

The Traprain Law Environs Project

Fieldwork and Excavations 2000-2004

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Chapter 5

Excavations at Knowes

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(with a contribution by Anwen Caffell)

The rectilinear enclosure at Knowes is situated at just under 20m OD on a broad terrace sloping down northwards towards the River Tyne, 2km from East Linton and 4km north-east of Traprain Law, beside the A1 trunk road (Figure 5.1). It was discovered from the air by CUCAP in 1970 and has been photographed repeatedly since. The cropmarks reveal a subrectangular ditched enclosure measuring internally about 48m from north-north-west to south-south-east and 44m transversely at its southern end, tapering to about 33m at the north (Figure 5.2). The ditch varies from about 3.5-6.5m across and is widest on the west. After making an allowance for an internal bank, the internal area is about 0.14ha. There is an entrance on the eastern side and a large macular cropmark in the interior indicating a scooped or dished area of locally deeper deposits. Some 30–35m north-north-west of the enclosure is a similar macular cropmark measuring about 15–20m across.

In the geomagnetic survey, much of the ditch and the internal and external scooped areas were evident as intense positive magnetic anomalies, although south of the entrance causeway the ditch is apparent only as a much weaker anomaly. Within the interior, an area of enhanced magnetic susceptibility and concentrations of small, intense anomalies, possibly reflecting hearths and other subsequently excavated features, are also evident. Outside the enclosure, several linear anomalies, almost certainly ditches, were recorded, including one running right up to the entrance, but some of the more diffuse and irregular anomalies are probably geological in origin. The north–south



Figure 5.1

Knowes, looking towards Traprain Law. The excavation is visible in the middle foreground beyond the farm buildings; the line of the newly dualled A1 is clearly visible (Photo John Davies)

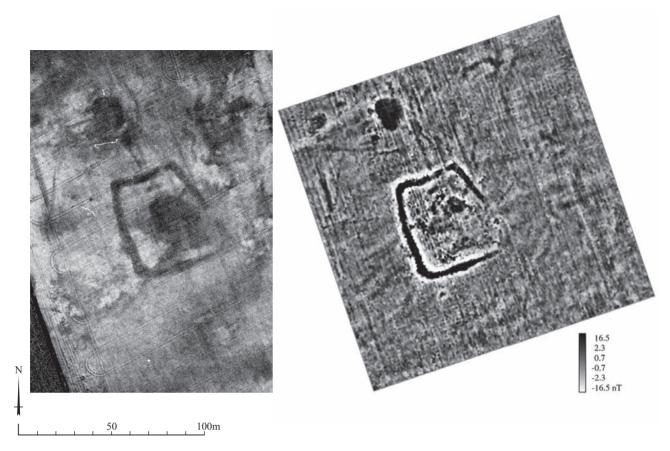


Figure 5.2

Knowes (NT67NW 19): rectified aerial photograph (EL4557) and TLEP geomagnetic survey (Crown Copyright: RCAHMS, GV004474)

aligned texture in the geophysical data reflects the modern plough regime. The geology is Calciferous Sandstone Measures, overlain by late glacial sand and gravel deposits.

From the cropmark and geophysical evidence, Knowes represents a good example of the many rectilinear enclosures recorded in the TLEP study area. Following an evaluation trench over the western enclosure ditch in October 2002, which recovered carbonised cereals (ASUD 2003c), the site was chosen for large-scale excavation. A second evaluation in September 2003 examined the macular feature north of the enclosure (ASUD 2004b).

THE EXCAVATIONS

An east–west transect of c. 1540m² was opened across the site in order to investigate the enclosure ditches and entrance area, and to characterise the internal

occupation (Figure 5.3; Plate 2). The work took place over seven weeks in June-July 2004. Following machine stripping and cleaning, test pits confirmed that the central cropmark was indeed generated by a large scoop, which had subsequently been buried by a thick deposit of silty sand to a depth of at least 0.7m. Since complete excavation was beyond the scope of the project and the overburden deep enough to protect the underlying archaeology from plough damage for the foreseeable future, it was decided to focus on the western and eastern sides of the scoop. At the end of the excavation, the exposed stone structures were covered with a protective layer of stones before backfilling. The Data Structure Report was submitted to Historic Scotland in March 2005 (ASUD 2005a). The site codes are TKN02 and TKN03 for the evaluations, and TKN04 for the main excavation.

The natural subsoil was sand, sometimes with gravelly laminations, and was both free draining and

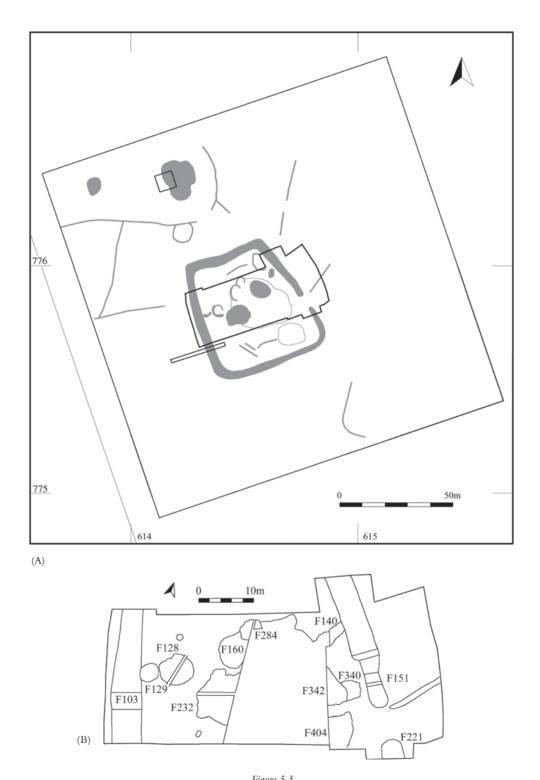


Figure 5.3 (A) The enclosure at Knowes, showing the principal subsurface anomalies and the location of the 2002-4 excavations. (B) Key plan showing the main excavated features

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extremely loose, particularly in the western half of the site, where it resembled beach sand. This proved very susceptible to rapid redeposition by the prevailing westerly wind, as the students learned to their cost! The modern ploughsoil averaged 0.3m in depth and north—south plough marks were visible cutting into the underlying deposits over much of the site. A single field drain cut through the trench from north-east to south-west (F398).

THE ENCLOSURE CIRCUIT

Sections were excavated through the western and eastern sides of the enclosure ditch, as well at both

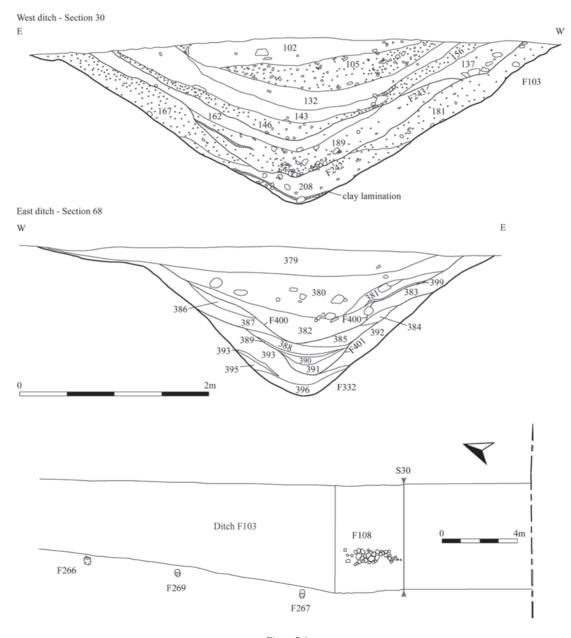


Figure 5.4
Sections through western (F103) and eastern (F332) ditches; inset of late paving (F108) and post-holes on the western side of the enclosure

entrance terminals. The apparent variations in ditch width around the circuit proved to be real, reflecting a combination of intentionality on the part of the original builders – such as a shallow lip along the east side – and differential erosion and truncation in the sandy subsoil.

The western side of the ditch

A 3m section was excavated across the western side of the ditch (F103) at the point where it slightly changes direction and becomes narrower as it descends the hill. This was positioned just to the north of the 2002 excavation, which had sampled the upper fills to a depth of 0.9m.

The ditch possessed a broad, V-shaped profile, with a maximum depth of 1.75m and width of 5.75m (Figure 5.4) and had been recut at least twice. The primary fill comprised 0.3m of light brown sand with a few small stones [208], presumably from erosion of the ditch sides, containing thin lenses of clay and loam [e.g. 207]. Above were further deposits of gritty sandy loam, reflecting the gradual infilling of the ditch as both edges eroded [167; 181]; that on the outer side contained part of the base of a coarse pottery vessel (sf 124).

The ditch was later recut to the same V-shaped profile, albeit a little more irregular and only to a depth of 1.5m (F242). This recut was filled with sandy loam with small stones in the middle [189, 0.3m deep], then black silty loam [162, 0.2m deep]. Three carbonised grains in these fills were radiocarbon dated to between the second century cal BC and the early first century cal AD (SUERC-10576; 10575; 10580). The profile was then redefined for a second time, again creating a shallower version of the same overall profile (F243, 1.15m deep). A build-up of a gravelly sandy loam [146, 0.35m deep] suggests that this recut initially suffered erosion from the outer side. Above this were sandy loams with gravel [107; 137; 156], and laminated fine dark silts [143; 132], variably distributed along the length of the ditch. They were covered by more gravelly deposits [136; 105], by which time the ditch was largely infilled, leaving only a shallow hollow 0.2-0.3m deep. Several of the fills of both recuts were comparatively rich in charred cereals, as were equivalent layers from the 2002 evaluation [7–11]. Two more radiocarbon dates were obtained from the second recut, one from [146] similar to those from the earlier recut (SUERC-10569), the other from [143] slightly later (SUERC-

10567). [132] yielded pottery (sf 66), whilst part of an amber bead (sf 248) was recovered from an equivalent deposit [10] in 2002.

A band of flat slabs F108, c. 4m long, was placed over [105] towards the western side of the ditch (Figure 5.4 plan), apparently the remains of a surface. Its original extent is unclear, but it might indicate a later access route across the former ditch from the west. Other stones were observed in the unexcavated upper fill on both sides of the ditch to the north, which might be remnants of further stabilization at about the same stage as F108. In time, the slab surface and remaining hollow in the top of the ditch were covered by black silty loam resembling midden [102; 179], which was evidently deliberately deposited. This deposit was rich in finds, including fragments of white glass bangle (sf 121) and decorated copper alloy sheet (sf 242), as well as a concentration of mussel and winkle shells, and small fragments of animal bone. An intact quern upper stone (sf 104) was also found, placed upright within the ditch (Figure 5.5).

Three widely spaced post-holes, each about 0.3m in diameter (F267; F269; F266), found alongside the outer edge of the ditch may be the remains of an earlier or later fence; no relationship to the ditch was recovered, although the presence of cereal remains in the fills of F267 and F269 might suggest that they cut the ditch deposits.

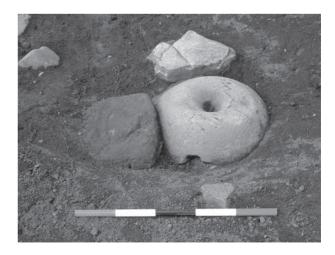
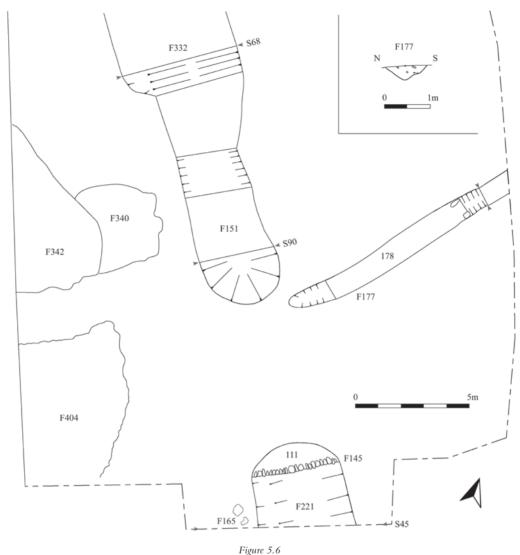


Figure 5.5

Quern upper stone (sf 104) placed upright within western ditch (F103)



Plan of eastern entrance; inset section of gully F177

The eastern ditch

A second section was excavated across the ditch on the opposite side of the site, some 8m north of the entrance, at a point where the ditch apparently widened significantly. Here too there was evidence of two phases of recutting. The initial ditch was again a broad V-shape in profile and 1.6m deep (F332), but proved to be only 3.8m wide, much narrower than in the western section (Figure 5.4). The impression of greater width was due to a shallow lip 1m broad on the inner edge, which began at this point. The base of the ditch was filled with coarse gravel [396], followed by

lenses of gravelly soil and dark loam [395; 394], then more substantial deposits of silty loam on the inner side [393], and a thick gravelly deposit [392] on the outer slope, all presumably the result of erosion.

The first recut retained the original profile but was shallower (F401). Its base was filled with successive deposits of sand and stones [391] and clayey loam [390] – very much as on the western side – but was then covered by a skim of clean reddish-brown sandy clay [389], perhaps laid to retain water or formed as a result of standing water. Over this, successive bands of silt [388] accumulated and then gravelly slumps [385; 386; 387; 383], with some clay loam [384].

These deposits greatly reduced the size of the ditch, which was recut to a shallower, more U-shaped profile, with a steeper slope to the outside (F400). At the base was a thick layer of dark loamy sand [382, 0.3m deep], covered on the outer edge by lenses of fine gravel and gritty sand [399; 381]. The body of the ditch then infilled with dark sandy loam and some large stones [380], leaving only a slight hollow 0.3m deep, at the level corresponding to a stone structure over the northern terminal (described below). In due course, the hollow filled up with brown clayey silt [123], from which the lower stone of a quern (sf 65) was recovered.

Banks

No *in situ* remains of banks were recovered on either side of the site, nor was there conclusive evidence from the ditch fills. Indeed, the loose, sandy subsoil would have made it difficult to construct any lasting bank. However, a band around the inner edge of the ditch is devoid of features apart from a few late structures dating to a period when the ditch had very nearly filled up, which implies that there was originally an internal bank. There is also circumstantial evidence for an internal stone revetment beside the entrance. From the ditch fills, there could easily have been an external bank as well.

THE ENTRANCE AREA

The enclosure entrance was formed by a break in the ditch circuit approximately 6m wide on the eastern side of the site, although the excavation only exposed the tip of the southern terminal (Figure 5.6). Both terminals were initially rounded and showed evidence of recutting, although less than in the other ditch sections. After the terminals silted up, stone structures were constructed over them. The subsoil in the entrance area was more gravelly and firmer than on the western side of the site.

The ditch terminals

A 7m segment of the ditch north of the entrance was investigated, but owing to the overlying stone structures, only the 3m nearest the causeway was excavated to natural. The original ditch (F151) had a broadly similar profile to the section to the north, but was apparently slightly shallower (1.4m) – although since the base was waterlogged (during excavation standing water was present to a depth of 0.4m), it was difficult to be certain of the exact profile of the lower reaches. In the base was a distinct deposit of browngrey clay [333], which had almost petered out by the time the section was reached (Figure 5.7). Above was a thick deposit of green-grey sand with gravel [275],

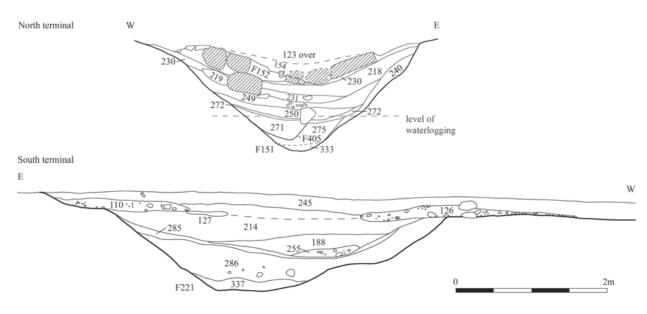


Figure 5.7
Sections through northern (F151) and southern (F221) ditch terminals

and on the outer side, silty sand [240] representing erosion.

A V-shaped recut (F405) through [275] appears to equate to the recut observed further north. This was filled with dark grey silty clay [271], which – unlike the basal fill of the primary ditch - contained waterlogged plant remains as well as part of a hazel stake (sf 205) driven at an angle into the clay. The stake and a charred barley grain from the same layer gave radiocarbon dates between the fourth and first centuries cal BC (SUERC-10587; 10588). Above [271] was a skim of clean sandy clay [272] which extended right across the ditch, reminiscent of [389] in the same recut to the north, but this time greenish-grey, perhaps due to the waterlogging. Two more radiocarbon dates were obtained from barley in this deposit (SUERC-10590; SUERC-10589). Above [272] were a series of fairly horizontal sandy clay layers with varying amounts of silt and gravel, some 0.6m deep [250; 220; 249; 231]. There was no sign of the second recut seen in the section to the north in these deposits, but a slump of compact clayey sand with large rounded boulders on the inner edge [219] may be the remains of a collapsed bank revetment, of which more evidence was found at the south terminal. Overlying this were further deposits of sandy silt [230; 217; 218].

The southern ditch terminal (F221) had a more U-shaped profile than elsewhere on the circuit, shallower (1.3m) but also slightly wider (4.2m) than its northern counterpart. The basal fill [337] was blue-grey silty sand with pebbles, but unlike on the north side, this terminal showed no evidence of waterlogging, nor of an early recutting phase - which may be explained by its different structural history. Although it was initially rounded, at a relatively early stage a dry-stone revetment wall (F145) was built straight across the butt end, squaring it off. Between the wall and original ditch edge was a layer of sandy silt [111], but whether this was packing or earlier ditch fill is uncertain, since only 0.1m was excavated (in order not to disturb the wall). Sitting in the top of [111] was the rim of a large bucket-shaped pottery vessel [sf 10], which may have been a deliberate deposit.

The lower part of wall F145 rested directly on [337] and was formed of boulders, whereas the upper part was made of smaller cobbles laid in irregular courses (Figure 5.8). It is unclear whether two phases of construction are represented or whether expedient use was made of available stone, perhaps from an adjacent revetment, of which two large boulders (F165) set in the ground beside the inner edge of the ditch were perhaps the

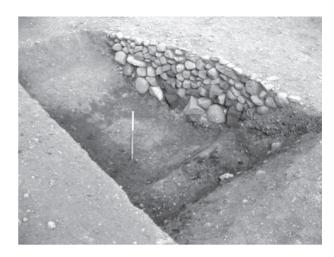


Figure 5.8
Revetment wall F145 in southern ditch terminal

last remnants. Following the building of wall F145, a thick deposit of silty sand with stones [286] – quite possibly bank material – formed against it, across the body of the ditch. Over this a thin compact layer of brown silty sand and stones [285; 262] formed, its profile suggesting a stabilization of the ditch, perhaps equivalent to the second recut elsewhere. The upper part of the ditch was infilled mainly with soft clay [188] and a thicker deposit of clayey silt with stones and gravel [214], perhaps deliberate levelling, which left the terminal virtually full.

The external gully

A shallow gully with sloping sides, up to 0.3m deep and 0.9m wide (F177), ran from close to the northern ditch terminal towards the north-east, evidently the external feature apparent on the geophysical survey. The fill contained a few large stones, but there was no evidence for stakes or posts. Whilst there is no direct relationship, the position of the gully suggests that it is contemporary with the entrance at some point, and was intended to control or guide movement in and out of the site.

Stone structures at the entrance

After the ditches had largely filled up, stone surfaces were laid over both terminals, although of rather different character. The surface to the north was made up of very large and thick (up to 0.3m) sandstone slabs

(F152). This began with a straight edge 2m inside the butt end, from where it extended at least 4.5m north (Figure 5.9). At its southern limit the paving extended across the full width of the ditch, but the northern part

was less regular, perhaps as a result of some stones at the edges having been removed, whether by the plough or some other agency. The purpose of the surface is unclear, but it may be linked to another paved area

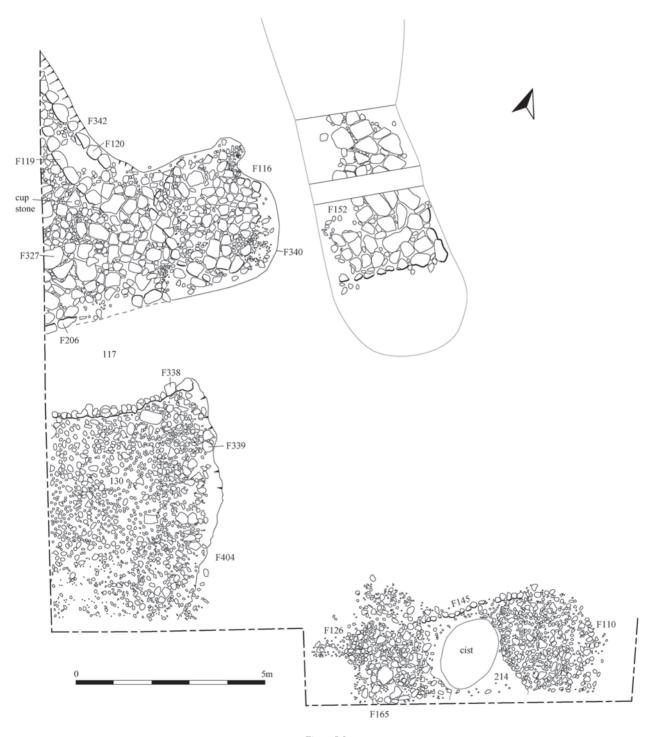
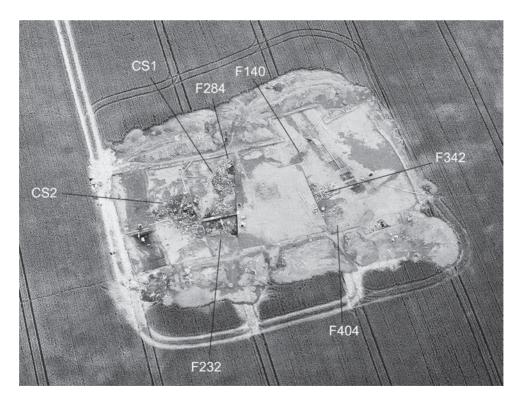


Figure 5.9
Plan of later stone surfaces in the eastern entrance area

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 ${\it Figure~5.10}$ View of paving F152 over north ditch terminal, with F116 in the background



 $\label{eq:Figure 5.11} Figure 5.11$ Aerial view of the enclosure during the excavation, showing the principal features in the interior (Photo John Davies)



 $\label{eq:Figure 5.12} \textit{Plan of scoop edges (F340, F342 \& F404) inside the entrance}$

to the west (F116 below) (Figure 5.10). The stones were apparently laid directly over the slight hollow at the top of the ditch – no evidence was found of any levelling or bedding layer – and then subsided further into the fills. Over the paving was a thin gravel layer

[154], whilst dark brown sandy silt accumulated in the adjacent ditch end beyond it [155], both eventually being covered by the same clayer silt [123] as to the north. A glass bangle (sf 52) was the only notable find from over the stone surface.



Figure 5.13 View of causeway revetment (F338) and early surface F358 at base of scoop F404

The surface laid over the southern terminal was made from smaller cobbles set in silty loam (F110, F126) (Plate 2). Unlike F152 this surface not only covered the whole ditch, where it sloped slightly down towards the centre, but continued a short distance into the interior and may well originally have been continuous with a similar surface in the central scooped area just to the west (F130 below). The cobbles forming F126 were laid around the possible revetment remains F165 and also incorporated the top of wall F145; judging from a few surviving patches of cobbling beyond wall F145, it probably also extended across the entrance causeway. The southern limit of the surface lay beyond the excavation, but its presence may explain the different appearance of this part of the ditch on the geophysical survey. Subsequently, an oval pit (F226) was cut through this surface to hold a stone cist; this is described below.

THE CENTRAL SCOOPED AREA

The main feature of the interior was a large subcircular sunken area, measuring 28m east—west and at least 24m north—south, and cut nearly a metre deep into the natural subsoil. The western, northern and eastern limits all lay within the trench. The scoop was positioned somewhat asymmetrically within the enclosure, its eastern edge lying closer to the entrance than the western edge is to the ditch (Figure 5.11).

The eastern side and entrance area

On the eastern side, the scoop probably began as a single large feature, with a smaller 'cell' protruding toward the northern ditch terminal, leaving only 1m between the two (Figure 5.12). A causeway was subsequently created across the scoop, dividing it into unequal northern (F342) and southern (F404) halves. Due to the complexity of the structural remains north of the causeway, only the southern part was completely excavated down to natural.

South side: F404

An area some 4.5m E–W by 4m N–S of the southern part of the scoop was exposed (F404). This sloped down from south to north to a flattish base at 0.5m depth, which itself also sloped a little from east to west. Four successive roughly cobbled surfaces had been laid within this area, which may have served as a slightly sunken yard or working area.

The earliest surface was composed of pebbles and small cobbles [358] covering an area roughly 3m E–W by 4m N–S in the base of the scoop. The scoop was then remodelled, with the creation of a raised gravel

causeway c.2.2m wide [117], running east—west and heading out towards the northern ditch terminal. This causeway, which was 0.3m deep, was retained on its south side by a low dry-stone wall (F338) constructed of large and medium stone blocks, 3 courses high (Figure 5.13). Some stones (F339) on the eastern and southern edges of the scoop may be the remnants of either a primary edging or a continuation of this new revetment. It is possible that the causeway succeeded an earlier access point here.

Abutting the causeway, a new surface made of rounded cobbles with some larger stones [329], was placed directly over the first, but extending a little further to the south. Subsequently, the area was levelled with sand [330, 331, 368], on which a third, rather rougher cobbled surface was laid [248]. Radiocarbon dates on two barley grains in the sand indicate a second to first century cal BC terminus post quem for surface [248] (SUERC-10595; -10596). Above was a more irregular layer of stones [246] supporting a fourth and final cobbled surface [130]. This spread over a wider area



Figure 5.14
View of late surface F130 and entrance to central scooped area

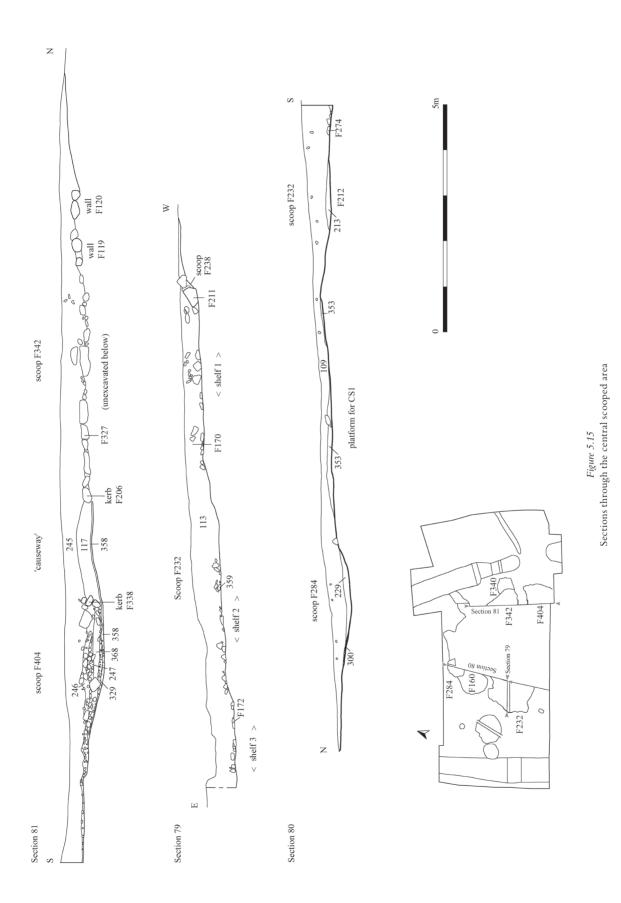
than its predecessors, extending onto the flat ground beyond the southern edge of the scoop (Figures 5.14–5.15). By this time the surface was virtually level with the causeway and the ground outside. This final surface resembles the cobbles overlying the southern ditch terminal [110]; the two may have been contemporary and were perhaps originally continuous.

North side: F340 and F342

The northern part of the scoop (F342) seems originally to have been continuous with F404. Patches of pebbles and small cobbles [341] – similar to [358] to the south – were found at the base of the sequence, implying that the whole scoop was originally surfaced in this way. The northern edge was revetted by a single line of boulders (F120) set upright into the edge of the cut and packed with sand [350]; this walling was continuous for about 3m up to the point where the scoop became shallower and projects to the east (F340) (Figure 5.12). Whether or not this projection was originally integral has been obscured by the presence of a later stone structure, but a few stones along the northern edge imply that the revetment originally extended round here too.

When the causeway was inserted, its northern side was retained by a low stone wall like the one on the southern side, but only a few stones remained in situ (F206). Its line continues as an irregular slot (F402), which terminates level with F338 on the opposite side of the causeway and is probably the result of removing the stones, rather than a foundation trench for a timber structure, as was thought at the time of excavation. A silty sand deposit [328] was then used to level up the interior of scoop F342, before a paved surface made up of large stone slabs (F327) was laid, including a cupmarked stone (sf 223). This paving extended north as far as a kerb of large vertically-set stones (F119), apparently another wall face parallel to F120 along the edge of the scoop 0.8m to the north. F119 seems to be contemporary with the paving, forming the southern face of a new double-skinned wall with an earth core, utilizing the original revetment F120 as its other side (Figure 5.16). This wall had no clear eastern end, simply stopping to allow the paving to carry on across its line (Figure 5.9 above). A butt end could, however, have been dismantled when the wall was later extended (below); another possibility is that the double-skinned wall is secondary to the paving, with some slabs along the northern edge of F327 having been removed in order firmly to embed the stones of F119.

Paving F327 slopes up slightly to the east, and joins with F116, a polygonal area of paving some 3m across



80



Figure 5.16
Double-skinned wall F119 and F120

occupying the eastern projection of the scoop (F340). Paving F116 was bedded on a thin layer of dark brown sandy silt [309]; variations in the size of stones used hint at a complex history of construction and/or repair, the stones at the north-eastern corner being worn particularly smooth (Figure 5.17). In plan F340 has the look of an individual 'room' or structure, and there were hints of post-settings at the south-east (F403) and north-east corners. On the other hand, the continuous paved surface created by F116 and F327 aligns perfectly with the stone surface (F152) laid across the top of the adjacent ditch terminal, and could together have formed a paved access into the settlement.

It is thus unclear whether these paved areas represent a series of structures lining the north side of the entrance or whether the access actually shifted here for a period. However, if the latter was the case, it did not last, since a subsequent refurbishment placed a wall across the paving! Prior to this, the northern wall of the gravel causeway was apparently replaced by a new stone kerb just one course deep (F215). Two lengths of walling (F118; F216) were then built over the paved surface, continuing the double wall line built previously along the northern side of the scoop (F119; F120), effectively dividing up the higher and lower parts of the surface (Figure 5.16). At its northern end, this walling curved slightly to join the existing wall end, but was built of smaller stones; at the southern end it abutted the



Figure 5.17
Paved surface F116

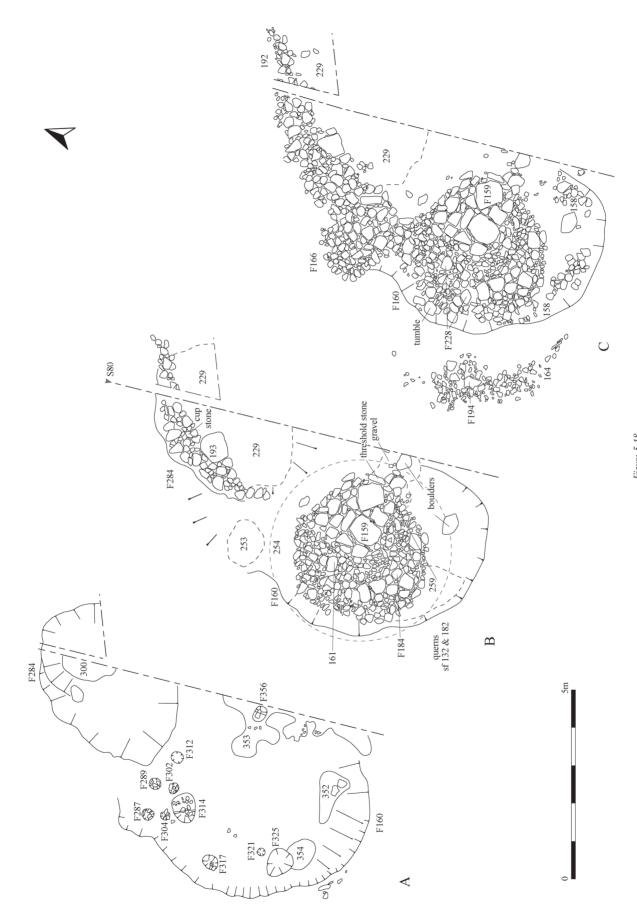


Figure 5.18
CS1: (A) Early features in scoop F160; (B) Paved surface F159 and F184, tumbled revetment F193 to north; (C) CS1 with additional entrance to north and external paving F166

rebuilt southern kerb (F215). A possible post-setting was recorded on the western face of the cross-wall, built of medium sized stones set around a single paving slab

After the paved structures were abandoned, the scooped areas and gravel causeway were covered by sand [245].

The northern edge of the scoop

The northern limit of the main scoop was not excavated beyond defining its extent. Its shape suggests that it comprised at least two adjacent sunken scoops. The edge was marked by an irregular band of stones [192] – including a cup-stone (sf 168) – which continued around the scoops at north-western corner of the complex (below). From the north-east side of the scoop, a shallow gully with a silty fill, evidently a drain (F140), ran downhill into the eastern ditch. It was relatively rich in charred plant remains, suggesting that domestic refuse may have been dumped there after it went out of use.

The north-west corner of the scoop

Cleaning revealed the north-west corner to comprise two interconnecting scoops (F160; F284), one of them containing a circular building (CS1), effectively discrete from the deeper scooped area to the south (F232, below).

The larger of the two scoops, F160, was a roughly circular area c. 5.75m across, terraced into the subsoil on its western side to a depth of c. 0.5m, and was evidently the stance for a circular building (CS1) occupying a shelf that continued into the unexcavated area to the east. No relationship could be established with the smaller scoop F284 to the north-east, but there is no reason not to believe them contemporary.

The earliest building phase in F160 is represented by several post-holes of fairly similar dimensions and mostly containing packing stones (F321; F317; F287; F289; F302; F304; F312, F356), along with a small sub-circular pit (F314, 0.25m deep) and a shallow scoop (F325). Whilst the post-holes do not form a regular circle, the way they follow the circumference of the scoop suggests that at least some of them were roof supports for a timber building (Figure 5.18A). Some patches of compact brown silt may be the remnants of an associated surface [352, 353, 354].

Covering these earlier features was a well-preserved floor of roughly polygonal shape about 4m across (Figure 5.18B). The north-eastern quadrant was made up of particularly large, thick slabs, up to 0.8×0.6 m (F159), extending as far as a worn linear stone, which



Figure 5.19
View of CS1 showing paved surface F159 and repair F228, with F166 beyond and scoop F284 partially excavated

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Figure 5.20
View of CS1 and CS2 from the north, looking towards scoop F232

may mark an entrance threshold oriented almost due east (Figure 5.19; Plate 3). It is possible that the paving stones were laid before the rest of the surface (F184), which utilised a mixture of intermediate and smaller slabs set on a levelling layer of dark brown soil [263]. A number of stone artefacts were incorporated into the floor, including a cobble tool (sf 198) and the partial upper stone of a quern (sf 132), on top of which was the broken lower stone of another quern (sf 182). On the western side of paving F159 was a black deposit [161], which probably represents in situ burning and may indicate the location of a hearth. From it came the base of a samian platter (sf 185), a fragment of copper alloy ring (sf 184), and fragments of burnt bone. An area of sandy silt [259] around the south-western edge of the floor, filling the gap between the scoop edge and the floor, may either be collapse of the edge, which is somewhat irregular here, or conceivably remnant wall core.

The north-west part of the floor was patched or repaired by adding smaller slabs (F228) on top of F184, although elsewhere the existing floor stones seem mostly to have continued in use (Figure 5.18C). The quern base mentioned above may be a remnant of this repair. Around these higher stones was a blackish green clayey silt [186], which yielded further finds (sfs 105; 134). It was probably at this stage that a second

(additional or replacement?) entrance was constructed on the northern side of CS1, providing access to a paved area F166 at a slightly higher level, just outside the scoop (Figure 5.19). This was reached via a step or passageway just over 1m wide. The bedding [241] for this paving contained another cobble tool (sf 194) and was itself laid over pockets of soil, presumably an earlier ground surface [253, 254].

No unambiguous evidence for the wall line or wall structure of CS1 was recovered, but a band of boulders and stones [158] at the southern edge of the scoop may well mark the location of an inner face. An arc of small stone rubble [164], including another quern fragment (sf 46), just outside the western edge of the scoop might relate to the outer face; beneath this was another patch of paving (F194).

Beyond the external paving F166 lay the smaller scoop F284, which was only partially investigated (Figure 5.19). This was a sub-circular area some 3–4m across and 0.25m deep, with remains of a pebble surface [300] surviving on its northern side. A band of mottled silt, sand and burnt material [283] over the pebbles and a thin layer of sandy loam [257] in its base are the only remnants of the earliest use of this structure.

A revetment of boulders F193 was set into the scoop edge. This is probably a primary feature rather than a later modification, as the adjacent surface (F166)

appears to abut the revetment, rather than the other way round. Some of the revetment stones were *in situ*, but many had collapsed, including a very large square stone block that had fallen inwards. The tumble also

incorporated a large stone with a cup pecked into it (sf 197). Beneath the stones and filling the scoop was a layer of black clayey silt [229], no doubt the remains of occupation. Charred grain from this deposit was



Figure 5.21 Plan of Scoop F232 and related features

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radiocarbon dated to 50 cal BC-cal AD 130 (SUERC-10585). A band of smaller stone rubble [192] on top of F193 running east from scoop F284 implies that the revetment continued round the unexcavated northern edge of the central scoop.

As elsewhere, the features and surrounding area rapidly became covered over with a thick layer of silty sand [109; 115], from which a handful of finds were recovered.

The western end of the scoop

South of CS1 was the main body of the scoop (Figure 5.20). This was cut into the hillslope, and thus was deeper on its southern edge, which was retained by a stone wall; the northern side was only slightly terraced into the ground and had a much gentler slope (Figure 5.15). The scoop seems to have been conceived from the outset as a series of three level platforms or shelves, rising from east to west, the upper one (F238) tailing out close to the western ditch. The two lower shelves effectively formed a separate deeper scoop (F232), of which some 8m east—west by 9m north—south was exposed. The scoop was investigated in two halves, separated by a baulk (Figure 5.21); only the north side was completely excavated to natural. The lowest shelf

was 0.7m deep, making it the same level as the base of the opposing scoop (F342) on the eastern side of the site. A squarish lip on the northern edge of F232 near CS1 may represent an access point, or might just be collapse.

Scoop F232

A number of cut features were found in the base of the northern part of F232 (= F273), two of them sealed beneath later stone spreads and thus potentially primary. A broad but shallow linear hollow (F212) ran east-west into the unexcavated part of the site; its charcoal-rich silty sand fill [213] yielded fragments of a copper alloy object (sf 193); three pieces of charcoal were identified as oak. West of it was a large stone packed post-hole (F301). Nearby, at the edge of the scoop, but not sealed by the later spreads, was a second larger posthole (F323), packed with stones around a void left by a decayed timber. This post-hole, which may be related to the first, appeared to cut the remains of a third possible post-setting (F292). No cut features were found in F232 south of the baulk, but a gravelly layer [355], which may be the original surface, was exposed in several places. Further patches of gravel north of the baulk are evidently part of the same horizon.



Figure 5.22 View of southern half of F232, looking towards revetment wall F234/235

The southern edge of F232 was revetted with a drystone wall, incorporating some very large boulders (F234; F235) (Figure 5.22). A silty sand fill [147] was present behind the wall, which survived to two or even three courses high (0.8m) for most of its length. It is possible that this wall originally continued around the upper shelf of the scoop, where a group of stones (F169) appeared to continue its alignment, but this area was not fully excavated. The extant revetment, however, turned sharply inward at its junction with the upper shelf in order to accommodate what appeared to be two steps formed by pairs of flat slabs (F171) leading down into the lower area. Beyond the steps, the wall then turned west again (F168), running across the unexcavated part of the upper shelf, rejoining the original scoop edge a little to the west, where further remains of it were found (F211).

In a later modification, a north—south retaining wall F170 was built along the edge of the upper platform, across the whole western end of the scoop, to support a path leading to a nearby building (CS2, below). Building this new wall seems to have involved blocking the steps at the south–west corner, since several large stones found over the steps appear to be wall stones collapsed from above.

Most of the lowest shelf of scoop F232 was covered by spreads of compact rubble, which may have been deliberately laid, but did not form obvious surfaces. A somewhat polygonal spread (F274) on the north side, which covered some of the cut features described above, was bedded on sand [296]. It included some large flat stones, which might well be the remains of a surface, but, if so, one that was at a higher level and consisted mainly of earth. From the corner of F274, a near continuous stone spread (F172) ran south to the opposite side of the scoop, then along the southern edge; among these stones was the fossilized rootstock of a giant clubmoss (lepidodendron), which could have been collected for its appearance. Towards the centre of the scoop were smaller patches of stone (F359) and gaps that might possibly represent the location of settings, but no coherent features were discerned.

The middle section of the southern revetment wall had subsequently collapsed over the rubble spread [236]; a second pile of stones [233] at the eastern end of the excavated area might have been an attempt to prop up the wall, but is more probably further tumble. Finally, the scoop filled up with a thick layer of silty sand [106; 113; 122].

Two radiocarbon dates were obtained from contexts within the scoop. Charred grain from sand [296]

beneath the rubble spread in the northern part yielded a date of 210–1 cal BC (SUERC-10591), whilst the sand infill [147] behind the southern revetment wall produced a somewhat later date of 40 cal BC-cal AD 210 (SUERC-10570).

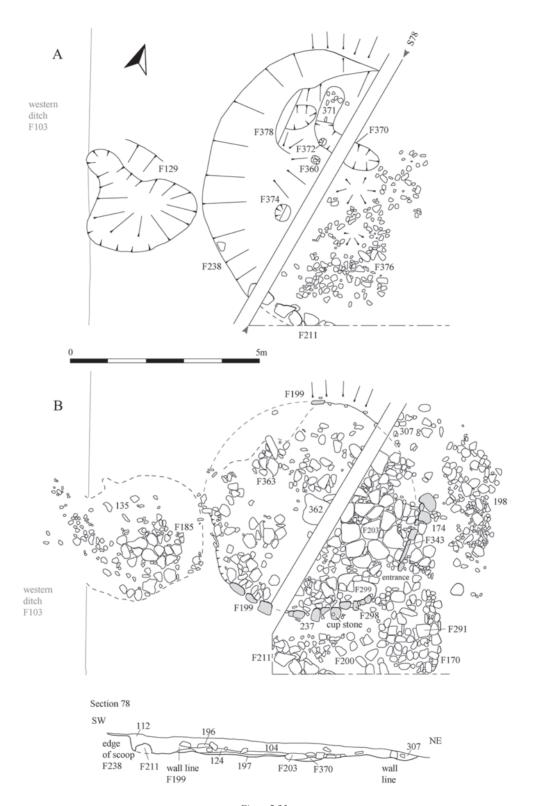
Scoop F238

Between F232 and the western enclosure ditch was what appeared on the surface to be a discrete scooped area, but on excavation transpired to be the site of a well-preserved circular building (CS2) constructed over earlier features at the western limit of the upper shelf (F238). At this point, the upslope edge of the shelf was some 0.5m deep, and had been revetted with large blocks (F211), evidently a continuation of the southern revetment wall for F232 described above. To the west was a smaller scoop (F129), which overlapped the edge of the infilled ditch, implying that by this point at least, little if anything remained of a bank.

A number of features, representing more than one phase of activity, were recorded beneath CS2 (Figure 5.23A). The earliest was a wide shallow hollow (F378, 3m across and 0.2m deep), on the northern side. Samples of onion couch and barley from its upper fill [364] yielded conflicting dates of 1130–910 cal BC and 40 cal BC—cal AD 140 (SUERC-10598; 10597), implying that an earlier feature may have been disturbed here. Cutting the hollow was an L-shaped gully (F370) containing packing stones [371], itself cut by a posthole (F372), possibly a pair for F360. F374 a short distance to the south may be the remnants of a third post-hole. These post-holes could, however, belong to CS2, as none is sealed by its floor. A crude cobbled surface (F376) lay to the east of these features.

CS2

A circular structure (CS2) about 5.75m in internal diameter was later built in the scoop, perhaps taking advantage of any remaining remnants of the internal bank for shelter. The eastern quarter of this building had a floor of substantial well-set paving slabs F203, but elsewhere only fragmentary paving (F363) was found (Figures 5.23B & 5.24). A distinct patch of dark brown soil [362] at the centre might mark the position of a hearth. In contrast to CS1, there was clear evidence for a wall, best preserved around the southern and eastern sides to either side of the entrance, where the terracing into the slope offered most protection. The inner face was a revetment of large boulders set on edge (F199; F298; F343); one of those belonging to the southern arc proved to be a large cup-stone (sf 224).



 $\label{Figure 5.23} \textit{Figure 5.23}$ Plans and section of CS2: (A) Early features in scoop F238; (B) Paved surface F203 and walling (F199/F298/F343)

The wall most probably had a turf or soil core laid on a slab base, with an outer facing of stone, but none of the latter survived *in situ* and only a few remnants of base and core, near the entrance. A curving band of tumble just to the east of the building (F198) almost certainly derives from the wall line, as does another area of tumble and some larger stones to the south (F200). Pockets of wall fill survived on the southern [237], eastern [174] and northern sides [307]. A single piece of coarse pottery was recovered (sf 110).

A gap of 1.2m between inner wall stones F298 and F343 marks the site of an entrance facing east-southeast, leading from the largest paving stones in the interior to an area of smaller paving outside. The end of the north wall is marked by a transverse alignment of smallish stones and three basal stones on top of which further stones had collapsed (F202). From the entrance, a path (F291) led south across the upper shelf of the scoop and out to the south-west, its eastern edge formed by north—south retaining wall F170 mentioned above. A rough cobble layer [210] over the path might indicate a later repair.

Just inside the entrance to CS2, an oven or hearth (F299) was constructed in a shallow oval pit measuring $1m \times 0.7m \times 0.2m$ deep. It lay immediately against the inner wall stones, which showed clear signs of

burning (Plate 4). A rim of burnt clay ran around the western and northern sides (F264) and further small fragments of burnt clay or daub were found in its fills, suggesting that it had a clay superstructure. Several burnt stones (both igneous and sandstones) were found in the base, beneath layers of burnt material [261; 281]. A burnt Roman flagon base and fragments of a rotary quern (part of sf 41) were found in the fill, along with alder charcoal and a high density of charred cereal remains. A barley grain from [261] was dated to cal AD 1-220 (SUERC-10586), whilst archaeomagnetic analysis of stones from the base of the oven places its last use between the second century BC and AD 200 (Hounslow and Karloukovski 2004). The Component B magnetisations suggest a relatively mild temperature (120-150°C) for the last heating, whilst the Component A magnetisations (acquired at 200-600°C) imply either that the stones had been moved after they were burnt and/or were cooking stones. The oven lies surprisingly close to the entrance, suggesting it might be a late addition, perhaps even towards the end of the life of CS2.

West of the oven, a charcoal-rich layer [197] built up over the floor, undoubtedly material derived from the oven and perhaps also from an earlier central hearth. Further pieces of the quern and flagon came



Figure 5.24 CS2 in the course of excavation seen from the north

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from this deposit, as well as a Roman glass bangle (sf 203), coarse pottery and burnt bone. On top of [197] was a more extensive silty layer [124], which proved even richer in finds, including a chip of Roman glass (sf 55), fragments of a copper alloy spiral finger ring (sf 149) and copper alloy sheet (sf 212), an iron nail (sf 137), stone implements (sf 147; sf 153) and several pieces of coarse pottery (including three rim sherds sf 108, sf 109, sf 145), as well as more fragments of the flagon and quern! A hazel nutshell from [124] was radiocarbon dated to cal AD 1–220 (SUERC-10566), very much in line with the suggested date of the flagon (AD 160–200/230; Chapter 7).

There was no evidence for secondary flooring in CS2. Scatters of stones found over the paving and silt in the eastern and southern part of the building [196, 224; 225] appear to be tumble; one very large flat slab is probably a fallen wall stone caught by the plough. All the indications are that the building fell into disuse around the end of the second century AD, after which both the structure and its surrounds succumbed to an accumulation of silty sand [104, 112, 351], from which a handful of further finds were recovered, including the largest piece of the quern and another Roman glass bangle (sf 18). Interestingly, this quern can be matched to a lower stone found in the top fill of the eastern ditch [123].

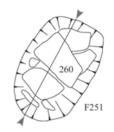
F129

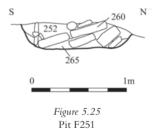
Just west of CS2 was a smaller, roughly circular scoop (F129) 3m across (Figure 5.23). This was 0.2m deep, and was largely filled by black sandy silty clay [135], which yielded a rim sherd (sf 81) and a radiocarbon date of 100 cal BC-cal AD 80 (SUERC-10568). Above was a discontinuous paved surface of flat stones (F185), itself covered by sandy silt [134] like that over CS2. F129 is sited where the remnants of the enclosure bank would have been and cut slightly into the top fill of western ditch. It seems likely to be an ancillary structure or working area associated with CS2 or the structures that preceded it.

Isolated features in the interior

The ground surface around the central scoop was largely devoid of features, apart from two pits, both with structured stone deposits. To the north of CS2 was a circular pit, 0.4m deep (F334), which contained numerous large slabs and cobbles, some set against its sides and base, the purpose of which is unclear. Two cobble tools (sf 227; 228) were recovered from the



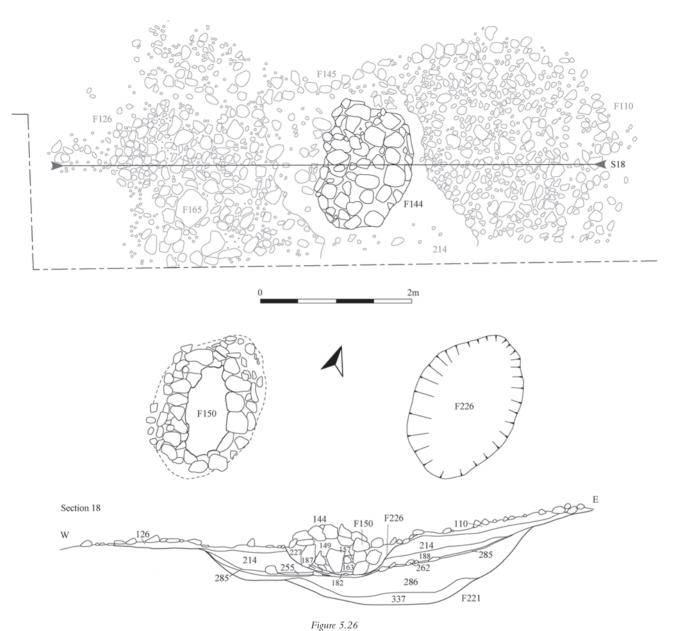




sandy loam fill [335]. South of scoop F232 was a sub-rectangular pit (F251, 0.3m deep), its sides lined with large flat, rectangular stone slabs [260], with others placed over the top, forming a sort of cist, which had subsequently collapsed inwards (Figure 5.25). A broken cobble tool (sf 199) was found in the upper fill [252]. From its dimensions (1.1 × 0.75m), F251 resembled a cist burial, but no human bone was recovered.

THE CIST BURIAL AT THE ENTRANCE

The cobbled surface overlying the southern ditch terminal at the entrance was later disturbed by the construction of a crudely built stone cist F150, housed in an oval pit (F226), 0.5m deep, and orientated due north



Plans of the cist during excavation and section of cist cutting through southern ditch terminal

(Figure 5.26). The cist itself was $1.65 \text{m} \log \times 1.2 \text{m}$ wide, and sub-rectangular in shape externally with a more oval interior no more than $1.2 \times 0.55 \text{m}$ (Figure 5.27). The west and east side-walls were constructed from large sub-rectangular blocks and boulders, whilst the ends were built of smaller stones and not as well-structured. Some of the stones were discoloured by burning and heat fractured (Plate 5), perhaps indicating re-use of materials, as there was no evidence of *in situ*

burning. Silty clay [227] was packed around the stones; there was no stone base. Capping the cist was a low cairn of large stones (F144), which stood proud of the ground surface to either side (Figure 5.28). Whilst the lack of any intervening deposits over the cobbles might suggest only a relatively short time gap had elapsed between the laying of the surface and the insertion of the cist, not too much should be read into this as the surface could have been kept clean.



Figure 5.27 View of the cist (F150) from the south

The fills of the cist contained several small groups of cremated human bone and other burnt material, conceivably the result of several events. The earliest deposit was a compact silty clay with some charcoal at the northern end of the cist [187]; on top of this, piled in the north-east corner, were seven stones [195]. Above was a layer of black silty loam rich in charcoal [182] and then a more compact layer with occasional stones [163] containing both lumps of charcoal and most of the burnt bone from the cist; a large stone in the middle may have been deliberately placed. The upper fills were brown silty loams, [157] being charcoal-rich, whilst [149] yielded a single sherd of pottery (sf 101).

The cremated human bone - Anwen Caffell

All the soil fills and the wall packing contained fragments of burnt human bone, with eleven discrete scatters being recognized during excavation. No animal bone was found. Following McKinley (2004), the bones were sorted by size, the weight in the different size fractions recorded, and the largest bone measured. Much of it had fuel ash slag adhering. The total weight of bone and fused bone/fuel ash was 581.1g, of which

just over two-thirds (400g), including most of the identifiable pieces (by number and weight) came from [163]. Each of the upper fills [149; 157] yielded just over 50g of bone and fused bone/fuel ash, whilst the remaining deposits yielded mostly bone, but in even smaller quantities, [182] having the most (34g). The earliest fill [187] had the least bone overall, but yielded the largest single piece, a fragment of radius shaft, 55mm long. By weight most bone was in the >10mm fraction, the other two contexts with large fragments being [163] and [227].

Most of the bone was buff-white in colour, which implies complete or near-complete oxidation, although the internal surfaces of some long bone pieces were not fully oxidized. Analysis of the burnt residues confirmed that they were fuel ash; to generate such fusion and melting, temperatures of around 1000°C must have been achieved, and the cremation must have taken place on a soil surface with a significant silica (sand) content, such as the site itself would have provided.

Although the majority of fragments were unidentifiable, most parts of the skeleton are present. The skull is mainly represented by cranial vault fragments, [163] also yielding a piece of mandible.

Longbone shaft fragments occurred in most contexts, but it was not always possible to identify which bone: parts of all limb bones are recorded, with upper limbs better represented than lower, including three finger and wrist bones. Fragments of vertebrae and ribs represent the axial skeleton. No elements give a definite indication of age or sex, but a tooth root (premolar?) from [182] is fully formed, implying that this person was over the age of 13–14 years (Ubelaker 1989). On balance, the remains are adult or possibly adolescent. There was no evidence of pathological lesions.

The presence of small hand bones implies either that effort was put into collecting the bones or that both bone and pyre debris was scooped up for deposition, which would be consistent with the charcoal-rich cist fills. From the bones alone, it is unclear how many cremations are represented. There is no duplication of elements, but this does not rule out there being more than one individual; indeed the way the bone is distributed in different fills might favour this. Whatever the case, such a small quantity of bone represents only

a tiny fraction of a cremated body or bodies. A full report is in the site archive.

The date of the cist

Two pieces of burnt human bone from the cist were radiocarbon dated (from the bottom [187] and top [149] fills respectively), along with a cereal grain and a birch twig in [163]. The latter samples yielded dates of 50 cal BC—cal AD 130 and cal AD 80—320 (SUERC-10577; 10578), which are not consistent with one another, but perfectly reasonable given the position of the cist in the site sequence.

The two human bone samples, however, generated older dates of 420–200 cal BC and 750–390 cal BC (SUERC-10579; SUERC-10571). These are not only inconsistent with one another, but also much older than both dates from [163]; in addition the older date is from the later context! Unless they are statistical outliers, this both increases the possibility that more than one individual is represented and implies that



Figure 5.28 View of southern ditch terminal showing surfaces F110 and F126, and cairn F144 over cist

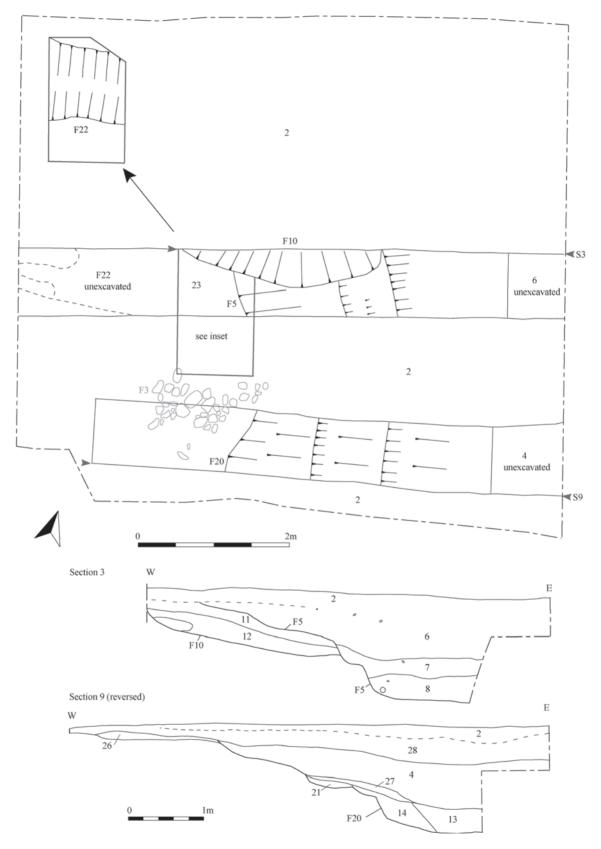


Figure 5.29
Plan and sections of external pit complex

the cist may incorporate the reburial of older, partial remains, particularly as the identifiable bone from [187] is from a single radius and was the largest in the cist. In retrospect, it is unfortunate that none of the bone fragments from [163] was dated, as this has the best claim to be the principal deposit.

THE EXTERNAL PIT COMPLEX

The western side of the large macular feature north-north-west of the enclosure was sampled in 2003 (Figure 5.3 above). The whole area was covered by silty sand [2], very like that filling the scoops inside the enclosure. Since no features were apparent, two 1m-wide trenches were excavated into the deposit, revealing that the anomaly comprised a series of intercutting features dug into natural sand and gravel (Figure 5.29).

The earliest feature was a gully or ditch (F22, 1m wide and 1m deep) running broadly east—west found at the western end of the northern cutting; it had been cut away by later pits to the east. The sandy ditch fills [25; 24; 23] were very like the surrounding subsoil and were only distinguished with difficulty, suggesting that the feature had been rapidly backfilled. The ditch is not apparent on the aerial photographs or the geophysical survey, but there are several other linear features in the general vicinity, with which it may be linked. Cutting this ditch were the truncated remains of a pit or scoop (F10) up to 0.8m deep, filled with sand [12, 11], which lay largely outside the cutting. No finds were recovered from either of these features.

Both features were cut by a much larger pit or scoop F5, undoubtedly the origin of the macular cropmark. This was up to 1.4m deep (within the area opened); the western edge sloped gradually at first, and then stepped down quite sharply to a fairly flat base. The sandy silt in the deepest part of the scoop [8] yielded a large rim of Iron Age tradition pottery (sf 3), whilst a wheat seed from the darker brown sandy silt overlying it [7] gave a radiocarbon date of 50 cal BC–cal AD 130 (SUERC-10565). The upper part of the scoop was filled with more sandy silt [6], which yielded further sherds of pottery (sf 2).

This scoop continued up slope into the southern cutting (F20). Here on the edge was a thin layer of charcoal [15], covered by deposits of sand [21] and silty sand [14], the latter spilling into the base. The deepest part of the feature was again filled with silty sand [13=8], overlain by sandy silts [27, 4], the latter containing some cobbles and pottery (sf 1). A patchy

dark grey layer which was cut by the scoop may be the remains of a turf line [26], above which was a layer of silty sand [28] – almost impossible to differentiate from [2] – and a patch of cobbles F3, perhaps the remains of a contemporary surface.

The pottery and the radiocarbon date indicate that the scoop saw activity at roughly the same period as the enclosure. It may well have been dug for sand and later infilled with settlement refuse (see Chapter 8) but, given the limited area explored, this feature could also be another structural scoop comparable to those excavated within the enclosure.

DISCUSSION

The excavations at Knowes revealed a complex history of occupation and structural alteration associated with first enclosed and then unenclosed phases of settlement, probably spanning a period of some centuries and associated with a relatively large and diverse finds assemblage – at least in comparison to the other TLEP sites – which included some quite unusual items such as the amber bead, and several cup stones and glass bangles, as well as the late cist burial containing cremated human remains.

1. Pre-enclosure activity?

No certain traces of activity before the Later Iron Age were found in the excavation, but there are hints that the locality was at least occasionally frequented at an earlier date. A handful of worked flints were recovered, including an Early Bronze Age thumbnail scraper, whilst the Later Bronze Age radiocarbon date from beneath CS2 might indicate that an earlier feature was disturbed there. Some of the human bone in the cist burial was also evidently older than the occupation, but this can be explained in other ways (below). The most likely scenario is that the enclosure was founded on an unoccupied site, although – given the linear features in the vicinity – the area may already have been farmland.

2. The Late Iron Age enclosure

Based on the radiocarbon dates from the secondary cut in the northern ditch terminal and elsewhere around the circuit, the rectilinear enclosure was founded in the second or first century BC at the latest. On both the eastern and western sides, the enclosure circuit was redefined at least twice, although each time the

boundary became shallower than its predecessor. This recutting may explain some of the variations in ditch width around the circuit, but the overall shape of the enclosure changed little, and the easterly entrance was maintained throughout. The entrance terminals showed fewer signs of recutting, but rather than indicating that they were allowed to silt up earlier, this might be due to later structural alterations having removed the relevant evidence.

The retaining wall built across the end of the southern ditch terminal differs from the entranceway revetments found on other contemporary sites in the region like Fishers Road East (Haselgrove and McCullagh 2000) by extending to the bottom of the ditch. The wall was presumably intended to shore up the entrance causeway or even to expand it slightly. A substantial piece of an Iron Age pot recovered from the infill behind the wall appears to have been deliberately placed there. The northern ditch terminal had a different structural history: it evidently held standing water for a time and may have been deliberately lined with clay to facilitate this, presumably to provide a source of water for the occupants and their animals – although we should not exclude a symbolic dimension.

No direct evidence of banks was found, but what seem to be collapsed remnants of a supporting revetment were found at the entrance, which added to the paucity of features just inside the ditch, suggests there must originally have been at least an inner bank. Given the sandy subsoil, both bank and ditch would have been highly unstable and prone to collapse, and even with the evidence of recutting, it would not be surprising if the enclosure phase was short-lived, perhaps only a few decades. When maintenance ceased, it is clear that the ditches began to be used for the disposal of domestic refuse, especially on the western side of the site, and as a result quickly filled up, leaving only a slight hollow at the top.

Nothing was found to indicate the date of the external gully running up to the northern ditch terminal, but it is clearly linked to the use of the entrance and helped guide or control the movement of people and/or animals in and out of the site.

3. The scooped settlement

There is no evidence to establish precisely when the main scoop was originally constructed. A series of second to first century BC radiocarbon dates from its lower levels imply that this may not be far removed in time from the digging of the enclosure circuit. Indeed,

in some form at least, the scoop may well be primary, since, apart from the two undated cist-like pits, there were no indications of activity unconnected with the scoop (although earlier features could have been destroyed when this was dug). There are, however, hints from the air photographs and geophysics of further features in the unexcavated portion of the interior, including what may be a second, smaller scoop to the south of the entrance.

What is clear is, firstly, that the central scoop had a complex history of occupation, undergoing several structural modifications, particularly in the area near the entrance; and secondly, that by the time some of the later buildings were in use, in the early centuries AD, only vestiges of the enclosure circuit remained. A number of features linked to the scoop, including a drain, were constructed where an internal bank would have stood, and well-made paved and cobbled surfaces were laid across the ditch terminals on either side of the entrance, both of them with direct relatives inside the scooped area

The excavations produced clear evidence that the entrance to the scoop had been realigned at least once, possibly as many as three times. Exactly where the scoop was originally accessed is unclear, but there is no evident entry point directly opposite the enclosure entrance, one argument for thinking that the scoop may be secondary. The most likely possibility is that the original entrance was from the south-eastern corner (F404), veering left down a gentle slope from the main route into the site.

Subsequently, a new entrance was created by building a gravel causeway on the eastern side of the scoop at a point that would have required the removal of any remaining bank material just inside the enclosure entrance. A third phase of scoop entrance, in all probability, followed, this time taking the form of a paved surface created by F116 and F327, which aligns perfectly with the stone surface F152 laid across the top of the northern ditch terminal – the alternative being that these are the remains of stone structures built along the northern side of the entranceway. If so, this paved access did not last, being blocked by the building of a stone wall, and access shifted back to the gravel causeway, by now flush with a cobbled surface laid on top of what had been the south-eastern corner of the scoop and extending beyond it towards a similar surface covering the southern ditch terminal, with which it probably originally joined up.

From the aerial and ground evidence, the deepest part of the central scoop lay nearly or entirely within

the limits of the excavated area. Its southern, eastern and northern edges were all revetted with substantial stone blocks, up to two to three courses high in the case of the upslope (southern) side, but on the western side it stepped up by means of two successive shelves, the lower of which may have carried on into the unexcavated northern part of the scoop. At these higher levels, a series of discrete sunken areas were identified, cut into the shelf surfaces and surrounding edges. Post-holes and other features suggesting earlier structural phases were identified in the bases of two of these higher scoops, both of which were later used as stances for circular buildings (CS1-2) with stone-faced walls and stone floors. Both buildings had carefully laid flags in the quadrant nearest the entrance, and probably had central hearths; in addition a clay-walled oven was built just inside the entrance of CS2. Adjoining both buildings, at a slightly higher level, were subsidiary paved areas, probably some kind of ancillary structure, with F166 being reached directly from CS1 by means of a short stone passage via a second entrance on the north-west side of the building. At some point, a paved surface was built over the remaining hollow above the western enclosure ditch, presumably to give direct access from the west; the possible fence line along the outer edge of the ditch may also belong to this phase.

The nature of the occupation in the deeper parts of the scoop is difficult to make out, given the small areas exposed. F404 appears to be a sunken yard or working area, whilst the alternative way to interpret the paved surface formed by F116 and F327 is as part of another residential building and adjoining ancillary structure like CS1–2. All that was visible at the western end of the main scoop was a series of stone spreads of various shapes and sizes – in one case at least, sealing earlier features – which may mark the position of further interconnecting buildings, but need not be structural at all. Similar uncertainties exist over the purpose of the large pit complex outside the settlement to the

north-north-west; this appears to date to the same general period and might be a second structural scoop, but could just as easily have been dug for sand and then used as a place to dump domestic refuse.

Both the material culture and the radiocarbon dates (Chapter 9) imply that the latest occupation focused on the western margins of the central scoop – leading to the dumping of further midden material in the remaining hollow over the western enclosure ditch. In all probability the site was abandoned by the end of the second century AD.

4. The abandonment and burial of the site

The abandonment of the site appears to have been orderly. One of the latest events was the insertion of a stone cist into the southern ditch terminal, containing some human remains which appear to be appreciably older than the settlement itself, implying that this was an event of high symbolic significance, perhaps an act of closure linking back to the original ancestral claims to the land.

Following abandonment, the scooped areas filled up with silty sand, as did the area over the ditches on the east side of the enclosure, where the ground level was noticeably lower. Apart from the base of this horizon, where the soil is of a slightly darker character, perhaps indicating an admixture of organic material originating from the decay of the built structures, this deposit is remarkably homogenous and undoubtedly due to a combination of wind and rain action. A tiny amount of post-medieval and modern pottery and glass was found in the sand, but there is no evidence of the site being subsequently robbed for building stone and all the indications are that it was rapidly buried in antiquity.

Evidence of subsequent agricultural activity is limited to a field drain at the eastern end of the site and a few larger stones from the higher-up buildings, which had evidently been caught by the plough.