contribution of marine foods to dietary protein. A diet where all protein came from seafoods would result in a human bone collagen d value of *c*. -12%, and for British archaeological skeletal material a completely terrestrial diet would be indicated by a d value of *c*. -21.5% (Mays 1997). The Bleadon results are indicative of diets in which the great majority of protein came from terrestrial resources; seafoods made only a minor contribution and, because most are protein-rich, would have formed only a very small proportion of the whole diet, despite the proximity of the site to the coast. The nitrogen d values are consistent with the carbon stable isotope results in suggesting a primarily terrestrial diet for these people (cf. Mays 1998, fig. 9.2).

TABLE 5: CARBON AND NITROGEN STABLE ISOTOPE DATA

| | Skeleton 4000 | Skeleton 4001 |
|---|---|---|
| ä$^{13}$C(%) | -19.7 | -20.36 |
| ä$^{15}$N(%) | 10.8 | 10.7 |

PLANT MACROFOSSILS *Vanessa Straker*

**Introduction and methodology**

To assess the plant remains assemblage an extensive programme of bulk sampling was implemented, with samples processed on-site and at the offices of Avon Archaeological Unit. The samples were processed in a standard flotation tank; floats were collected on a 250 micron sieve and residues on a 500 micron mesh. The purpose of the assessment was to establish the potential of the samples to provide information on crop husbandry and the economy of the settlement (Straker 2001). The assessment process is intended to provide a rapid characterisation of assemblages by providing information on quality and quantity of macrofossils, including an indication of the range of taxa present. Accordingly, all the floats were scanned and the results are summarised in Table 6. This does not provide a full identification; the Latin genera and species listed (Table 7) are only the most common taxa noted in the assessment. If the project had proceeded to full analysis, other identifications would have been made and more detailed conclusions about the nature of farming practice drawn. Nomenclature is according to Stace (1997).

The medieval contexts included in the assessment proved suitable for full analysis and are reported on by Wendy Smith (below) and are not included in Table 6.

**Results**

Apart from the medieval contexts (Smith below), further analysis was not appropriate, because radiocarbon dating of selected grains confirmed that there was some contamination of the Iron Age layers by macrofossils from medieval deposits. The assessment had noted the presence, in many of the late prehistoric contexts, of short grains with rounded dorsal surfaces and steeply angled embryos. Such grain morphology is often typical of free-threshing wheat such as hexaploid bread wheat or tetraploid rivet wheat. However, no chaff, apart from a single rachis internode of free-threshing wheat survived to confirm this. While free-threshing wheat is not unknown in small amounts in prehistoric samples, it is unusual. Some of the weed taxa, such as *Anthemis cotula* (stinking chamomile) are also much more common in post-Roman deposits.

As noted above (Bayliss *et al.*; Table 4) AMS radiocarbon dating was undertaken on some wheat and barley grains (fill 1149 from pit 1133, Period II) to investigate the possibility of contamination from the known medieval use of the site. The 2 sigma age ranges of 390–170 cal BC (OxA-11450) for the barley and 380–170 cal BC (OxA-11451) for the wheat grains were consistent with the Middle Iron Age dates obtained for the sheep/goat foetuses from an overlying fill.

Specimens with the morphology typical of free-threshing wheat (as noted above) were dated from fill 1188 in pit 1092. This context was from Period II, a layer of fill beneath the context containing an adult male inhumation (skeleton 4000). The burial was dated to the middle-late Iron Age (section 5), however the 2 sigma age ranges for the cereal grains of cal AD 770-980 (OxA-11452) and cal AD 1020-1220 (OxA-11453) clearly demonstrate that contamination of the prehistoric deposits by medieval domestic or agricultural waste had taken place.

Apart from some likely species such as the stinking chamomile noted above, it is not easy to separate the other probable medieval contaminants in the Iron Age assemblages, so full analysis was not justified.

The assessment results are given for each feature, but, as it is not known how the composition has been affected by the medieval contaminants, interpretation is not attempted. Table 6 is arranged in feature groups within periods, with the contexts listed stratigraphically as set out in the site matrix.

Seventy samples from 58 contexts were processed. These were from the fills of ten large pits, two of which (pits 1089 and 1092) were grave pits, and a prehistoric soil. All the identifiable remains were charred. The basal fill (1167) of pit 1107 appeared to be waterlogged, but although a few tiny fragments of uncharred plant tissue were preserved, these were very fragmentary and could not be identified at all. There were also charred remains in the fill.

PERIOD I

*Prehistoric soil*

The density of plant macrofossils was very low with only occasional cereal grains and weed seeds present.

PERIOD II

*Pit 800*

Grains of wheat (*Triticum* sp.), barley (*Hordeum* sp.) and oats (*Avena* sp.) were present in most contexts, but not in large numbers. Grains of rye (*Secale cereale*) were noted only in the upper fills 1022 and 1041. The condition of the grains was generally poor. Wheat chaff in the form of glume bases of hulled wheat (spelt and emmer) was present in small amounts in most contexts. Neither oat nor barley chaff was found. The lack of oat chaff makes it impossible to be certain whether the oats are a wild species that infested the wheat and barley crops, or a crop in their own right. In fill 1022, a single pulse (*Vicia/Pisum*) was noted. This could have been a large vetch or a pea. The seeds of weeds typical of arable or disturbed ground such as grasses (Poaceae and *Bromus* sp.), sorrel (*Rumex* sp.), stitchwort (*Stellaria graminea*), medick or clover (*Medicago/Trifolium*) and vetches (*Vicia* sp.) were also noted. Occasional seeds of stinking mayweed (*Anthemis cotula*) were also present.

TABLE 5: PLANT MACROFOSSIL ASSESSMENT (O = OCCASIONAL 1–10, M = MODERATE 11–100, F = FREQUENT 101–500. CF. FREE THRESHING WHEAT GRAINS ARE SHORT AND ROUNDED WITH A STEEPLY ANGLED EMBRYO

| CNTXT / SAMPLE | CONTEXT | PERIOD | SAMPLE WT / VOL (KG/ L) | FLOAT VOL (ML) | CROPS (GRAIN + PULSES) | CHAFF | WEEDS | CHARCOAL (CH) >2mm; COMMENTS |
|---|---|---|---|---|---|---|---|---|
| l1021/9000 | prehist soil | I | 50/46 | 5 | | | O inc *Anthemis cotula* | |
| 1021/9001 | prehist soil | I | ? | 5 | O *Triticum, Hordeum, Avena* | | O *Trifolium/ Medicago*; Silene sp. | *Triticum* grains mainly cf. free threshing. |
| 1021/9002 | prehist soil | I | 41.7/39 | 5 | O *Triticum, Hordeum* | | | |
| 1021/9003 | prehist soil | I | 41.1/38 | 10 | O *Triticum, Hordeum, Avena* | | O | |
| *Pit 800* | | | | | | | | |
| 1022/9051 | fill | II | 182.5/? | 150 | M *Triticum, Hordeum, Avena, Vicia/Pisum*, cf. *Secale cereale* | M spelt glume bases and spikelet forks | M small range of taxa | Ch O (in residue) |
| 1041/9004 | spit 1 | II | 201.75/117 | 30 | M *Triticum, Hordeum, Avena,* | M glume bases | M | Ch 1 frag (residue); 1 snail. frag. |
| 1132/9031 | spit 1 | II | 392.5/339 | 100 | F *Triticum, Hordeum, Avena* | F spelt glume bases | M inc *Vicia* sp. | |
| 1041/9005 | spit 2 | II | 116/109.5 | 15 | M *Triticum, Hordeum* | O glume bases | O inc *Vicia/Lathyrus* | |
| 1132/9040 | spit 2 | II | 233.5/199.5 | 80 | M *Triticum, Hordeum, Avena* | M spelt glume bases | M inc Poaceae, *Rumex* | pot |
| 1041/9006 | spit 3 | II | 105/93.5 | 20 | M *Triticum, Hordeum* | M glume bases | M inc *Bromus, Fallopia convolvulus* | O snail frags |
| 1132/9044 | spit 3 | II | 225/? | 60 | M *Triticum, Hordeum, Avena* | | F Chenopodiaceae, *Trifolium/ Medicago, Stellaria graminea, Sambucus nigra*, Poaceae | Ch 1 frag (residue) ; tuber |
| 1041/9009 | spit 4 | II | 39/36 | 10 | M *Triticum, Hordeum* | | O | |
| 1132/9050 | spit 4 | II | 270/? | 150 | M *Triticum, Hordeum, Avena* | O inc spelt glume bases | O | Ch O (1float, 1 residue) |
| 1132/9052 | spit 5 | II | 90/77 | 20 | O *Triticum* | O glume bases | O | 2 frags snail shell |
| 1132/9045 | spit 6 | II | 120.5/102.5 | 20 | M *Triticum, Hordeum, Avena* | M spikelet forks and glume bases inc. spelt | M inc *Vicia*, Poaceae, *Stellaria* | Inc. cf. free threshing wheat grain |
| 1132/9030 | spit 7 | II | 132/126 | 25 | | | M inc *Brassica, Trifolium*, Poaceae | |
| 1132/9046 | spit 8 | II | 133/111 | 20 | O *Triticum, Hordeum* | O inc spelt glume bases | M inc Poaceae, Polygonaceae, Chenopodiaceae, *Trifolium/ Medicago, Fallopia convolvulus* | Radiocarbon dates on bone |
| 1063/9012 | fill | II | 133/118 | 15 | M *Triticum, Hordeum* | O spelt glume bases | O inc *Anthemis cotula* | |
| 1074/9016 | fill | II | 165.5/154 | 30 | F *Triticum, Hordeum, Avena* | M spelt glume bases | M inc *Galium aparine* | Ch 1 frag..(residue) |
| 1039/9023 | fill | II | 545.5/477 | 200 | F *Triticum, Hordeum, Avena* | F glume bases | F inc *Rumex, Vicia*, Poaceae, *Bromus* | |
| 1164/9057 | Fill | II | 100.9/72 | 20 | | | M (small) | |
| 1164/9061 | Fill | II | 262/211 | 20 | M *Triticum, Hordeum* | | O | Inc. cf. free threshing wheat grain; radiocarbon dates on bone. |
| 1146/9095 | primary fill | II | ? | <5 | M *Triticum, Hordeum, Avena* | O spelt glume bases | O (1 *Bromus*; 1 *Anthemis cotula*; 5 *Phleum*) | Ch 1 in residue |
| 1174/9097 | primary fill | II | ? | <1 | | | | |
| *Pit 1133* | | | | | | | | |
| 1134/9059 | pit | II | 141.5/126 | 45 | F *Triticum, Hordeum, Avena* | O grass/cereal culm nodes | F inc. *Atropa belladonna, Bromus* | Ch M inc. in residue; ?slag. O uncharred seeds – poss. partially mineral replaced inc. cf. free threshing wheat grain. |
| 1152/9063 | pit | II | 329.2/239 | 30 | O *Triticum, Hordeum* | O inc. free threshing rachis | | Ch M; 2 frags snail shell |
| 1149/9094 | pit | II | ? | <5 | O (1 *Hordeum; 3 Triticum*) | | | Ch O (1 in residue); radiocarbon dates on *Hordeum* and *Triticum* grain, see text. |
| Pit 1056 | | | | | | | | |
| 1058/9010 | pit | II | 15.2/12/5 | 5 | M *Triticum, Hordeum, Avena* | | | |
| 1061/9014 | pit | II | 70/69.5 | 20 | M *Triticum, Hordeum* | | O | |
| 1062/9015 | pit | II | 17/15 | 5 | M *Triticum, Hordeum, Vicia* faba | O inc *Fallopia* | | |
| *Pit 1107* | | | | | | | | |
| 1106/9021 | pit | II | 76.6/62 | 20 | O *Triticum, Hordeum* | | M (small) | |
| 1119/9077 | pit | II | 5.8/5.5 | 5 | O 1 *Triticum* | 1 spelt/emmer glume base | 1 *Bromus* | |
| 1120/9067 | pit | II | 108.9/87 | 10 | O *Triticum, Hordeum* | | O inc. *Galium aparine* | Ch O inc. non-oak |
| 1122/9073 | pit | II | 13.9/11 | 5 | O *Triticum, Hordeum, Avena* | O glume bases | | |
| 1124/9076 | pit | II | 8.2/8 | <5 | O 2 *Triticum*, 1 *Hordeum* | | 1 *Euphrasia/ Odontites* | |
| 1125/9066 | pit | II | 32.2/25 | 10 | O *Hordeum* | | O inc. Poaceae | Ch O (2 in residue); poss. iron replaced non charred wood fragment |

| CNTXT/ SAMPLE | CONTEXT | PERIOD | SAMPLE WT VOL (KG/L) | FLOAT VOL (ML) | CROPS (GRAIN + PULSES) | CHAFF | WEEDS | CHARCOAL (CH) >2mm; COMMENTS |
|---|---|---|---|---|---|---|---|---|
| *Pit 1107* (cont.) | | | | | | | | |
| 1139/9081 | pit | II | 101.8/63 | 5, 2 bags | O 1 *Hordeum* | | 1 mineral-replaced *Ranunculus* | |
| 1142/9047 | pit | II | 103/86 | 20 | | O glume bases | O inc. *Bromus* | |
| 1142/9071 | pit | II | 16.4/8 | 10 | M *Triticum*, *Hordeum* | O spelt glume bases | | Inc. cf. free threshing *Triticum* grain |
| 1143/9029 | pit | II | 132.5/102.5 | | | | | |
| 1167/9035 | pit | II | 42/32 | 20 | M *Triticum*, O *Avena*, *Hordeum* | O *Triticum* spikelet forks and glume bases | M Poaceae. *Rumex*, *Valerianella dentata*, *Bromus* | All charred. Waterlogged remains all unidentifiable plant tissue. |
| *Pit 1059* | | | | | | | | |
| 1068/9020 | pit | II | 76.6/65 | 50 | M *Triticum*, *Hordeum* | M glume bases | O | Ch M float, 3 in residue |
| 1099/9068 | pit | II | 103.4/85 | 30 | F *Triticum*, *Hordeum*, *Avena* | M spelt and ? emmer glume bases | M inc *Bromus* | Ch O |
| 1147/9075 | pit | II | 2/1.5 | 5 | O *Triticum*, *Hordeum*, *Avena* | O spelt glume bases | O inc. *Vicia*/*Pisum* | Ch O (1 not oak) |
| 1148/9078 | pit | II | 17.6/13 | 10 | M *Triticum*, *Hordeum*, *Avena* | O inc. spelt glume bases | O *Bromus* only | Ch O |
| 1111/9086 | pit | II | ? | 5 | O *Triticum*, *Hordeum* and cf. *Secale* | | O | Ch O |
| 1189/9080 | pit | II | 13/16 | 5, 2 bags | O-M *Triticum*, *Hordeum* | | | |
| *Pit 1202* | | | | | | | | |
| 1196/9088 | pit | II | ? | 5 | M mainly *Hordeum*, 1 *Triticum* | O *Triticum* glume bases | M *Chenopodium*, Poaceae, *Bromus*, *Trifolium*/ *Medicago* | Ch O (3 in residue); O snail shell fragments |
| 1213/9053 | pit | II | 80/70 | 10 | F *Triticum*, *Hordeum*, *Avena* | M glume bases | M inc *Bromus* & small seeded weeds | Ch O in residue; tuber |
| *Pit 1211* | | | | | | | | |
| 1169/9064 | pit | II | 26.4/17 | 5 | | | | |
| *Pit 1168* | | | | | | | | |
| 1187/9056 | pit | II | 68/60 | 5 | O *Triticum*, *Hordeum* | | O (all small) | |
| 1187/9054 | pit | II | ?/46 | 5 | | | O inc *Vicia/Lathyrus* | |
| 1175/9091 | pit | II | ? | 5 | O (2 *Hordeum*) | | O inc. Caryophyllaceae | |
| *Pit 1092* | | | | | | | | |
| 1188/9060 | grave pit | II | 102/86 | 30 | F *Triticum*, *Hordeum*, *Avena*, | O glume bases inc. emmer | M inc. *Vicia*/*Pisum*, *Anthemis cotula*, *P.aviculare* | Ch O inc. 2 in residue; inc. cf. free threshing wheat grain. Radiocarbon dates on 2 grains, see text. |
| 1193/9087 | grave pit | II | ? | 5 | M mainly *Triticum*, some *Hordeum* | O inc. *Vicia/Lathyrus* | Ch O; *Triticum* grains include cf. free threshing. | Also some with humped dorsal surface cf. emmer |
| 1194/9093 | grave pit | II | ? | 10 | O *Triticum* and *Hordeum* | | O (inc. *Bromus*) | Ch O (4 in residue) |
| 1076/9019 | grave pit | III | 65/76.6 | 30 | F *Triticum*, *Hordeum* (hulled), *Avena*, cf. Secale | M emmer and spelt glume bases | M inc. *Galium aparine*, *Bromus*, Poaceae, *Rumex*, *Trifolium*/ *Medicago* | Inc. cf. free threshing *Triticum* grain |
| 1095/9089 | grave pit | III | ? | 5 | M *Triticum*, *Hordeum*, *Avena* | | M inc. *Atropa belladonna*, Poaceae, *Bromus*, *Galium aparine* | Ch M |
| 1093/9065 | grave pit | III | 37.8/31 | 15 | M *Triticum*, *Hordeum*, *Avena* | M spelt glume bases | M inc *Anthemis cotula*, *Stellaria media agg.*, *Rumex*, Poaceae | Ch O |
| 1113/9082 | Sk. pelvis | III | 2.5/2 | no float | | | | |
| 1112/9070 | grave pit | III | 17.2/14 | <5 | O *Triticum*, *Hordeum* (hulled) | | O inc. *Bromus* | |
| 1113/9082 | Sk. pelvis | III | 2.5/2 | <5 | O *Triticum* | | | Ch M |
| 1113/9083 | grave fill | III | ? | 10 | M *Triticum*, hulled *Hordeum* | O *Triticum* glume bases | M *Bromus*; *Atropa belladonna*; *Galium aparine* | |
| 1114/9079 | grave pit | III | 131.9/90 | 20 | F *Triticum*, *Hordeum*, *Avena* | | M inc *Bromus* and small Poaceae | Ch O ( inc 4 in residue) |
| *Pit 1089* | | | | | | | | |
| 1178/9092 | grave pit | II | ? | 10 | O (5 *Triticum*, 1 *Hordeum*, 1 indet | O (1 *Bromus*) | | |
| 1090/9022 | grave pit | III | 38/32 | 100 | M *Triticum*, *Hordeum* | | F inc. *Fallopia convolvulus* Chenopodiaceae, *Ranunculus*, *Galium aparine* | some modern seeds |
| 1091/9084 | grave fill, threshing | III | ? | 20 | M *Hordeum* and *Triticum* | | O *Galium aparine*; *Chenopodium* sp. | Ch O 1 in residue; *Triticum* grains cf. free |
| 1097/9090 | grave pit | III | ? | 5 | M *Triticum*, *Hordeum* | | M inc. *Euphrasia*/ *Odontites*, Poaceae, *Rumex*, *Galium aparin* | |
| 1098/9085 | grave fill threshing | III | ? | 10 | O *Hordeum* and *Triticum* | | O *inc. Chenopodium rubrum*/ *glaucum* | Ch O (3 in residue); *Triticum* grains cf. free |
| *Post medieval* | | | | | | | | |
| 1070/9013 | ditch | V | 25/24 | 10 | O 1 *Triticum* | | O | |
| *Modern and undated* | | | | | | | | |
| 1118/9072 | posthole | VI | 27/19 | 10 | O *Triticum*, *Avena*, *Secale cereale* | O inc *Plantago lanceolata*, *Ranunculus* | Ch O inc non oak | |
| 1136/9096 | ? modern ph | VI | ? | 5 | O *Triticum*, hulled *Hordeum* | | O inc. Poaceae, *Bromus*, *Plantago lanceolata*, *Chenopodium* sp. | Ch O |
| 1116/9074 | posthole | | 11.6/9 | 5 | O *Triticum*, *Hordeum* | | | |

TABLE 6: COMMON NAMES OF THE LATIN GENERA AND BINOMIALS USED IN TABLE 5. FULL CITATION, INCLUDING THE AUTHORITY, IS GIVEN IN STACE 1997

| | |
|---|---|
| *Triticum* sp. | Wheat |
| *Hordeum* sp. | Barley |
| *Avena* sp. | Oats (wild or domesticated) |
| *Secale, Secale cereale* | Rye |
| | |
| *Anthemis cotula* | Stinking chamomile |
| *Atropa belladonna* | Deadly nightshade |
| *Brassica* | Cabbage, rape etc |
| *Bromus* sp. | Brome |
| Chenopodiaceae | Goosefoot family |
| *Chenopodium rubrum/ glaucum* | Red / glaucous goosefoot |
| *Euphrasia/ Odontites* sp. | Eyebright / Red bartsia |
| *Fallopia convolvulus* | Black bindweed |
| *Galium aparine* | Cleavers |
| Poaceae | Grass family |
| *Phleum* sp | Timothy (grass) |
| *Plantago lanceolata* | Ribwort plantain |
| *Ranunculus* sp. | Buttercups |
| *Rumex* sp. | Sorrel, dock |
| *Sambucus nigra* | elder |
| *Silene* sp. | Campion |
| *Stellaria graminea* | Stitchwort |
| *Trifolium* | Clover |
| *Trifolium/ Medicago* sp. | Clover / medick |
| *Valerianella dentata* | Narrow-leaved corn salad |
| *Vicia/Pisum* sp. | Vetch/pea |
| *Vicia* sp. | Vetch |
| *Vicia/Lathyrus* sp. | Vetch / Tare |

*Pit 1133*
Only one context (fill 1134) was relatively rich in plant macrofossils, however another fill (1152) is the only context from the site to preserve a fragment of a rachis internode of free-threshing wheat.
*Pit 1056*
Wheat, barley and oat grains are preserved, but there was no chaff and very few weed seeds from this feature.
*Pit 1107*
As with the other pits, wheat, barley and oat grains, wheat glume bases and weed seeds were noted, but the concentration of macrofossils and species diversity was low. Corn salad (*Valerianella dentata*) was present in the weed assemblage and not noted elsewhere on the site.
*Pit 1059*
Wheat, barley and oat grains, occasional glume bases and weed seeds were noted. The composition of the assemblages was similar to the other features, but the concentration of macrofossils was generally low.
*Pit 1202*
The two fills produced similar assemblages to those in Pit 1059.
*Pit 1211*
Plant macrofossils were absent.
*Pit 1168*
Occasional wheat and barley grains and small weed seeds were noted.
*Pit 1089*
Fill 1178 contained occasional wheat and barley grains and a single brome.
*Pit 1092, fills 1188, 1193 and 1194*
The medieval radiocarbon dates (see above and Table 4) were obtained on wheat grains from fill 1188. See Period III, pit 1092 for a general summary of contents.

PERIOD III

*Pit 1092 (apart from 1188, 1193 and 1194)*
Wheat, barley and oat grain and hulled wheat chaff were present in most fills. The weeds were similar species to those in pit 1130, but also included deadly nightshade (*Atropa belladonna*), a woodland edge or scrub plant and cleavers (*Galium aparine*), a typical arable weed.
*Pit 1089 (apart from 1178)*
Wheat and barley grains and occasional weeds seeds were recovered. No chaff was preserved.

PERIOD V POST-MEDIEVAL

Context 1070 contained occasional wheat grains only.

PERIOD V MODERN

The postholes, contexts 1118 and 1136, contained occasional wheat, oats, barley and rye grains, and weeds including ribwort plantain, brome and goosefoot, similar taxa to those in the earlier phases and possibly derived from them.

**Comment**

Few assemblages of Iron Age date have been recovered from the north of the (historic county of) Somerset, the closest being those from Meare Iron Age Lake Villages where the dominant cereal crop was spelt wheat, a tall-strawed hardy cereal popular in the Iron Age and Roman periods, with hulled barley, beans, and rye (Jones 1986; Housley 1987; Straker 2000).

STRATIGRAPHIC STUDIES *Vanessa Straker and Richard Macphail*

**Introduction**

While the excavation was in progress, a transect of three powered percussion augur cores was obtained from the farmland below the site. The transect ran from the field to the west of the excavation area (Core 1, NGR ST3395256881), down the slope and onto the alluvial clay levels at the base of the hill (Core 2, NGR ST3391356805 and Core 3, NGR ST3386556753).

The intention was to obtain a profile of the stratigraphy from the sediment retained in the open-sided gouges employed, and establish whether any peat was present at a level that could be contemporary with the settlement and provide, through pollen analysis, a datable record of the contemporary vegetation and thus an environmental context for the prehistoric site. Detailed field logs and soil descriptions are included in the archive version of this report.

**Summary of the results**

Core 1 was 1.99m in depth and comprised a topsoil and subsoil that probably contained some hillslope-derived colluvium. It extended 0.96m into the underlying head deposits, which overlie the Mendip carboniferous limestone.

Core 2 was 5m in depth and reached a dark reddish brown stony clay interpreted as the top of the pre-Holocene geological sequence, at 4.48m, a depth of +1.16m OD. A thin very dark brown peat (5mm thickness) was recorded at 4.25m depth and small and degraded wood fragments were noted at the base of the sediment sequence above the pre-Holocene geology.

Core 3 was 7.0m in depth, but did not reach the underlying pre-Holocene geology. The basal 2.47m consisted of black and brownish woody peat, which graded into a silty clay loam at -0.38m OD, the base of the core. The depth of the sediments below the base of the core and above the pre-Holocene geology is not known.

Two peat samples were selected for pollen assessment using a standard preparation (Moore *et al*. 1991). Only occasional grains of alder pollen, which is more resistant to decay than grains of other taxa, survived, and it was clear that further analysis would not provide useful information on the nature of the vegetation on the edge of the dryland and in the wetland below the prehistoric site. In general, however, it is likely that in the Iron Age the hillside was fringed by a tidally exposed saltmarsh, though earlier in prehistory a wet alder carr or fen woodland, or possibly a reedswamp, may have grown at the edge of the Levels and base of the hill.

**Discussion**

A general framework for the stratigraphic sequence of the Severn Estuary has been published by Allen and Rae (1987) and Allen (2000). The sequence developed within a context of Holocene sea level rise. A basal peat, accumulated before the effects of sea level change were evident, was overlain by early Holocene silts and sands at a time when sea level was rising rapidly. Above this was a series of intercalated peats and silts which the authors equated to a slower rate of mid-Holocene sea level rise between *c*. 6000 and *c*. 2500 BP (*c*. 4050 and *c*. 650 BC) with further deposition of silt in the Late Holocene. The environments represented include saltmarsh and mud flats, freshwater, supratidal and occasionally saltmarsh peats (Haslett *et al*. 2000). At different locations in the estuary, the details of the sequence vary, suggesting that local factors such as geology, drainage patterns and coastal barriers were influential (Straker *et al*. 2002). The depth of the sequence depends on the topography of the underlying geology but can be up to 20m thick in places.

Recent stratigraphic studies by Haslett *et al.* (2000) along the southern flank of Mendip, in a north-east–south-west transect around Nyland Hill to the south-east of Bleadon, have demonstrated the presence of a peat layer with its upper contact dating from *c*. 3725–3330 cal BP (*c*. 1775–1350 cal BC (Haslett *et al.* 2000, fig. 4). Its surface altitude varies and Haslett *et al*. were able to estimate that a 3.16m overburden of silty clay had resulted in peat compaction of 2.2m. The silty clay overburden in the Bleadon Core 3 is 5.53m, thus the present surface height of +1.093 m OD for the top of the peat in Core 3 does not reflect its original surface altitude. No radiocarbon dating was done on the Bleadon peat and it is not known whether it is contemporary with that identified by Haslett *et al.* (2000).

The other important finding published by Haslett *et al.* (2000) based on analysis of the foraminifera in their cores, is that in the Late Holocene the rate of sea level rise had risen compared with that for the Middle Holocene (late Mesolithic and Neolithic). This would have been reflected in a transition from high to low salt marsh dominance. This is contrary to previous models for sea level rise in the Severn which assumed that in the Late Holocene the rate of sea level rise had slowed down (Heyworth and Kidson 1982). If the model is taken as a likely scenario for the environment at Bleadon, the estuarine environment that abutted Bleadon Hill in the Iron Age would probably have comprised a limited area of higher marsh on the foot slopes of the hill, and an extensive, frequently flooded, low marsh containing many large tidal creeks. This would have been a very different environment from the plentiful grazing available where high saltmarsh, with relatively infrequent flooding, had developed earlier in the Holocene.

IRON AGE BROOCH *Jane Bircher and Margaret Brooks with a contribution by Penelope Walton Rogers*

The brooch (SF 8026) was found in the region of the left shoulder of the female burial (skeleton 4001), with one or more pieces retrieved during later sieving (Fig. 16). Five fragments make up a more-or-less complete brooch and pin with the point missing. The brooch hoop is constructed from a sub-square bar or rod, apparently flattening and tapering slightly towards the extant (cleaned) terminal, although the original form of the terminal may be lost through corrosion. The long pin is formed from a rod, flattened to hinge over the loop and tapering towards the point. The external diameter of the hoop is approximately 45mm and the extant length of the pin 76mm.

Although penannular brooches are discussed in depth by Fowler (1960), their typological sequence and chronology are complex and remain poorly understood. It is clear that the form is a conservative one with Iron Age types surviving relatively unchanged into the Romano-British period. The earliest in the typological sequence are Fowler type A brooches (*ibid*), characterised by a heavy hoop, simple expanded terminals and a pin with a pronounced 'hump'. This type seems to appear during the 3rd century BC at the earliest. Iron examples are known from important Iron Age assemblages such as All Cannings Cross and Cold Kitchen Hill, both in Wiltshire (Cunnington 1923; Corney forthcoming; Nan Kivell 1926a; 1926b). The Bleadon brooch is undoubtedly an example of this form, although the characteristic slight expansion at the terminals is missing. There is certainly insufficient space for the more intricate terminals of Fowler's types B and C. The pronounced hump of the pin is further confirmation of the attribution to type A.

Arras Culture burials include penannular brooches (mainly in copper alloy) that are stratigraphically and typologically early in the relative sequence and dated

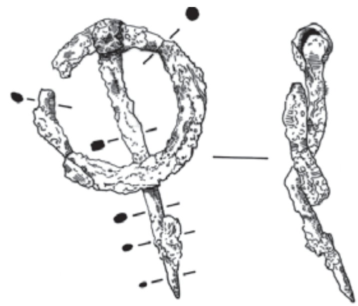

*Fig. 16 Iron Age brooch, SF 8026; scale 1:2*

to the Late La Tene I and La Tene II (Dent 1982, 439–46). Remaining in Yorkshire, a copper-alloy type A brooch was recovered from grave R11 at Rudston (Stead 1991, 89–90, 187, fig. 101). The dating evidence here is secure on both stratigraphic and typological grounds, with the majority of the burials belonging the 3rd and 2nd centuries BC (*ibid* 179–84). A copper-alloy example with the distinctive humped pin and slightly moulded terminals is known from Meare (Coles 1987, 75, fig. 3.14, no. EE10), a site principally occupied from the 3rd to 1st centuries BC.

An iron type A brooch was recovered from the south-western entrance of the hillfort at South Cadbury (Barrett *et al*. 2000, 142). The brooch, possibly curated, was associated with early to mid 1st-century AD material relating to the so-called 'massacre' (*ibid* 115–16).

Evidence of mineral-preserved textile found on the brooch is described here by Penelope Walton Rogers of The Anglo-Saxon Laboratory. The remains of two textiles are preserved. The first is a relatively fine weave, probably a twill, made with Z-spun yarn in warp and weft and approximately 14 x 14 threads per cm. The second is coarser, with a count of about 8 x 8 threads per cm, and an unclear weave, although the yarn is again Z-spun. The finer textile is on the back of the brooch ring and wraps tightly round the pin, close to the hinge, so that it may be interpreted as the material of the garment fastened by the brooch. The coarser textile is represented by a single patch at the outer edge of the ring and may belong to a second garment worn over the first.

Fabrics similar to the coarser outer textile were recorded in the cemeteries of Iron Age Yorkshire (Crowfoot 1991, 119–25). Where the fibre could be identified, the textiles mostly proved to be wool and some at least were almost certainly part of cloaks. No finer fabrics have been recorded in these cemeteries, but most of the brooches with textile in these sites belong to the 3rd and 2nd centuries BC. From the 1st century BC, there are some finer textiles made of linen from Kelvedon, Essex (Walton Rogers 2007), and Ashford, Kent (Walton Rogers 2002), although these are tabby weaves (plain weaves). Relatively few other textiles have been recorded from this end of the Iron Age and those that have are mostly coarse. Twill textiles of similar quality to the finer fabric on the Bleadon brooch are not found until the 1st century AD in the largely native-made collection from Roman Vindolanda in Northumberland (Wild 1977). Other comparable examples have been recorded in parts of Britain outside the Roman boundary (Bender Jørgensen 1992, 198–9). Given the paucity of evidence from the immediately pre-Roman Iron Age it is possible that such fabrics were already current in the 1st century BC.

Closely dated parallels for iron penannular brooches are difficult to find. This is, in part, a result of the heavy corrosion that can occur leading to the loss of critical typological detail. However, the use of iron for the manufacture of British brooches, although relatively rare for penannulars, is a consistent chronological indicator as it largely ceased by the mid 1st century AD. In the case of the Bleadon brooch, the survival of the pin with its relatively pronounced hump, and the lack of the more ornate form of terminals leaves little doubt in the attribution to Fowler type A. Although the type can occur into the early Roman period, as is suggested at South Cadbury, the cumulative evidence points to a *floruit* in the 3rd to early 1st centuries BC.

## MEDIEVAL AND POST-MEDIEVAL POTTERY

*Andrew Young*

### Introduction

A small assemblage of 372 sherds of medieval and post-medieval pottery weighing 3390g was recovered during the excavation work. The collection was subsequently washed, marked and quantified by sherd count and weight.

The collection was examined in hand specimen and using a binocular microscope and divided into 30 fabric groups (FT1 to FT30) detailed in the project archive, plus a miscellaneous group of undifferentiated medieval earthenwares (FT31). The characteristics of each fabric were mainly based upon temper and clay mineralogy, as well as overall fabric, firing conditions and surface treatment.

Eight of the fabric types, amounting to just over 10% of the total assemblage by count and 27% by weight, were of common post-medieval type, whilst the remaining 23 fabrics (2487g) represent varieties of plain medieval earthenware, cooking or storage vessels, and a smaller number of finer glazed medieval earthenwares. A small proportion of the latter were from recognised regional types that are variously described and dated, in particular and most usefully in the Bristol Pottery Type Series (BPT) with dating refined most recently by Rod Burchill (Burchill 2004).

### Medieval

The medieval pottery assemblage consists of 333 sherds (2487g) of which 28 (*c*. 8% by count and weight) are from glazed fineware vessels representing six separate fabrics. The remainder (92% by count) represent plain undecorated earthenwares. The average sherd size (7.4g) is relatively low and levels of abrasion are generally moderate to high. This, coupled with the nature of the excavated medieval features, which represent mainly boundary features, suggests that the sherds reflect a secondary archaeological context and features located peripherally to the main focus of medieval settlement.

The 305 sherds of plain earthenware were subdivided into 16 separate fabric types with a further 66 sherds (*c*. 21% by count) being undifferentiated (FT31). Twelve of the earthenware fabrics shared broadly similar characteristics with diagnostic inclusions of calcite and rounded quartz that were variably oxidised and reduced. Together, this related group of earthenwares amount to 75% by count of the total plain medieval earthenware assemblage and, in view of the frequency of calcite inclusions in particular, are likely to represent a number of local products with FT8 (42% by weight) the most common. Other inclusions of limestone and rock fragments are less common whilst mica is often present but rarely a distinguishing characteristic. Exceptions to these general characteristics were represented by a small number of calcite-free, quartz and limestone-tempered wares (FT1, FT3, FT9 and FT24) although collectively these only amounted to *c*. 5% of the total coarse ware assemblage.

The great majority of the plain earthenware consists of body sherds from simple undecorated handmade jars and cooking pots. Of the 19 rim sherds and 6 base sherds only one example of finger-tip decoration is represented, whilst the great majority of the vessels are restricted to simple globular jars with flat bases and mainly everted necks and flattened or occasionally ledged or beaded rims (Fig. 17). Other diagnostic forms are restricted to a handful of sherds from west country dishes, alternatively often called 'bee skeps', a form that appears to first occur in significant numbers on rural sites in the region during the period 1150–1250 (Young forthcoming). The fabrics appear to have been both handmade and wheel thrown although external finishing is mainly restricted to wiping. Traces of external and internal sooting are common, indicating that many of the vessels were probably used for cooking directly in or over an open hearth.

The glazed earthenware sherds indicate the presence of a handful of fine tableware jugs or pitchers and include a few examples of fabrics that occur widely across the region. Most important of these are sherds of Bristol Ham Green A (FT5), north-west Wiltshire oolitic limestone-tempered tripod pitcher ware (Minety; FT6) and Bristol Redcliffe glazed wares (FT23). The Minety and Ham Green wares were first produced in the late 11th and early 12th century respectively and continued to be made until around the end of the 12th century. The Bristol Redcliffe wares are later, dating from between *c*. 1250–1350 in Bristol. Together these fabrics provide key dating evidence for the medieval assemblage as a whole, although the other glazed sherds present, whilst generically similar, could not be attributed to any particular or closely dated source.

Overall, the medieval assemblage represents a restricted collection of very standard cooking, storage and fineware vessels with a large proportion of the plain earthenware likely to have been produced locally. The presence of a small number of better quality glazed wares, less than 10% of the total assemblage, is consistent with evidence from other rural medieval settlements in the region and indicates the use of a small number of finer tablewares, mainly jugs or pitchers brought in from the Bristol and north Wiltshire areas, during the 12th and early 13th centuries. Circumstantial evidence from the coarse earthenwares, in particular the restricted range of vessel forms, the low numbers of glazed wares and the prevalence of external and internal sooting, indicates an 11th to 12th-century domestic tradition where earthenware vessels were often placed directly over or onto an open hearth. This tradition appears to have been replaced in the 13th century, when a more varied and complex suite of domestic ceramics, more commonly glazed and decorated and including specialised items such as dripping pans and skillets, become common.

In combination, the restricted utilitarian characteristics of the plain earthenwares combined with the dating evidence provided by the key Ham Green, Minety and Bristol Redcliffe sherds, suggests a date range of between 1150 and 1250 for the principal medieval activity on the site.

CATALOGUE OF ILLUSTRATED SHERDS

Fig. 17

1 Base sherd from a handmade plain west country dish; FT1; oxidised buff surface; late 11th to mid 12th century
2 Rim sherd from handmade cooking/storage jar; FT2; everted neck with simple beaded rim; 12th to 13th century
3 Rim sherd from everted neckless bowl, possibly part of a fish dish or dripping dish; FT4; flattened and channelled rim with external bead; traces of external sooting; 12th to 13th century
4 Rim sherd from cooking jar with upright neck and plain beaded rim; FT7; heavy external sooting; thoroughly reduced wheel thrown fabric with internally burnished surface; 12th to 13th century
5 Rim sherd from thin-walled cooking jar with upright neck and plain rounded rim; FT13; reduced throughout with traces of external sooting; late 11th to early 12th century
6 Rim sherd from handmade cooking jar with everted neck and flattened, channelled rim; FT13; reduced throughout with heavy external sooting; 12th to 13th century
7 Large rim sherd from thick-walled cooking/storage jar with inverted neck and flattened rim with thick external bead; FT8 with coarse calcite inclusions and wiped surfaces; ?late 11th to 12th century
8 Rim and body from handmade globular cooking jar with slightly everted neck and beaded/internally hooked rim; FT8; external sooting; 11th to 12th century

**Post-medieval**

The small assemblage of post-medieval pottery includes a range of common fabric types that are found very widely on urban and rural sites across the region. Foremost of these are examples of Somerset red ware, Bristol or Staffordshire yellow slipware, stoneware and ubiquitous transfer-printed white wares. None of these ceramics provide any

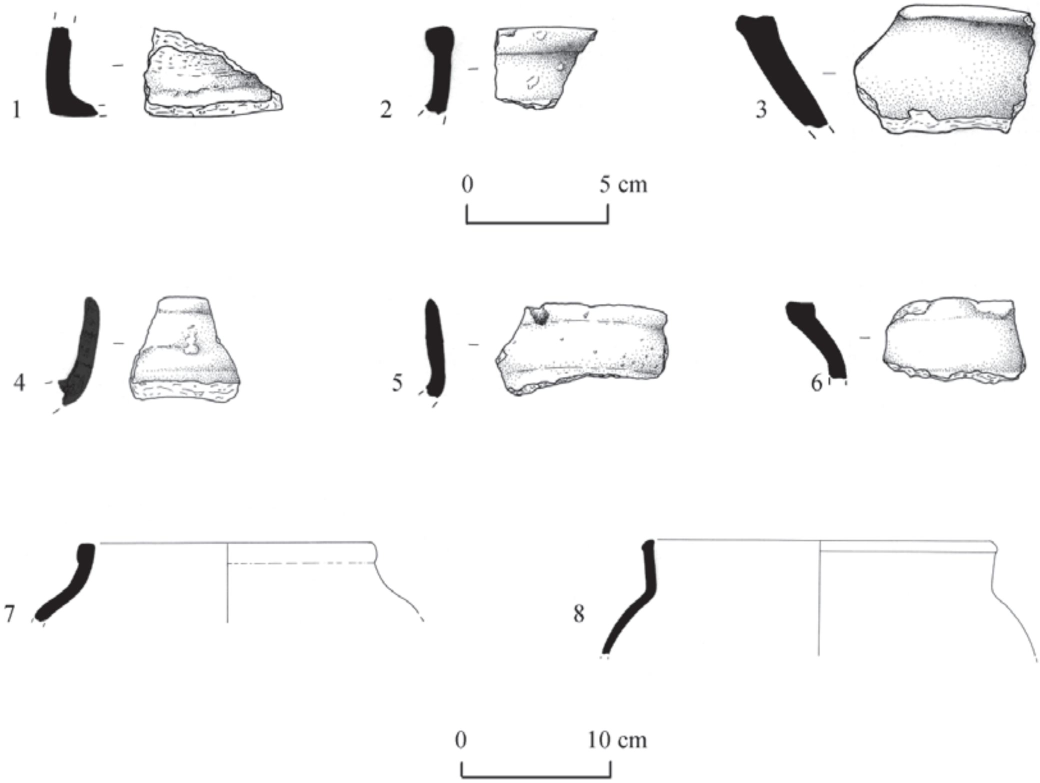


*Fig. 17 Medieval pottery*

particular insight into the activity on the site during the post-medieval era, other than that some limited settlement-related activity occurred, although the absence of any diagnostic wares of the 15th to 17th centuries is to be noted and could indicate a period of reduced activity overall in the village.

**Conclusions**

The pottery assemblage is dominated by plain medieval earthenware fabrics indicative of utilitarian cooking and storage vessels of 12th to 13th-century type, in association with a small quantity of glazed tablewares that are dated to between the mid 12th and early 13th century elsewhere in the region. Calcite is a common component in approximately 75% of the plain medieval earthenwares. This is likely to indicate a local origin for the majority of the coarse utilitarian earthenware vessels present. The range of medieval vessel forms represented is restricted to a standard suite of cooking and storage jars with a handful of west country dishes. Many vessels are sooted externally indicating cooking directly over an open hearth. This feature, coupled with an absence of later developed and often glazed vessel and fabric types, indicates a domestic context and pre-1250 date for the main medieval activity represented. The assemblage contains a small number of medieval glazed finewares of Minety, Ham Green and Redcliffe types. These domestic tableware fabrics are dated at Bristol and elsewhere in the region to the period between *c*. 1120 and 1300.

The post-medieval fabrics represent a small and entirely standard suite of mainly 18th and 19th-century domestic ceramics that occur extensively throughout the region and which provide no new insight into activity on the site during the period.

## MEDIEVAL CHARRED PLANT REMAINS

*Wendy Smith*

**Methods**

The methods used for the plant remains of medieval date were the same as those discussed by Straker above. Three samples (9017, 9018 and 9062) from primary deposits in paired boundary ditches 808 and 810 were examined. The flots were sorted under a low-power binocular microscope at a magnification of x12. The heavy residues were sorted by eye for charred plant remains. Identifications of plant remains (i.e. seeds) were made at magnifications of between x12 and x50 and in comparison with modern reference material housed at the English Heritage Centre for Archaeology.

Nomenclature for cereals follows the traditional binomial system as outlined in Zohary and Hopf (1994, tables 3 and 5) and nomenclature for indigenous taxa follows Stace (1997).

**Results**

Table 8 lists the taxa identified in each of the three contexts sampled. Fig. 18 provides a breakdown of the types of plants recovered in each sample. All three samples comprised a fairly even mixture of cereal grain and weed seeds.

Free-threshing type wheat grain was the most common cereal grain identified. There is a certain amount of overlap in the gross morphology of free-threshing wheat and glume wheat grains, which means precise identification is often not possible, and identifications can only be made to type (Jones 1998). On the basis of observed morphology of the cereal grain and the period of the site, it is most likely that free-threshing wheat was in use. One bread wheat (*Triticum aestivum*) rachis node was securely identified from ditch 810 (sample 9017). With only one rachis fragment securely identified to species level, however, it is not possible to claim that all of the free-threshing wheat grain was bread wheat. Small quantities of wheat rachis nodes, which clearly are from an indeterminate species of free-threshing wheat, were also recovered from all samples; further supporting the interpretation that the wheat grain recovered is free-threshing type.

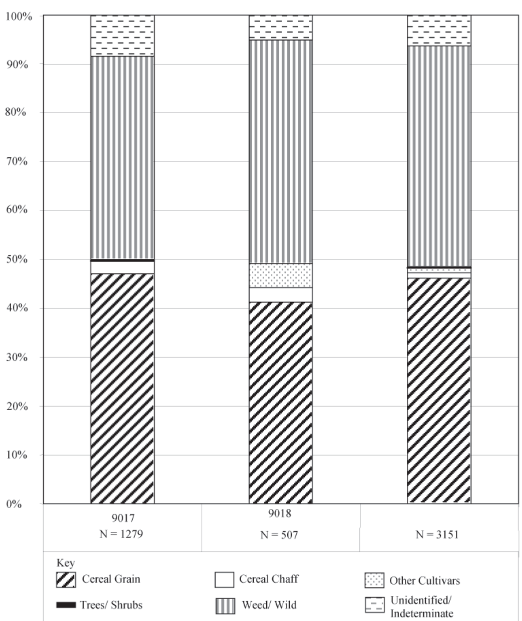


*Fig. 18 Proportion of plant remains recovered in the samples – left to right 9017, 9018, 9062*

In addition to free-threshing type wheat grain, small quantities of barley grain and a single rye rachis node were also identified from ditch 810. The overall dominance of cereal crops is unlikely to be due to any particular scarcity of non-cereal crops on site but, instead, reflects the pattern of charring events at Bleadon, which appear to frequently involve cereal grain. Notably, only small quantities of cereal chaff were recovered in this assemblage.

Aside from cereal crops, these samples also contain small quantities of cultivated pulses, such as broad bean (*Vicia faba*) and garden pea (*Pisum sativum*). In addition to these cultivars, non-edible vetches/ clovers (e.g. *Vicia sativa* and *Melilotus* sp./ *Medicago* sp./*Trifolium* sp.) were also recovered. These may have been cultivated for animal fodder, possibly as part of a crop rotation system, however, the small quantity of vetches/ clovers recovered may have occurred as weeds of the cereal crop.

Hazel (*Corylus avellana*) nutshell fragments were recovered from ditch 808 (sample 9062). These could be the remains of a foodstuff; however, hazel nutshells could have entered the deposits, possibly accidentally, through the use of hazel wood for fuel.

All three samples contained many taxa that typically occur as weeds of arable crops in the archaeological record (i.e. *Papaver rhoeas*/*dubium*, *Stellaria media*, *Fallopia convolvulus*, *Melilotus* sp./ *Medicago* sp./*Trifolium* sp., *Euphrasia* sp./*Odontites* sp., *Carduus* sp./*Cirsium* sp., *Centaurea* sp., *Anthemis cotula*, *Avena* sp., *Avena* sp./ *Bromus* sp. and *Bromus* sp.).

**Discussion**

The plant remains could derive from several sources, but the assemblage as a whole does provide information about the crops in use and their cultivation conditions, whilst the recovery of hazel

(*Corylus avellana*) nutshell fragments provides limited evidence for hedges or scrub in the area. Comparison of the results from Bleadon with several other sites in the region suggests that the dominance of free-threshing type wheat in this assemblage is typical; however the recovery of pulses is somewhat unusual.

### POTENTIAL SOURCES OF PLANT REMAINS

Several sources of domestic rubbish are possible for this assemblage:

kitchen waste, dominated by semi-clean grain and contaminants of cereal crops
disposal of spoiled crops, dominated by semi-clean grain and contaminants of cereal crops
floor litter or packing materials (comprising straw and other collected plants)
thatch (although larger quantities of culm nodes would be expected if this was a major source for the assemblage – e.g. results from Stone in Moffett and Smith 1996).

The samples consistently produced similar results suggesting that repeated charring events involving cereal grain occurred on site. The limited amount of cereal chaff recovered, however, may be deceptive, as Boardman and Jones (1990) have suggested that cereal chaff is less likely to survive charring events than cereal grain and therefore these results might be biased to cereal grain and weed seeds, which are more likely to survive charring. Although debris from some form of food processing is the most likely explanation for this deposit, burning of rubbish such as spoiled crops, domestic litter or old thatch cannot be entirely ruled out.

### EVIDENCE FOR CULTIVATION CONDITIONS

The weed/wild plants recovered provide some information on the range of cultivation conditions. Table 8 summarises the various conditions/habitat types possible for those weed/wild plants identified to species level, as well as including some taxa identified to genus level, when only a limited range of habitats are possible.

Many of the taxa recovered are typical weeds of arable crops, such as common/ long-headed poppy (*Papaver rhoeas*/*P. dubium*), common chickweed (*Stellaria media* s.l.), black bindweed (*Fallopia convolvulus*), possible scarlet/blue pimpernel (cf. *Anagallis arvensis*), shepherd's needle (*Scandix pecten-veneris* L.), stinking chamomile (*Anthemis cotula*), possible corn marigold (cf. *Chrysanthemum segetum*), wild oat (*Avena* sp.), and brome (*Bromus* sp.).

In addition, many of the weed/wild taxa (several of which are also common crop weeds) are typical of open or waste ground. These include common/ long-headed poppy (*Papaver rhoeas*/*P. dubium*), possible small nettle (cf. *Urtica urens*), chickweed (*Stellaria media* s.l.), knotgrass (*Polygonum aviculare*), black bindweed (*Fallopia convolvulus*), black mustard (*Brassica* cf. *nigra*), possible scarlet/ blue pimpernel (cf. *Anagallis arvensis*), shepherd's needle (*Scandix pecten-veneris* L.), nipplewort (*Lapsana communis*), stinking chamomile (*Anthemis cotula*), possible corn marigold (cf. *Chrysanthemum segetum*), wild oat (*Avena* sp.), and brome (*Bromus* sp.). It is likely that such taxa could occur in the margins of arable fields, and certainly many of these taxa are frequently recovered with cereal grain or chaff at archaeological sites.

There also is some indication for cultivation of heavier soils or cultivation of crops in damp, possibly wet, conditions. Stinking chamomile (*Anthemis cotula*) can occur on heavy soils. The recovery of spike-rush (*Eleocharus* sp.), wood club-rush (*Scirpus* sp.) and sedge (*Carex* sp.) all suggest damp to wet conditions. Although it is possible that these taxa arrived on site as weeds of crops, it is also possible that some of these plants were collected for floor litter, bedding, packing or rush lighting materials.

### LIMITED EVIDENCE FOR HEDGES OR SCRUB

Fragments of hazel (*Corylus avellana*) nutshell in ditch 808 (sample 9062) and unidentified thorns in the same ditch (sample 9018) may suggest the presence of hedges or scrub in the area. However, these fragments could have entered the deposit in other ways, for example, as collected wild foodstuffs or fuel waste. Hazelnuts, with their robust outer shells, are particularly well suited to transport and storage, so although hazelnuts may have been available locally, they may also have been bought in or exchanged for some other product. Thorns or hazelnuts may have entered these deposits with wood used as fuel.

### SOUTHERN ENGLAND COMPARANDA

Table 8 presents a comparison of the Bleadon results with ten other sites in southern England. With the

TABLE 8: OCCURRENCE OF MEDIEVAL CHARRED PLANT REMAINS WITH COMPARANDA

| | | QUANTIFIED RESULTS FROM BLEADON | | | | | | COMPARATIVE SITES IN SOUTHERN ENGLAND | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Number<br>Context Number<br>Context Type<br>Sample Volume (L)<br>Proportion of flot/ HR analysed | Habitat Coding | 9017<br>1075<br>Ditch<br>48 L<br>1/8 | | 9018<br>1083<br>Ditch<br>24 L<br>1/2 | | 9062<br>1138<br>Ditch<br>56 L<br>100% | | East St. | Eckweek | Howard's Lane | Lydford | Middleton Stoney | Okehampton Castle | Ower Farm | Priory Barn | Sherborne Old Castle | Wareham 1974–5 | |
| Flot/ HR | | Flot | HR | Flot | HR | Flot | HR | | | | | | | | | | | |
| Volume flot (ml)/ HR (L) | | 300 | 1.8 | 50 | 0.6 | 150 | 1.8 | | | | | | | | | | | |
| Seeds Per Litre | | 213.2 | | 42.3 | | 56.3 | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| LATIN BINOMIAL | | | | | | | | | | | | | | | | | | COMMON NAME |
| | | | | | | | | | | | | | | | | | | |
| CEREAL GRAIN | | | | | | | | | | | | | | | | | | |
| *Hordeum* sp. – hulled | A | 9 | | 8 | | 24 | 4 | | ✓ | ✓ | | | | | | | | Hulled Barley |
| *Hordeum* sp. | A | 6 | | 8 | | 114 | 6 | ✓ | | | | | | ✓ | ✓ | ✓ | ✓ | Barley |
| cf. *Hordeum* sp. | A | 4 | | 4 | | 15 | 1 | | | | | | | | | | | Possible Barley |
| *Hordeum* sp./ *Secale cereale* L./ *Triticum* sp. | A | 263 | 1 | 103 | | 262 | 111 * | | | | | | | | | | | Wheat/ Barley/ Rye |
| *Secale cereale* L. | A | | | | | | | ✓ | | ✓ | ✓ ! | | | ✓ ! | ✓ | | ✓ | Rye |
| *Triticum* sp. – free-threshing type | A | 167 | | 78 | | 515 | 40 | ✓ | ✓ ! | | ✓ | ✓ ! | | ✓ | ✓ | ✓! | ✓ | Free-threshing wheat |
| *Triticum* sp. – free-threshing type tail grain | A | | | | | 5 | 1 | | | | | | | | | | | Free-threshing wheat |
| *Triticum* sp. – indeterminate | A | | | 1 | | | | | | | | | | | | | | Wheat |
| cf. *Triticum* sp | A | | | | | 191 | | | | | | | | | | | | Possible wheat |
| *Avena sativa* L. | A | | | | | | | | | | ✓ ! | | | | | | | Cultivated oat |
| Cereal/ POACEAE (large) – indet. caryopsis | A | 152 | | 1 | 7 | 102* | 60* | | | | | | | | | | | Cereal/ Wild grass |
| Cereal/ POACEAE – indet. detached embryo | A | | | | | 3 | | | | | | | | | | | | Cereal/ Wild grass |
| Cereal Chaff | | | | | | | | | | | | | | | | | | |
| *Hordeum* sp. – rachis node | A | | | 2 | | | | | | ✓ | | | | | | | | Barley |
| *Secale cereale* L. | A | 1 | | | | | | | | | | | | | | | | Rye |
| *Triticum aestivum* L. – rachis node | A | 1 | | | | | | | | | | | | | | | | Bread wheat |
| *Triticum* sp. – free-threshing type rachis node | A | 13 | | 5 | | 14 | | | | | | | | | | | | Free-threshing wheat |
| *Triticum* sp. – awn (fragments) | A | 2 | | | | | | | | | | | | | | | | Wheat |
| cf. *Triticum* sp. – awn (fragments) | A | | | 2 | | | | | | | | | | | | | | Possible Wheat |
| Cereal – indeterminate rachis node | A | 15 | | 1 | | 17 | | | | | | | | | | | | Cereal |

| Sample Number<br>Context Number<br>Context Type<br>Sample Volume (L)<br>Proportion of flot/ HR analysed | Habitat Coding | 9017<br>1075<br>Ditch<br>48 L<br>1/8 | | 9018<br>1083<br>Ditch<br>24 L<br>1/2 | | 9062<br>1138<br>Ditch<br>56 L<br>100% | | East St. | Eckweek | Howard's Lane | Lydford | Middleton Stoney | Okehampton Castle | Ower Farm | Priory Barn | Sherborne Old Castle | Wareham 1974–5 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Flot/ HR | | Flot | HR | Flot | HR | Flot | HR | | | | | | | | | | | |
| Volume flot (ml)/ HR (L) | | 300 | 1.8 | 50 | 0.6 | 150 | 1.8 | | | | | | | | | | | |
| Seeds Per Litre | | 213.2 | | 42.3 | | 56.3 | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| CEREAL GRAIN continued | | | | | | | | | | | | | | | | | | |
| Cereal – indeterminate rachis internode | A | | | 3 | | | | | | | | | | | | | | Cereal |
| Cereal – indeterminate basal rachis node | A | | | 1 | | | | | | | | | | | | | | Cereal |
| Cereal/ POACEAE – indeterminate culm node | A | 1 | | 1 | | 4 | | | ✓ | | | | | | | ✓ | | Cereal/ Wild grass |
| Cereal/ POACEAE – indeterminate culm base | A | | | | | 1 | | | | | | | | | | | | Cereal/ Wild grass |
| | | | | | | | | | | | | | | | | | | |
| OTHER CULTIVATED PLANTS | | | | | | | | | | | | | | | | | | |
| *Vicia faba* L. | A | 1 | | 4 | | | 3 | | | | ✓ | | | | | | | Broad bean |
| cf. *Vicia faba* L. | A | 1 | | 2 | | 7 | | | | | | | | | | | | Possible Broad bean |
| *Vicia* spp./ *Pisum* sp. | ?A | | | 14 | 1 | 13 | 9 | ✓ | ✓ | ✓ | | | | | | ✓ | | Vetch/ Pea |
| *Vicia* spp./ *Lathyrus* spp./ *Pisum* sp. | ?A | | | | 2 | | | | | | | | | | | | | Vetch/ Vetchling/ Pea |
| *Pisum sativum* L. | A | | | 2 | | | | ✓ | | | | | | | | | | Garden pea |
| | | | | | | | | | | | | | | | | | | |
| TREES/ SHRUBS | | | | | | | | | | | | | | | | | | |
| *Corylus avellana* L. – nutshell fragment | WO | | | | | | 1 | | ✓ | ✓ | | ✓ | | ✓ | | ✓ | | Hazel |
| cf. *Corylus avellana* L. – imm. nutshell fragment | WO | | | | | 1 | | | | | | | | | | | | Possible Hazel |
| | | | | | | | | | | | | | | | | | | |
| WEED/ WILD PLANTS | | | | | | | | | | | | | | | | | | |
| cf. *Urtica urens* L. | A/W | 1 | | | | | | | | | | | | | | | | Small nettle |
| *Papaver rhoeas* L./ P. *dubium* L. | A | | | | | 1 | | | | ✓ | | | | | | | | Common/ Long-headed poppy |
| *Chenopodium* spp. | | 5 | | 5 | | 120 | | ✓ | | ✓ | | | | ✓ | | | | Goosefoot |
| *Chenopodium* spp./ *Atriplex* spp. | | 1 | | | | 50 | | | | ✓ | | | | | | | | Goosefoot/ Orache |
| *Atriplex* spp. | | 1 | | | | 3 | | | ✓ | ✓ | | | | | | | | Orache |
| *Stellaria media* s.l. | A/W | 1 | | 1 | | 2 | | | | | | | | | | ✓ | | Common chickweed |
| *Silene* spp. | | | | 1 | | 1 | | | ✓ | ✓ | | | | | | ✓ | | Campion |
| CARYOPHYLLACEAE – indeterminate | | 1 | | | | | | | | | | | | | | | | Pink Family |
| *Polygonum aviculare* L. | W | 1 | | | | 3 | | | ✓ | | | | | ✓ | | ✓ | | Knotgrass |
| cf. *Polygonum* spp. | | | | | | 1 | | | | | | | | | | ✓ | | Possible Knotgrass |
| *Polygonum* spp./ *Rumex* spp./ *Carex* spp. – internal structure | | 4 | | 2 | | 9 | | | | | | | | | | ✓ | | Knotgrass/ Dock/ Sedge |

| Sample Number<br>Context Number<br>Context Type<br>Sample Volume (L)<br>Proportion of flot/ HR analysed | Habitat Coding | 9017<br>1075<br>Ditch<br>48 L<br>1/8 | | 9018<br>1083<br>Ditch<br>24 L<br>1/2 | | 9062<br>1138<br>Ditch<br>56 L<br>100% | | East St. | Eckweek | Howard's Lane | Lydford | Middleton Stoney | Okehampton Castle | Ower Farm | Priory Barn | Sherborne Old Castle | Wareham 1974–5 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Flot/ HR | | Flot | HR | Flot | HR | Flot | HR | | | | | | | | | | | |
| Volume flot (ml)/ HR (L) | | 300 | 1.8 | 50 | 0.6 | 150 | 1.8 | | | | | | | | | | | |
| Seeds Per Litre | | 213.2 | | 42.3 | | 56.3 | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| WEED/WILD PLANTS continued… | | | | | | | | | | | | | | | | | | |
| *Daucus carota* L. | G/R | 1 | | | | 9 | | | | | | | | | | | | Carrot |
| *Fallopia convolvulus* (L.) Á. Löve | A/W | | | 1 | | 3 | | | | ✓ | | | | ✓ | | | | Black bindweed |
| APIACEAE – indeterminate | | 1 | | | | 7 | | | | | | | | | | | | Carrot Family |
| cf. *Prunella vulgaris* L. | G/R | 1 | | | | | | | | | | | | | | | | Selfheal |
| *Plantago major* L. | A/G/R/W | | | | | 5 | | | | | | | | | | | | Greater plantain |
| *Plantago media* L./ *Plantago lanceolata* L. | G | 1 | | | | 2 | | | | | | | | | | | | Hoary plantain/ Ribwort plantain |
| *Euphrasia* sp./ *Odontites* sp. | R/ ?H | 18 | | 7 | | 103 | | | ✓ | ✓ | | | | | | | | Eyebright/ Bartsia |
| *Galium* spp. | | 4 | | | | 4 | | | ✓ | ✓ | | | | | | ✓ | ✓ | Bedstraw |
| *Carduus* spp./ *Cirsium* spp. | | | | | | 1 | | | ✓ | | | | | | | | | Thistle |
| *Centaurea* spp. | | | | | | 1 | | | ✓ | | | | | ✓ | | ✓ | | Knapweed |
| *Lapsana communis* L. | | 1 | | | | | | | | | | | | | | | | Nipplewort |
| cf. *Lapsana communis* L. | A/W/hs | | | | | 1 | | | | | | | | | | | | Possible Nipplewort |
| *Picris* sp. – type | A/W/hs | 1 | | | | 3 | | | | | | | | | | | | Oxtongue type |
| *Anthemis cotula* L. | A/W | 120 | | 20 | | 226 | | | ✓ | ✓ | | | | ✓ | | ✓ | | Stinking chamomile |
| cf. *Anthemis cotula* L. | A/W | 4 | | | | 15 | | | | | | | | | | | | Possible Stinking chamomile |
| *Chrysanthemum segetum* L. | | | | | | | | | | ✓ | ✓ | | | ✓ | | | | Corn marigold |
| cf. *Chrysanthemum segetum* L . – marginal achene | ?H/WET | | | | | 1 | | | | | | | | | | | | Possible corn marigold |
| ASTERACEAE- indeterminate | WET/WO | | | | | 3 | | | | | | | | | | | | Daisy Family |
| *Eleocharis* spp. | ?H/WET | | | | | 2 | | | | ✓ | | | | | | | | Spike-rush |
| *Scirpus* spp. | ?H/WET | | | | | 1 | | | | | | | | | | ✓ | | Wood club-rush |
| *Carex* spp. – 3-sided | | 3 | | | | 31 | | | | ✓ | | | | ✓ | | ✓ | | Sedge |
| *Carex* spp. – 2-sided | | 1 | | | | | | | | | | | ✓ | | | ✓ | | Sedge |
| *Poa* spp. - type | ?A/?G/?W | 2 | | | | 10 | | | | | | | | | | ✓ | | Meadow-grass type |
| *Avena* spp. | A/G/W | 5 | | 6 | | 24 | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | Oat |
| *Avena* spp. – awn (fragments) | A/G/W | | | 2 | | 6 | | | | ✓ | | | | | | | | Oat |
| *Avena* spp./ *Bromus* spp. – type | A/?G/W | 41 | | 30 | | 64 | 10 | | | | | | | | | ✓ | | Oat/ Brome |
| *Phleum* spp. - type | ?A/?G/?W | | | | | 10 | | | | | | | | | | ✓ | | Cat's-tail type |
| *Bromus* spp. | A/W | 2 | | | | 1 | | | ✓ | ✓ | | | | ✓ | ✓ | ✓ | ✓ | Brome |
| POACEAE – indeterminate small caryopsis | | 22 | | 10 | | 77 | | | | | | | | | | | | Small-seeded wild grass |

| Sample Number<br>Context Number<br>Context Type<br>Sample Volume (L)<br>Proportion of flot/ HR analysed | Habitat Coding | 9017<br>1075<br>Ditch<br>48 L<br>1/8 | | 9018<br>1083<br>Ditch<br>24 L<br>1/2 | | 9062<br>1138<br>Ditch<br>56 L<br>100% | | East St. | Eckweek | Howard's Lane | Lydford | Middleton Stoney | Okehampton Castle | Ower Farm | Priory Barn | Sherborne Old Castle | Wareham 1974–5 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Flot/ HR | | Flot | HR | Flot | HR | Flot | HR | | | | | | | | | | | |
| Volume flot (ml)/ HR (L) | | 300 | 1.8 | 50 | 0.6 | 150 | 1.8 | | | | | | | | | | | |
| Seeds Per Litre | | 213.2 | | 42.3 | | 56.3 | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| WEED/WILD PLANTS continued… | | | | | | | | | | | | | | | | | | |
| POACEAE – indeterminate -unspecified size | | | | | | | | | ✓ | ✓ | | ✓ | | ✓ | | | | Wild grass – unspecified size |
| POACEAE – indeterminate large caryopsis | | 240 | | 127 | | 529 | 16 | | | | | | | | | | | Large-seeded wild grass |
| POACEAE – indeterminate culm node | | | | | | 3 | | | | | | | | | | | | Wild grass |
| | | | | | | | | | | | | | | | | | | |
| UNIDENTIFIED | | | | | | | | | | | | | | | | | | |
| Calyx | | | | 7 | | 1 | | | | | | | | | | | | Calyx |
| Fungal bodies | | (3) | | | | | | | | | | | | | | | | Fungal bodies[1] |
| Leaf (fragments) | | | | | | 2 | | | | | | | | | | | | Lead |
| Nutshell – indeterminate (fragments) | | | | 2 | | | 2 | | | | | | | | | | | Nutshell |
| Sprout (Coleoptile) | | 1 | | | | | | | | | | | | | | | | Sprout |
| cf. sprout (coleoptile) | | | | | | | 1 | | | | | | | | | | | Possible Sprout |
| Stalk | | 2 | | 1 | | 1 | | | | | | | | | | | | Stalk |
| Thorn | | | | 2 | | 1 | | | | | | | | | | | | Thorn |
| Twig | | | | 1 | | | | | | | | | | | | | | Twig |
| Unidentified | | | | 3 | | 91 | | | | | | | | | | | | Unidentified |
| Indeterminate | | 100* | 4 | 10† | | 50* | 50* | | | | | | | | | | | Indeterminate |
| TOTAL | | 1271 | 8 | 499 | 10 | 2829 | 322 | | | | | | | | | | | |
| OVERALL TOTAL | | 1279 | | 507 | | 3151 | | | | | | | | | | | | |

**Key to Table 8**

Fungal bodies are not included in the totals. Numbers in ( ) are not included in summary statistics.
* = estimate
† = The heavy residue contained approximately 90 fragments of material that appears to be modern tarmac.
‡ = Sample 9062 indeterminate APIACEAE may be poorly preserved *Daucus carota*.
M = mineralised
tick and exclamation mark = dominant cereal grain – more than one per site indicates sites with individual samples dominated by different cereals.

*Habitat codes* (based on Stace 1997)
A = arable/ cultivated ground
D = dry banks
G = grassland
R = rough ground
W = waste/ open ground
H = heathland
hs = heavy soil
ds = damp soil
WET = streamsides, marshes, wet soil
HE = hedgerows
WO = woodland/ scrub
WC = woodland clearings

*Sources of comparative data: context(s) (total number of seeds identified)*
East Street, Wareham, Dorset – (Green 1978): various contexts, not specified (number of seeds identified not provided); Eckweek, North Somerset (Avon) – (Carruthers 1995): various contexts, not specified/phases 5 & 6 (N = 2491); Howard's Lane, Wareham, Dorset – (Carruthers 1991a): four pits and one ditch (N = 610); Lydford, Devon – (Green 1980): granary deposits (not completely quantified, N >5000); Middleton Stoney, Oxfordshire – (Robinson 1984): cess pit (N = 155); Okehampton Castle, Devon – (Colledge 1982): pit (N = 27); Ower Farm, Dorset – (Carruthers 1991b): midden (N = 807); Priory Barn, Taunton, Somerset – (Greig and Osborne 1984): four pits and one ditch (N = 133); Sherborne Old Castle, Dorset – (Smith 2001): 21 midden deposits and one pit (N = 3012); Wareham 1974–5, Dorset – (Monk 1980): various contexts, not specified (number of seeds identified not provided).

exception of Lydford, where samples were collected from primary grain storage deposits, all of the material from the other sites in the region is from secondary contexts (middens, pits, cess pits and ditches). In most cases, only small assemblages (typically less than 1000 identifications in total) have been studied from these sites and the majority are dominated by cereal crops.

Three other sites in the region (cess pit deposit from Middleton Stoney in Oxfordshire, unspecified deposits from Eckweek in North Somerset (formerly Avon) and midden and pit deposits from Sherborne Old Castle, Dorset) have assemblages dominated by free-threshing type wheat (*Triticum* sp.) grain (Carruthers 1995; Robinson 1984; Smith 2001).

There is no 'typical' cereal crop(s) for this period in southern England; instead, it seems likely that a wide range of cereal crops were cultivated. Certainly at Bleadon, barley and rye (one rachis node recovered) were also identified. Samples of granary deposits at Lydford, Devon were dominated by rye and cultivated oat (Green 1980). Midden deposit samples from Ower Farm, Dorset (Carruthers 1991b) were also dominated by rye. The small size of assemblages at East Street, Wareham (Green 1978), Wareham 1974–5 (Monk 1980), and Howard's Lane (Carruthers 1991) in Dorset, as well as Okehampton Castle, Devon (Colledge 1982), meant that the archaeobotanists were not able to securely identify a dominant cereal crop at these sites.

Very few sites in the region have produced remains of cultivated pulses. Celtic or broad bean (*Vicia faba*) has only been recovered from one published site in the region – Lydford, Devon (Green 1980), however, broad bean has been identified by Julie Jones (pers. comm.) recently at Redcliffe Back and 98–103 Redcliffe in Bristol. Garden pea (*Pisum sativum*) also has only been recovered from one site in the region – East Street, Wareham, Dorset (Green 1978).

Seeds of common vetch (*Vicia sativa*) were found in ditch 808 (sample 9062). There is a great deal of overlap in the size of various sub-species of *Vicia sativa* (Zohary and Hopf 1994, 114), and it also is not certain whether species we now consider to be weeds were cultivated in the past. Stace (1997, 412) reports the size of seed for the various sub-species of common vetch as *Vicia sativa* sp. *nigra* (L.) Ehrh. 23–38mm, *Vicia sativa* sp. *segetalis* (Thuill.) Gaudin 28–70mm and *Vicia sativa* sp. *sativa* 36–70mm, unusually to 80mm. He also reports that both *segetalis* and *sativa* sub-species can be cultivated for fodder. The charred *Vicia sativa* seeds from ditch 808 ranged in size from 35 to 40mm, and therefore could not be securely claimed to be a cultivated subspecies, even allowing for shrinkage due to charring. Common vetch (*Vicia sativa*) has been recovered from Sherborne Old Castle, Dorset (Smith 2001) and, more recently, at 5 Welsh Back, Bristol (pers. comm. Julie Jones). In all cases, it was not possible to ascertain whether the common vetch was cultivated or merely a weed of crop.

The trend for the limited recovery of pulses in medieval charred plant assemblages from southern England may result from the types of deposits currently encountered, which primarily appear to be the remains of cereal crop processing debris or accidentally charred cereal crops in storage.

**Conclusion**

Archaeobotanical remains dominated by cereal grain are typical of most charred plant assemblages from this period in southern England (Table 8). In addition, the dominance of free-threshing type wheat (*Triticum aestivum* and indeterminate *Triticum* sp.) grain also occurs at several sites in this region. The limited recovery of non-cereal crops most likely reflects a repeated pattern of charring events at Bleadon, which primarily involved cereal grain. To date only a few sites in the region have produced remains of edible pulses, and therefore the recovery of small quantities of broad bean (*Vicia faba*) and garden pea (*Pisum sativum*) at Bleadon is significant. The recovery of common vetch (*Vicia sativa*), which may be cultivated as a fodder crop, also is relatively rare in the region.

The weed/wild flora identified is dominated by weeds of arable crops or open ground, and also includes some taxa which are indicative of heavier soils and damp to wet conditions. It is possible that hazel was present in hedges or scrub in the vicinity of the site, however, since it can be used as a foodstuff, it is also possible that hazelnuts were simply traded/bought onto the site.

## DISCUSSION

**The prehistoric evidence**

The long history of human activity and settlement in the Bleadon area was reflected in the evidence of multi-period activity revealed during the excavation at Whitegate Farm. No structural features were identified relating to the earliest phase of activity – indicated by the prehistoric soil horizon and by the small assemblage of residual pottery sherds dating to the Late Bronze Age/Early Iron Age transition – however, evidence of activity of this date in the vicinity is attested by several Bronze Age barrows that have been documented in the parish (Grinsell 1973). Furthermore, recent research undertaken on Bleadon and South Hills has identified remnants of probable Late Bronze Age fields underlying the Celtic field systems (Wykes 1997; 1998a; 1998b).

The principal prehistoric structural evidence consisted of a collection of pits dated by locally produced pottery and a suite of AMS radiocarbon determinations to the Middle Iron Age period. No clear evidence of associated domestic structures could be determined from the numerous postholes also recorded in the vicinity, the majority of which were undated, although the artefacts included in the pit fills certainly suggest domestic settlement nearby. The pits occurred as two distinct groups with an isolated pit located centrally between the two. They were either circular or oval in plan and although varying in size, broadly conformed to two types; smaller pits cut to a similar depth of *c*. 0.45m and larger cuttings around 1.4m deep. Pit Group 900 comprised an oval arrangement of six pits, five shallow and one deep, whilst in Pit Group 901, a single deep pit was truncated by two shallower features. The deep central pit (pit 800) was in excess of 3m in diameter and was the largest of the features recorded. It is likely that the prehistoric activity extended beyond the limits of the small excavation area and that the pits reflected only part of a more extensive area of prehistoric activity.

Elucidating the activity represented by the pits has been one of the main objectives of the project particularly as Late Iron Age contracted inhumations were inserted in two of the shallower features in Pit Group 900. The deposition, during the Middle and Later Iron Age, of complete or partial skeletons in disused storage pits or rubbish pits, is not uncommon in southern England on both defended and open settlements (Whimster 1977) and similar activity has been recorded in the vicinity, at Dibble's Farm, Christon (Morris 1988) some 4km to the east of Bleadon, where 21 individuals were recovered from the fills of 15 pits, part of a complex of 65–70 rubbish pits excavated during the construction of the M5 motorway. Unfortunately, much of the site archive has been lost and it remains unclear whether those pits containing human remains conformed to any particular spatial organisation or other formal characteristics.

That the pits at Bleadon were intended for storage or rubbish disposal is open to question, as the majority are relatively shallow and the quantity of domestic refuse recovered varied considerably between each. Some contained significant quantities of pottery sherds or animal bone deposits whilst others yielded very few artefacts at all. Equally, the range of artefact types recovered was very limited; there was virtually no metalwork and no quern fragments were found amongst the very few stone objects, nor were there any of the expected range of personal or craft-related items such as bone pins and spindlewhorls commonly found in domestic contexts. The careful organisation of Pit Group 900 suggested the group was opened in a single episode to a deliberate plan. This raises the possibility of an alternative, ritual purpose. The archaeological record reviewed during the course of this project indicates that storage or rubbish pits may occur as scattered features or clusters located in particular zones on a site, but that discrete groups of pits are not usually laid out to a deliberate plan.

In his thesis on the structured deposition of artefacts and ecofacts in Iron Age pits, Hill (1995) suggests ritual activity could be distinguished from rubbish disposal through the ordered deposition of associated classes of everyday objects such as pottery sherds, animal bone and quern stones. He noted similar associations in pits containing human remains and in some containing related animal bone groups, particularly articulating bones, indicating that these too, represented ritually significant deposits. Unfortunately, a similar analysis could not be applied to finds from individual pits at Bleadon, due to the limited range of finds recovered and the small size of the relative assemblages. Analysis of the distribution of artefacts and ecofacts within and between the pits however, has highlighted some possible examples of selected deposition that may support a ritual function.

The selected deposition of finds is most apparent in the animal bone assemblage. Sheep/goat are the dominant species in the assemblage, but in Pit Group 901 are only represented in reasonable numbers in pit 1202, alongside a significant quantity of Middle Iron Age pottery sherds, more than 40% of the entire assemblage. Conversely, pit 1211 yielded few ecofacts save for fragments of articulating cattle bone. The earliest of the three pits in the group, pit 1168, differed again in that it contained very few examples of livestock species, instead providing the entire assemblage of dog bones (probably parts of a single individual) deposited in association with two skulls from juvenile horses. The deposition of horse skulls in pits was not uncommon during the Iron Age, although skulls from juvenile specimens are rare. Examples from the full range of domesticates were recovered from the fills of pit 800, but, interestingly, rodent and amphibian bones in the secondary fill indicated the feature lay open and only part filled for a period of time prior to the deposition of articulating cattle bones at the base of the tertiary fill. Similar AMS radiocarbon determinations obtained for articulating animal bones recovered from both the secondary and tertiary fills indicated that the pit would have been left open for a relatively short time only (Table 4). In Pit Group 900, the pattern of deposition is again varied. Two of the five shallow pits in the group, pits 1056 and 1059, contained only small quantities of fragmented animal bone and this paucity of finds was reflected in the single deep cutting, pit 1107, where only two of the 13 fills yielded a collection of artefacts and ecofacts. This is in stark contrast to pit 1133, where the secondary and tertiary fills yielded significant quantities of animal bone including the majority of the entire sheep/goat assemblage. Analysis of the assemblage from the pit revealed that all parts of the skeleton were represented and that there was a strong bias towards young individuals, including two perinatal and two neonatal lambs. The tertiary fill of the pit also yielded more than 60 pottery sherds and fragments of daub, the second largest collection from a single context recorded over the site as a whole. The pattern of deposition in the final two cuttings in the group, pits 1089 and 1092, is complicated by their reuse as graves during the Late Iron Age period. Middle Iron Age pottery sherds and/or animal bone were found in deposits sealed by and overlying the Late Iron Age inhumations indicating that both pits were backfilled with excavated deposits once the bodies had been interred, at which time some mixing of excavated materials may have occurred. The occurrence of concentrations of rodent and amphibian bones in those fills immediately underlying the inhumations did, however, indicate that both pits lay open for a period of time during spring and prior to the interments.

An overall pattern of selected deposition appears to emerge, in which the deposition/disposal of cattle, horse and dog is concentrated in the east of the site and sheep/goat to the west. Pottery sherds largely occurred within those pits where sheep/goat predominate suggesting the two categories of finds were associated. In view of this, it would appear that the different animal species were deliberately sorted and deposited in specific pits or pit groups. The differentiation between species deposited in the three intercutting pits in Pit Group 901 suggests that different animals may have been favoured for deposition at different times during the period of activity and indicates a possible chronological hierarchy of ritually significant deposits, progressing from horse and dog through cattle to sheep/goat (in association with pottery sherds), and culminating with the deposition of human remains in reused pits during the Late Iron Age period.

The complete lack of Late Iron Age artefacts recovered on the site, save for the penannular brooch found with the female skeleton, is unusual and suggests that the focus of related settlement activity was located some distance from the pits. This would seem to contradict the evidence from the Middle Iron Age, which indicates that domestic occupation and ritual activity mostly coincide. The reuse as graves of two Middle Iron Age pits in Pit Group 900 demonstrates that, whilst the focus of settlement relocated during the Late Iron Age period, knowledge of the ritual significance of the pits was retained and that associated traditions continued.

How long this tradition continued into the Late Iron Age period is difficult to determine. The overall *posterior density estimate* of *cal BC 380–200* for the Middle Iron Age activity in Pit Group 900 overlaps with the AMS radiocarbon determinations for the skeletons, at cal BC 400–70 cal AD for the male and cal BC 210–1 cal AD for the female. This suggests that relatively few years may have elapsed between the laying out of Pit Group 900 and the subsequent reuse of the two pits for interments. This is supported by the typological dating of the iron Fowler type A penannular brooch associated with the female skeleton, as this form first appeared during the 3rd century BC.

The skeletons themselves appeared carefully positioned in the pits, and fibres preserved on the brooch indicated that the female was certainly clothed. Analysis of the skeletons revealed no evidence that either had died through violence and therefore were unlikely sacrificial victims or criminals, a hypothesis for some of the pit burials at Danebury where the wrists were positioned together as though bound (Cunliffe 1991b; 1995a). At Bleadon, the microfaunal evidence of numerous rodent and amphibian bones recovered from the in-situ Middle Iron Age pit fills immediately underlying the skeletons, indicated that the pits were open for some time prior to the interments, probably in spring. Cunliffe (1995b) suggests one possible interpretation for burials in storage pits, as seasonal deposits linked to the reproductive cycle of the agrarian year. The burial in spring of both interments at Bleadon would seem to support this hypothesis.

This does not necessitate that ritual offerings, whether animal or human, would have been specifically killed for the purpose and indeed much of the animal bone deposits at Bleadon could be viewed as natural or culled deaths and butchery waste. If 'ritual is integral to daily experience enacted through the standard activities of daily life' (Kinnes 1998), then the enacting of a ritual could be stimulated by other activities or circumstances occurring within the community. The human interments at Bleadon were both middle-aged individuals and may well represent natural deaths, possibly several years apart, which coincided with a specific set of criteria that determined how and when the particular rite involving ritual deposition of human remains or other categories of material in pits would have been observed. At Danebury, human interments in pits occurred at intervals throughout the *c*. 500 years period of occupation of the hillfort, but the small number of burials recorded in relation to proposed population estimates suggests it is unlikely that this activity reflected the continuing use of a specific, purely funerary tradition. Equally, the concurrent deposition of disarticulated human remains in storage pits and other features recorded at Danebury and other sites would argue against a prevalent funerary rite and indicate an alternative purpose for such deposits. As Haselgrove (1999) and others have pointed out, during the Iron Age, and indeed throughout prehistory, most of the dead were disposed of in ways that have left no traces in the archaeological record. The occurrence of human remains in pits therefore would seem to have greater significance than merely representing a preferred method of disposal of the dead, perhaps coinciding with times of perceived need to reaffirm the ancestral links of the community to the land they occupied and the gods they serviced.

The setting of the Iron Age pits, on the lower slope of Bleadon Hill, may also be significant. Stratigraphical analysis of three augur cores taken as part of the environmental sampling strategy adopted during the excavation revealed limited high marsh on the foot slopes of Bleadon Hill abutted during the Middle Iron Age by an extensive and frequently flooded low marsh with tidal creeks. This demonstrated that the site occupied a marginal location on the boundary between areas of viable agricultural land and the wetland marshes of the Bleadon Levels, and this physical marginality may well have reflected a ritually perceived transitional zone between the real and supernatural worlds, facilitating communication with the gods. Equally, it may simply reflect the location of a settlement nearby and a community that exploited a diverse range of wetland resources. Unfortunately, limited evidence of the Middle Iron Age economy was determined during the project, as detailed analysis of plant macrofossils in Iron Age contexts was not undertaken due to the recognition of medieval contaminants. The animal bone assemblage clearly illustrates that animal husbandry was important and, although cereal grains and weed seeds recovered from the pit fills may be entirely intrusive, the fossilised Celtic field systems recorded on Bleadon Hill and neighbouring Purn, Hellenge and South Hills (NSHERs 0027, 0026, 0038 and 0043) indicate that crops were grown. This, and the paucity of evidence of a metalworking industry, reflected in the absence of technological residues and the very few iron artefacts recovered, would suggest a mixed agricultural base for the economy of the community at Bleadon.

The distribution of pit burials, which have been identified on both open and defended Iron Age settlements with storage pits, appears widespread throughout central southern Britain in a zone extending westwards from Norfolk to Somerset (Whimster 1977). No parallels of the deliberate layout of Pit Group 900 at Bleadon have been found, although the extensive excavations at Danebury hillfort and the accompanying sites investigated in the Danebury Environs Programme (Cunliffe and Poole 2000) have illustrated that the occurrence of human remains in pits, more particularly disarticulated parts, was relatively common on such sites. It has, however, been more difficult to locate examples of Iron Age pit burials elsewhere in North Somerset. The closest example, at Christon (Morris 1988), lacks complete records from which to make comparisons and although several antiquarian finds of human interments in pits have been noted in the region (Whimster 1981), the majority were poorly recorded and are not closely dated, a problem exacerbated by the general lack of accompanying ritual deposits. Several such burials were discovered at the foot of Worlebury Camp, during the 19th-century development of Weston-super-Mare (Morrissey 1998) and may relate to a cemetery associated with the occupation of the hillfort, the interior of which also contained some human interments in pits. One final burial, which may be of particular interest, as it is also located in the village of Bleadon, was identified from a note attached to an HER entry (NSHER 0024) for several Romano-British burials discovered on Bleadon Hill. The listing notes that one (undated) burial comprised a contracted inhumation in a pit. Recent trial excavations on an adjacent site (Clarke 1998) pointed to prehistoric settlement or funerary activity in the vicinity, as a significant quantity of unstratified pottery dating to the Late Bronze Age/Early Iron Age transition was recovered, comparable with the early assemblage from Whitegate Farm.

**The medieval evidence**

Evidence of medieval activity was less extensive and mainly represented by a series of truncated ditches defining adjacent narrow linear enclosures or fields that extended beyond the site to the east. Although no related structural remains were identified within the excavation area, the location to the south-west of stratified soil layers sealed by a cobbled yard surface indicated that probable structures, whether domestic or agricultural buildings, may have been sited in close proximity.

The enclosures were arranged along one side of the main north–south road through the medieval village and opposite the church. It is not known when the medieval church was first erected, the earliest surviving architectural feature is the chancel, dedicated in 1317, and church documents revealed the first recorded incumbent, one Richard Pay, as priest in 1297 (bleadon.org.uk). A probable 13th-century origin for the medieval church correlates well with the dating to the period 1150–1300 of the local and regional products in the typical rural domestic pottery assemblage recovered from the enclosure ditch fills. The complete lack of earlier medieval pottery types in the assemblage was unusual given the AMS radiocarbon determination at 770–980 cal AD of an intrusive rye grain recovered from one of the Middle Iron Age pit fills in the west of the site. The presence of this grain indicates that the area was being farmed and a Saxon charter for the manor of Bleadon dating to 956 describes a settled community engaged in mixed agriculture with an associated church (Wykes 1998a), probably a Saxon precursor to the medieval church. The location of the Saxon church and focus of the associated earlier settlement is one of the questions that it is hoped will be answered during future work of the Bleadon and Lympsham Environs Research Team, a recently established community archaeology project.

The sequence of stratified soil deposits and cobbled yard surface recorded in the south of the site was also dated by pottery to the 12th–14th centuries, and possibly related to further medieval activity recorded during subsequent trial excavations at Whitegate Farm in 2002 (Young 2002). The 2002 excavations were located to the south of the 1997 excavation area, in a small paddock adjacent to the access road leading into the village from the north-west and along the margins of the wetlands at the foot of Bleadon Hill (Fig. 1). Four phases of activity spanning the 12th–14th centuries were revealed, providing evidence of former timber and masonry structures sited on the road frontage. In view of the location of the church alongside the north–south road, one might expect the early settlement to have developed in plots aligned east–west along either side, however the similar dating for the settlement evidence recorded during the 2002 excavations suggests that if, as is common, the development of the settlement was originally focused on the church, the village rapidly expanded downhill and along the access road.

Plant macrofossils retrieved from carbonised remains deposited in the base of two enclosure ditches revealed the mixed agricultural economy of the 13th century settlement. Cereal crops, including wheat, barley and rye, were cultivated alongside pulses such as the garden pea and broad bean. Numerous weed seeds were also recovered, many of which commonly grew amongst arable crops or on waste ground, such as the margins of fields. Hazel nutshells possibly indicated the presence of hedgerows or scrub at the margins of the cultivated areas, although these may have been imported onto the site as a foodstuff from elsewhere. Seeds from plants such as spike rush and sedge, common to heavier soils or wet conditions, were also noted in the assemblage. Their presence on site may have resulted from gathering resources for floor litter or thatch, or may indicate that land on the Bleadon Levels had been reclaimed for exploitation. The 956 Saxon charter mentions ‘a dyke in the mead’ (Wykes 1998a) suggesting that some marshland had been drained as early as the 10th century, and a medieval sea wall on Bleadon Moor is recorded (NSHER 0009). Such land was probably exploited as grazing for livestock, in conjunction with the cultivation of vetch and clover as animal fodder.

## The post-medieval and modern evidence

The absence of 15th and 16th-century pottery types in the assemblage indicated a reduced level of activity over the site during the earlier post-medieval period, until the 17th/18th centuries when a rubble trackway was laid in the south. The trackway became disused thereafter when a single large post-medieval enclosure was laid out later in the same period. The western side of the enclosure was demarcated by a rubble wall, constructed over the now silted medieval tenement ditch, and the southern side was defined by a boundary ditch cutting the north-eastern extent of the trackway. Related structural features located in the interior of the enclosure were less easily recognised, although some form of building had been erected on the site prior to the compilation of a 17th-century estate map (Wykes 1998a). Numerous postholes of varying form and size scattered over the site indicated the presence of former earthfast timber structures, but the majority were not securely dated and few clear spatial arrangements were evident. It is not certain whether the construction of the post-medieval enclosure represents the founding of the modern Whitegate Farm, but surviving mortared masonry foundations of 19th-century buildings and associated cobbled yard surfaces indicated the farm was well established by that time.

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