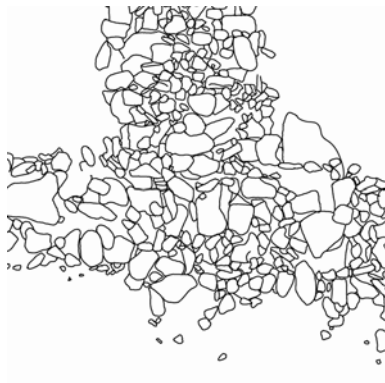
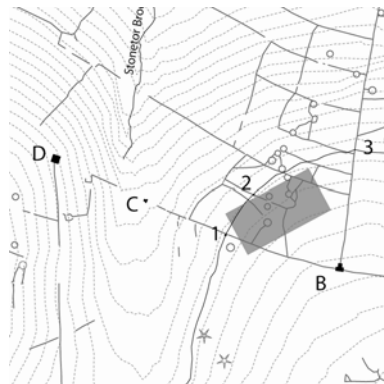


SHOVEL DOWN PROJECT SUMMARY REPORT 2003



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INTRODUCTION

This report presents the preliminary results of a self-contained scoping project comprising archaeological survey, excavation and palaeoenvironmental investigation on Shovel Down, northeast Dartmoor. The study area is located within Gidleigh Parish on the watershed between the North and South Teign Rivers (c.1km² centred on SX 655 860). The research focuses on the Bronze Age field systems and settlements, which are mainly concentrated on the north-westerly facing slopes (380-420m AOD) overlooking a wide basin formed by the middle reaches of the North Teign River, and one of its minor tributaries, Stonetor Brook (Fig 1).

The fieldwork for the project was undertaken during January (earthwork survey), July (excavation and topographic survey) and August (geophysical survey and archive research). The aim of this research was to examine the chronology and function of significant elements of the field system, to reconstruct the environmental and land use history of the study area, and to test methodologies in advance of a more ambitious 3-5 year project. The excavations targeted major junctions along a long axial boundary that forms the primary element of the field system. The palaeoenvironmental fieldwork focused on two mires situated at the head of Stonetor Brook.

Research context

Archaeologists have long argued that the appearance of field systems marks a particular stage in the socio-economic development of human societies, indicating the intensification of agricultural production and a significant change in human-environment relationships. In Britain, the best-known prehistoric field systems are those on Dartmoor, laid out in the middle of the second millennium BC. Andrew Fleming's work on these boundaries during the 1970s and 1980s has been particularly influential in our understanding of Bronze Age society (e.g. Fleming 1988; Fleming 1994). He argued that the Dartmoor field systems are the product of large-scale, planned and systematic land division during a single phase of agricultural expansion.

Although this model is widely accepted, it has not been adequately tested through archaeological excavation or environmental fieldwork. Evidence for chronological depth and accretionary growth has been underplayed. There is considerable variability in the form of land enclosure on the moor, yet there is a lack of understanding of the significance of this variation. The impact of changing patterns of land-use on the natural environment remains unclear.

Aims and objectives

The long-term aim of the Shovel Down Project is to provide an understanding of the process of land enclosure on this part of Dartmoor during later prehistory.

Specific objectives for 2003 were as follows:

- Investigate the junctions of major elements of the Shovel Down field system for evidence of chronological depth and accretionary growth.
- Assess the construction techniques used to build the field boundaries.
- Recover stratified diagnostic material and/or samples for radiocarbon and OSL dating.
- Recover pollen sequences from stratified peat deposits.
- Identify the stratigraphical relationship between peat deposits and elements of the field system.
- Test for the survival of buried soils beneath field walls.
- Employ peat and soil samples to reconstruct local vegetation history and land-use.
- Carry out geophysical prospection within selected parts of the field system to identify possible sub-surface archaeological features.
- Collate evidence from Devon SMR, local museums and aerial photographs to contextualise the project's results in relation to previous research in the Shovel Down area.

SURVEY

There are no large scale surveys of the field systems on Shovel Down. Earthwork plans at a scale of 1:100 were therefore undertaken of the main junctions along the axial reave during a preliminary field season in January. These plans formed the basis for the choice of excavation trenches discussed below.



Fig 1 Plan showing the locations of the excavation trenches and the geophysical survey (shaded grey) (archaeological survey data copyright English Heritage).

A GPS survey was completed of the topography within a 2km² area encompassing Shovel Down, the valley mire to the east of Stonetor Hill, and the lower lying ground to the north. This added important contextual information relevant to our understanding of the layout of the field systems and the distribution of soils and sediments.

Geophysical prospection techniques have rarely been employed on Dartmoor. In part, this is because of the well-documented problems of using these methods on granite lithologies, on waterlogged terrain and on moorland which is regularly burnt. However, it is also true to say that the relative lack of recent excavations in the region has meant that the opportunities to carry out geophysical survey have been limited. A programme of resistivity survey was carried out in order to assess its effectiveness in identifying subsurface features. Three locations, covering c.11,000m², were surveyed: an area of coaxial boundaries and settlement close to excavation trench B, an area of 'aggregate' fields and settlement to the south of the main axial boundary, and a possible stone circle situated close to excavation trench A. The results of this work were generally positive. Preliminary analysis has indicated the presence of several anomalies that may well indicate buried archaeological features. In addition, the stone banks of the boundaries and round houses, which are visible on the surface, were clearly represented and, though analysis is not yet complete, the survey appears to have picked up additional detail that was not visible on the surface.

EXCAVATION

Carefully targeted excavation was one of the primary means of addressing the project's objectives. The main excavation areas were situated at various locations along the Shovel Down axial boundary. Three trenches (A, B and D) were located at major junctions at the corners of large field blocks. A further trench (C) was excavated where the axial boundary was overlain by a thick deposit of peat within a valley mire beneath Stonetor Hill. Additionally, four small slot trenches (1-4) were excavated at locations where a medieval leat had truncated the prehistoric boundaries. In the following summary of the excavations, the main trenches are described from east to west.

Trench A

Trench A was located at one end of the Shovel Down axial boundary, where it intersects with the north-south boundary that passes from Scorhill. Viewing the system of boundaries as a whole, it appears that the Scorhill reave was the original feature, and that the block system on Shovel Down represents later expansion onto what had previously been open grazing land. It was therefore hoped that since the Shovel Down reave forms the primary element in the layout of that system, the junction between it and the Scorhill reave would provide important information on the wider context of the Shovel Down boundaries. The junction is close to a complex of stone rows and a possible stone circle, while nearby, within the enclosed land at Batworthy, an assemblage of several thousand lithics was collected during the late nineteenth century (Miles 1976).

Prior to excavation the junction did not survive as a clearly defined earthwork, probably in part due to peat and vegetation cover, although it may also have been affected by peat cutting and stone robbing. The Shovel Down axial consists of an intermittent, very low (<0.15m) bank with a few exposed stones visible on the surface. There was a short (1m) gap between the end of the boundary and the proposed line of the Scorhill reave; the axis of the latter was postulated on the basis of visible fragments of earthwork to the north-west and south-east, and the presence of a slight scarp (though this is adjacent to an area of possible peat cutting).

The excavated area, 87.5m² in size, did not unfortunately reveal any substantial evidence for the prehistoric boundaries. It would appear that the slight earthworks identified during the survey were perhaps the residual remains of peat cutting and stone robbing, which together with the construction of a leat had removed all trace of the boundaries. Nevertheless, the trench proved important in unexpected ways. Most significant of all was the recovery of features and artefacts that would appear to predate the construction of the boundaries, and that may be contemporary with the nearby monuments and lithic scatters.

The earliest feature that was identified was a small (0.5x0.36m & 0.17m deep) oval pit (1016) (Fig 2). It was cut into the mineral soil beneath a peat tie, and the fill was made up of layers of dark brown soil and charred material, including pieces of charcoal. A small flint blade was found towards the base of

the feature. Elsewhere in the trench, 73 worked flints were recovered from throughout the gritty mineral soil that lay below the peaty horizon. The majority of the lithics are utilised and unworked flakes. The pieces showing secondary working include scrapers, cores and a barbed-and-tanged arrowhead.

Although there were no substantial remains that could be related to the Bronze Age boundary system, there were two ill-defined features on the alignment of the Scorhill reave and, more tentatively, one of the Shovel Down stone rows. The features consisted of shallow peat-filled hollows, c.0.90x0.50m and 0.10-0.15m deep, the tops of which were delimited by roughly circular arrangements of medium sized stones (1009). The depth and fill of these features would seem to preclude the argument that they were deliberately excavated in order to support orthostats, although the presence of possible 'packing stones' in the upper fill might suggest otherwise. Alternatively, they may represent the remains of stone robbing episodes when larger blocks were removed from a boundary.

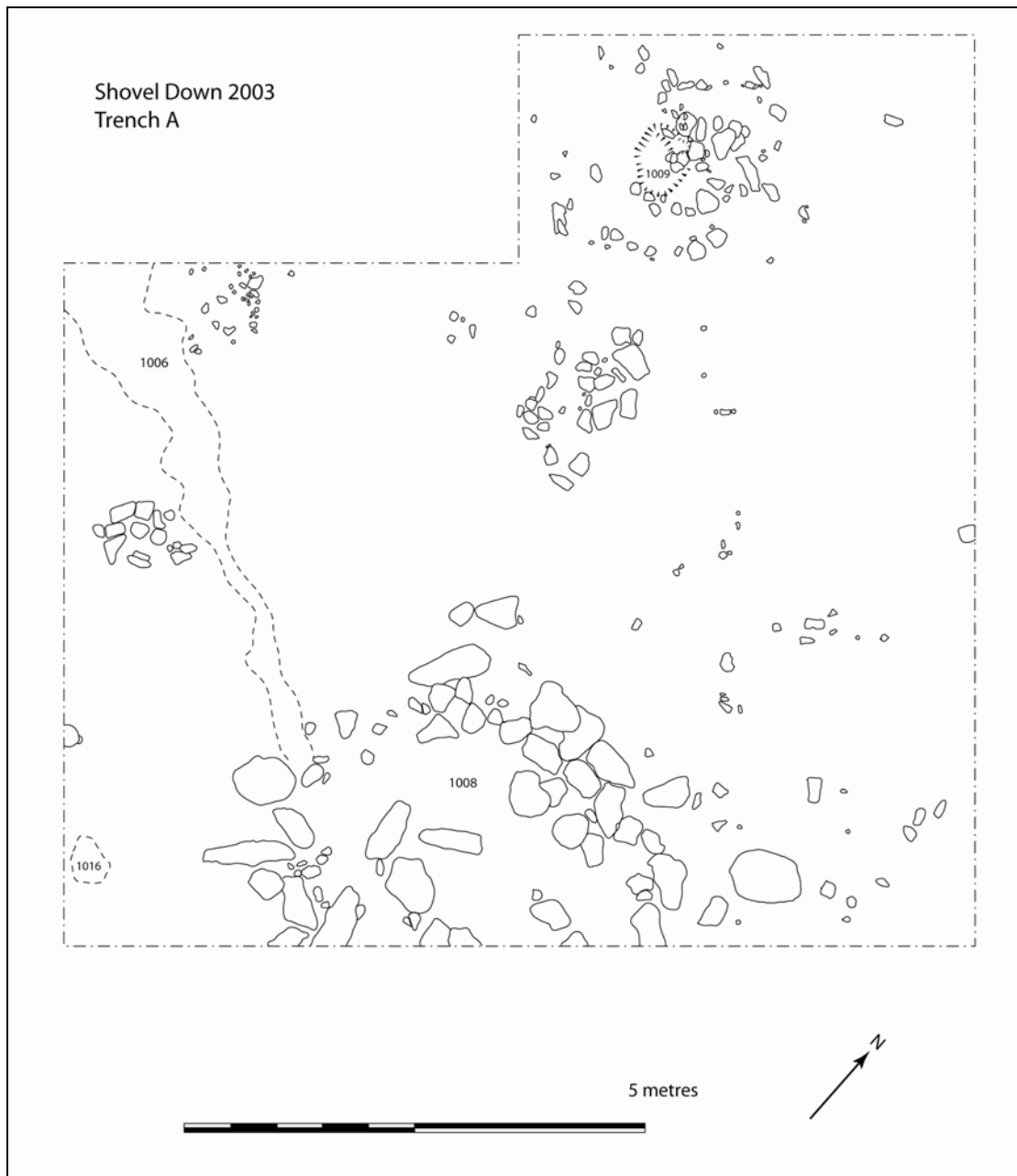


Fig 2 Plan of Trench A showing features directly overlying and cutting into the mineral soil.

There was considerable evidence for later, medieval and early modern, activity. The narrow linear cut of a tinnern's leat ran north to south across the north-west end of the trench (1006). It was 0.5-0.7m in width, 0.2-0.3m deep, and filled with a gritty, organic rich deposit. Bands of gritty sediments were also visible in the south facing section. A layer of similar material was identified beyond the eastern edge of the leat; this extended 2.3m downslope. One reason for this might be that the leat overflowed and washed sediments downslope, where they were trapped by some form of barrier (e.g. a stone bank) that has since been removed. The leat may well be an offshoot or redirected channel of the Southill Leat, discussed below, as it has a similar alignment and is <20m downslope. The south-west corner of the trench included the edge of an area of peat cutting, identified during the earthwork survey as a roughly rectangular scaped area with noticeably different vegetation. A great number of both 'peat tyes' and leats are visible on vertical air photographs of Shovel Down, and the former are particularly prevalent in the vicinity of Trench A.

A rather ephemeral stone feature was truncated by the southern edge of the trench (1008). It consisted of an incomplete arc of large granite blocks lying upon and in places partly embedded in the mineral soil, and defining an area *c.*2.5m in internal diameter. As the feature extended beyond the limits of the trench, its shape and full extents were not established.

In summary, the excavations at Trench A were important in revealing an aspect of the landscape hitherto unconsidered by the project: traces of occupation and perhaps settlement that precede the construction of the boundaries. While the lack of any preserved boundaries made it impossible to directly address the primary objectives for the 2003 field season, it is probable that stone banks had once existed in this area, as indicated by the peat filled hollows and the abrupt termination of the leat sediments in the section. Their removal was perhaps associated with the peat cutting episodes or, more likely, the robbing of stone to construct the nearby enclosure wall at Batworthy. Moreover, the evidence for earlier occupation, in particular provided by the flint assemblages, may cast light on the historical context within which the later boundary systems developed.

Trench B

Trench B was located *c.*600m to the south-west of the first trench, at the intersection between the Shovel Down axial and a boundary that divides the northern side of Shovel Down into two large blocks of land, and forms the 'terminal' for a series of long axial strips of land to the west. The investigation of this junction aimed to establish the chronological relationship between the axial boundary and the large field blocks to the north. It was also intended to allow a comparison of the structural and land use histories of what were presumed to be two different boundary types.

During initial survey work, the junction was recorded as an earth and stone bank (0.3-0.6m in height). It was investigated using a 75m² T-shaped trench. The boundaries were well preserved, with layers of collapsed stone overlying the walls, in places surviving to four courses. It was therefore possible to determine the construction methods and sequence. Unfortunately, no evidence for associated banks, ditches or pre-wall features was identified.

The boundaries lay at the interface between the underlying brownish grey mineral soil and 0.2-0.44m depth of peaty soil that formed the upper deposit throughout the trench (Fig 3). The walls were constructed using unworked granite stones, with a few erratic lithologies also present, notably quartzite. The level of preservation varied throughout the length of the excavated boundary, though a basal layer of undisturbed stonework was always present. The walls were constructed using carefully placed outer facing blocks with an infill of smaller, more irregularly laid stones together with a quantity of earth. The latter may have been deliberately deposited during the construction of the wall. The facing stones were of varying size (<350mm) though they were proportionally larger than those in the core (<116mm). The base of the wall was generally 0.85-1.0m in width, with wider (1.5m) sections in the area of the junction. The second course of facing mirrored this pattern but stones of intermediate size were selected, while the third course was made up of smaller stones laid flat, but with their long axes set into the wall rather than along the direction of the face. This form of construction would have allowed the upper course to have been 'tied into' the other stones in the wall, to prevent the face collapsing outwards. Overall, none of the *in situ* walls were more than four courses high and the quantity of tumbled stone recovered suggests that they were originally around five courses (*c.*0.6m) high. At various places along the length of the boundaries, a distinct layer of 'capping' stones could be identified. These had been laid once the wall had been built up to a height of between 2 and 3 courses. They consisted of large slab-like blocks laid flat as if they were 'paving' a level within the wall.

Contemporary dry stone wallers advise that similar layers of ‘capping’ stones can be built in walls today, where they are intended to prevent rain water rushing through the centre of the wall and dislodging the outer faces (J. James and D. James pers. comm.).

The sequence of walls at the junction proved to be altogether different to what had been expected. Instead of the north-south aligned wall abutting the Shovel Down axial boundary, it formed a corner with the western element of the axial. These two sections of boundary were ‘keyed in’ to one another to form a continuous wall. On the inner face of the corner, the builders had used smaller stones laid next to one other on their sides with their long axes tied into the wall. The outer face of the corner included larger sub-rectangular blocks laid with their long axes lengthwise to the wall. This style of construction allowed the wall to ‘corner’ with the smaller stones used in the confined space that was ‘the back of the knee’ of the wall. The corner was well built and three *in situ* courses survived on the outer face. On the lowest course, one large rectangular block was used which may have approximated to a ‘cornerstone’. At a later point in time, the corner formed by the northern and western elements of the junction was abutted by the eastern ‘leg’. This was built using broadly similar construction techniques.

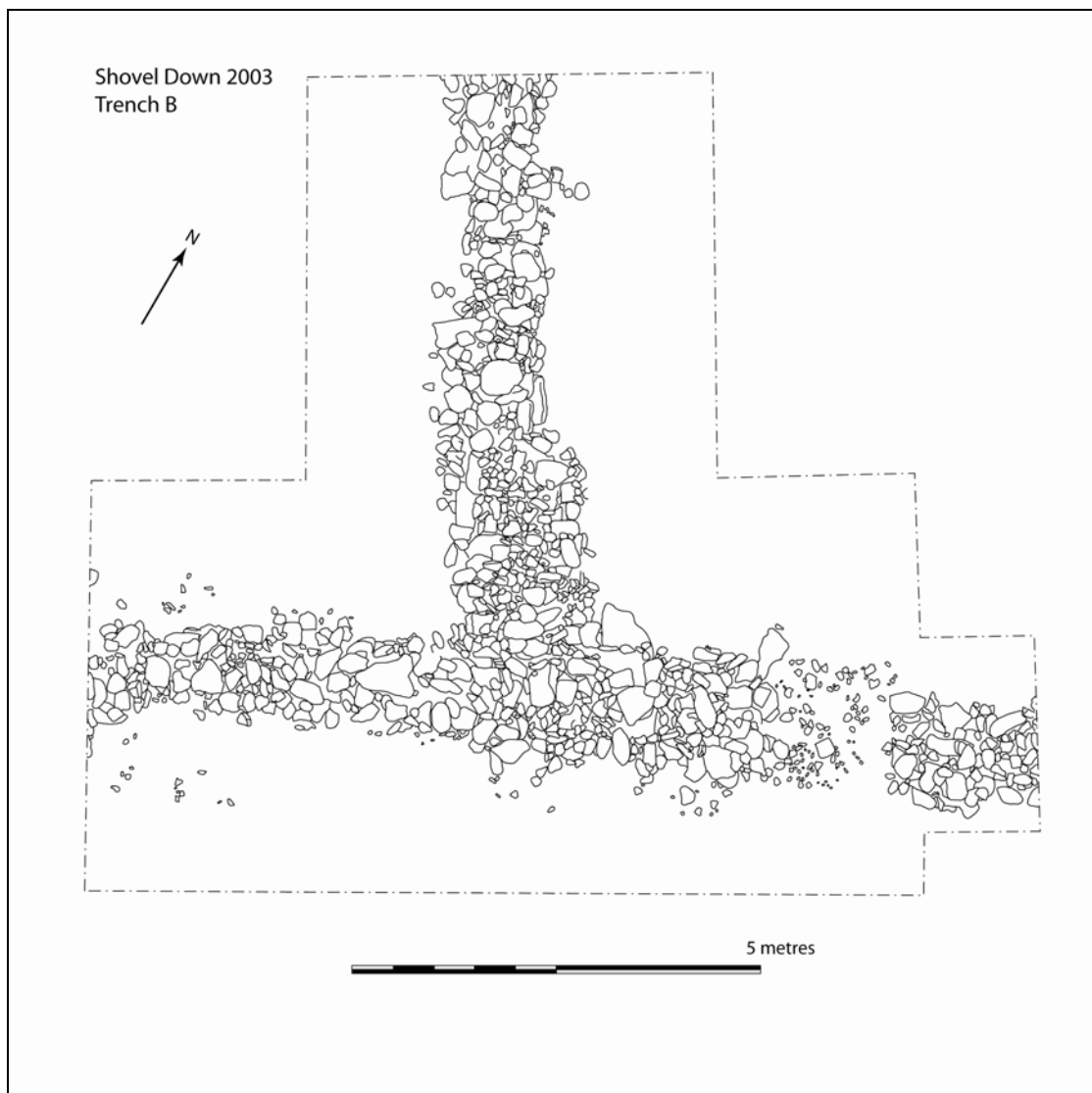


Fig 3 Plan of trench B showing the boundary walls following the removal of loose and collapsed stones.

There was further evidence for the reworking of the boundaries. Part of the northern 'leg' appeared to have been pulled down and reconstructed in a different style approximately 1.2m to the north of the corner. Along this stretch of boundary, the wall was narrower so that the easternmost face was noticeably set back from the line of the facing nearer the corner. In addition, a 1.9m wide gap was identified to the east of the junction. This had been cut through the eastern 'leg' some time after the construction of this boundary. The walls on either side of the gap did not have properly finished ends, and the rubble infill of the walls had slumped slightly on either side. Despite this, the space between the walls was roughly surfaced with cobbles (c.80mm diameter), suggesting that the gap was constructed and maintained as an access route through the Shovel Down axial. Immediately to the east and west of the entranceway, the collapsed reaves were higher, with several large blocks piled on top of and against the tumbled walls. It is likely that this material represents stone from the boundary removed in order to create the entranceway. The fact that the stone was not simply dislodged but piled on top of and next to the fallen walls suggests that although the walls had collapsed the boundaries were still respected at the time the access route was cut. A worked flint flake was found on the cobbled surface.

Trench B provided the best preserved sections of boundary. This enabled the method of construction and the sequence of the junction to be established in some detail. The latter proved to be of particular interest as it demonstrates that the original model, in which the Shovel Down reave formed the earliest axial boundary, is incorrect. The reworking of the boundaries, involving episodes of rebuilding and the creation of new access routes, demonstrates that there is the potential to explore patterns in boundary maintenance and styles of construction that would have been connected to the social dimensions of land allotment.

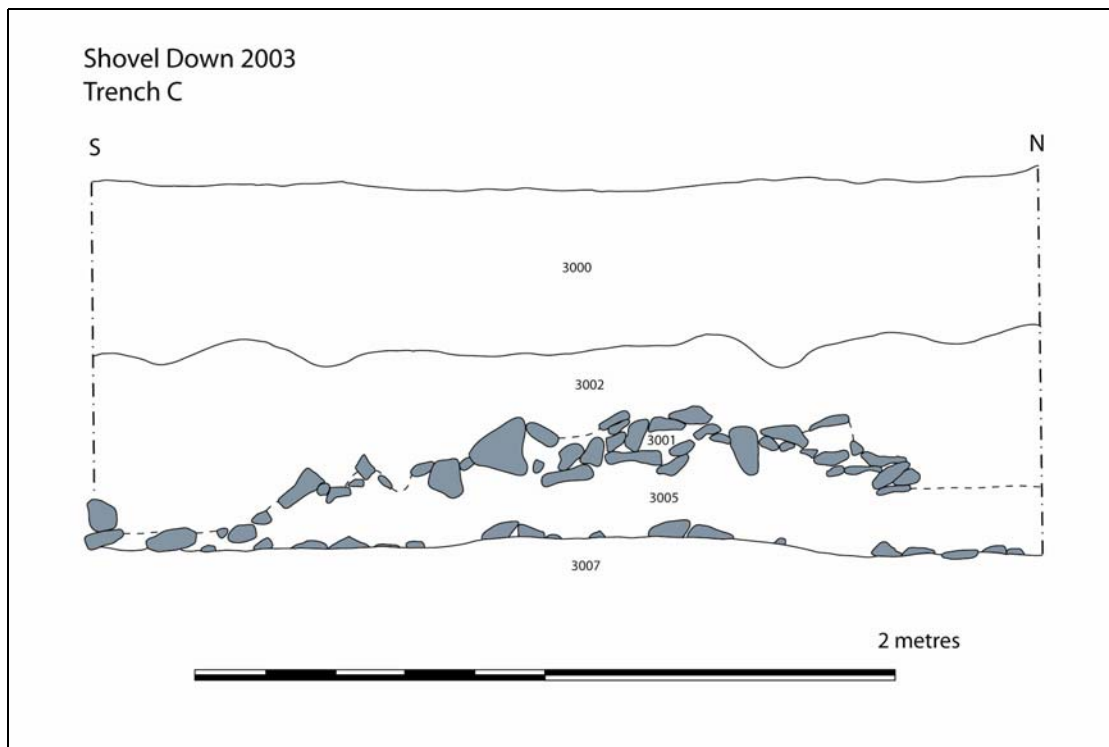


Fig 4 East facing section, Trench C.

Trench C

Trench C was located in the mire above the eastern tributary of Stonetor Brook. Probing during the initial phase of survey work undertaken in January 2003 indicated that the Shovel Down axial reave runs straight through this mire and that it is overlain by up to 1m of peat. The decision to locate a trench in this area was based on the following considerations. Firstly, it might be possible to establish the broad chronological relationship between episodes of boundary construction, maintenance and/or abandonment and phases of peat growth. If so, the peat deposits could provide valuable palaeoenvironmental data that might be linked to particular periods in the history of land use on Shovel Down. Secondly, if peat was forming around the boundary during its main phase of building/use, then

it seemed possible that the stretch of reave that runs through the mire might be better preserved than elsewhere in the study area. In this event, good evidence of wall construction techniques might be forthcoming.

Initially, a slot trench measuring 1.5x5m was laid out. Once the edges of the stone bank had been identified, the trench was extended 3m to the west so that more of the boundary was exposed. The peat within the trench was 1-1.1m in depth, and consisted of two distinct layers: a clean black deposit, overlain by a dark brown layer that was less humified and showed considerable intrusive root activity. These peats rested upon a deposit of decomposed granite, gravel, and angular stones.

The boundary (3001) was sandwiched within the lower layer of peat, with c.0.6-0.85m of peat above the stone bank, and 0.2-0.3m sealed beneath it (Fig 4). The bank comprised a simple linear dump of stones of varying sizes, without evidence for either facing or coursing. There was no indication of later robbing or disturbance, nor was the highly 'unstructured' nature of the boundary simply the result of episodes of collapse, although these had clearly taken place. Nonetheless, the reave appears to have been a substantial feature in this area. As it survived (including tumble), the boundary measured c.1.65m wide by 0.15-0.25m high.

Monolith and bulk samples were collected from both above and below the wall for radiocarbon dating and to facilitate studies of plant macrofossils, pollen, waterlogged wood and insect remains. This work may help to elucidate the more precise chronology and origins of peat formation in this area, particularly whether this process was continuous throughout later prehistory.

Trench D

Trench D was located c.1000m west of Trench A, at the intersection between the Shovel Down axial and a boundary that delimits the edge of two large blocks of land to the south. Excavation at this junction aimed to allow comparison of the chronology and function of the blocks of land laid out to the south of the Shovel Down axial with those to the north. The excavated area was 100m² in size.

This trench was expected to present particular challenges as the field evidence seemed to indicate that the boundaries had been reworked in the medieval period – a shallow ditch was visible on the north side of the Shovel Down axial just to west of the location of the trench. Prior to excavation, the boundaries survived as low earth banks (0.2-0.4m in height) with several exposed stones visible at the surface. There was a considerable build-up of sediment against the south-western edge of the junction, resulting in a terraced effect. The southern element of the boundary appeared to curve westwards and overlie the eastern 'leg'.

On excavation, the boundaries were found to comprise stone walls, with no evidence for either flanking ditches, earth banks or pre-wall features (Fig 5). The structure of the boundaries varied between the three 'legs' of the junction, although this may partly be explained by later processes of collapse and stone robbing. The southern element of the junction followed a slight break of slope on the hillside, and had served as a barrier against which a 0.25m depth of hillwash had built up. This accounted for the terracing that had been noticed during the survey. Only a small amount of the boundary survived. A band of small to medium sized stones, remnants of the wall core, lay along the lip and downslope side of the terrace, and a line of larger facing slabs remained *in situ* on the upslope side. Others lay at the base of the terrace, towards the eastern side of the trench. Elsewhere, along the eastern and western elements of the junction, there were very few facing stones, and only a band of disturbed smaller stones, presumably the original core of the wall. Overall, it seems likely that there had been deliberate robbing of stone from the boundary judging by the lack of facing slabs and the presence of a 1.6m wide, peat filled, gap in the southern element of the junction.

The lack of undisturbed structural features means that it is not easy to define the construction sequence. There are two possibilities. The loose stone that overlay the undisturbed portions of the boundary appeared to show a continuation between the southern and western sections of the junction, in other words, following the break of slope. This was then abutted by the eastern boundary. This is the same basic relationship that was noticed during the earthwork survey. Contrary to this, once the looser, upper, layer of stones had been removed, the *in situ* facing slabs on the south-eastern side of the junction, linking the eastern and southern elements, appeared to be of one build. The western element, it could be argued, abutted this corner. In summary, the sequence is either a corner formed by the

southern and western elements abutted by the eastern element, or a corner formed the southern and eastern elements abutted by the western element. This ambiguity could either be the consequence of later disturbance or the junction may have been rebuilt on a different alignment. If accepted, the latter option might indicate an interesting shift in patterns of land use and tenure.

Finds from the trench included a single piece of later prehistoric pottery, recovered from a mineral soil overlain by tumble and in which some of the wall stones were set, and three pieces of worked flint.

The denuded form of the boundaries in Trench D was disappointing, although perhaps not surprising given the diffuse character of the earthworks. It was therefore not possible to examine the structural sequence of the junction with the same degree of certainty as could be achieved in Trench B. Nevertheless, as was the case for Trench B, the original interpretation of the Shovel Down axial reave as the primary boundary off which the various large blocks of land were then laid does not appear to be supported by the excavation evidence. On the contrary, the evidence indicates that the Shovel Down axial is not a single structural unit, but is made of up several conjoined lengths of boundary built at different times. At least some elements of this reave appear to postdate boundaries delimiting the eastern and western edges of the main blocks of the field system.

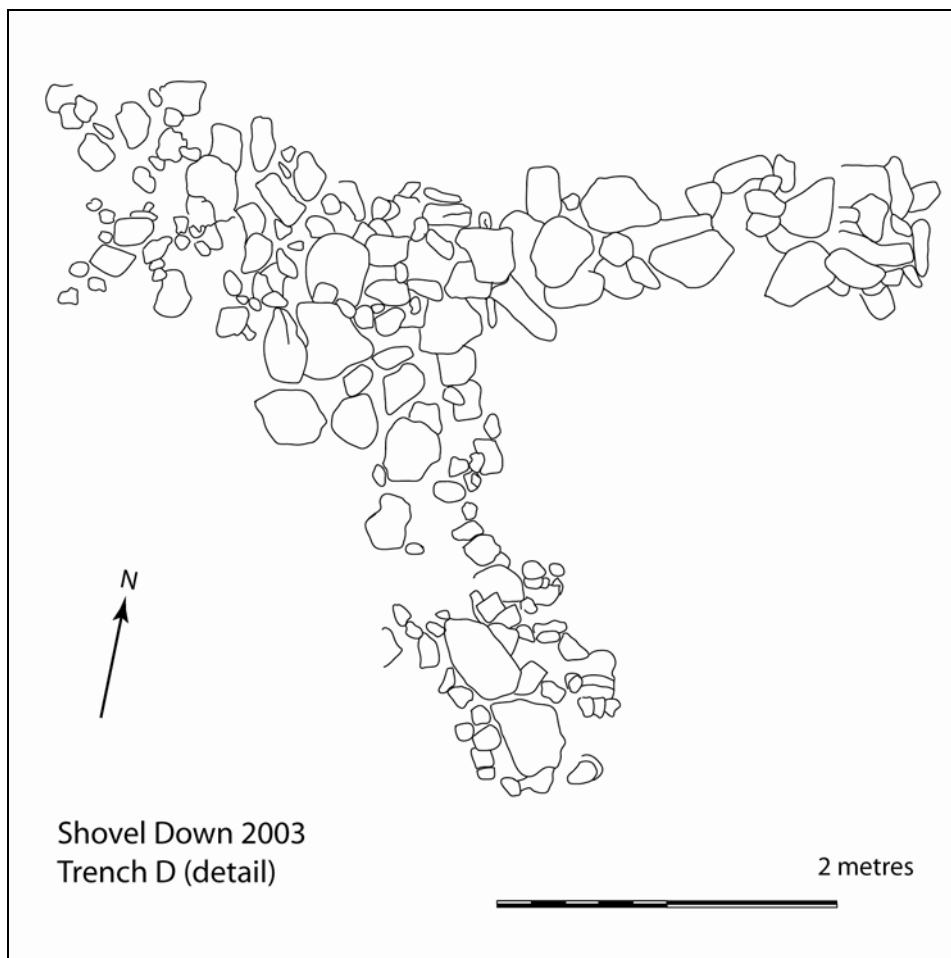


Fig 5 Plan of junction between boundary walls in Trench D.

Slot trenches across intersections between a medieval leat and the reaves

Four small sondages were located at the intersections of a medieval leat and the boundaries of the prehistoric field system. These allowed vertical sections of prehistoric field walls to be exposed. The primary aim of this element of the project was to identify buried soil horizons either within or underlying the boundaries and to facilitate sampling for soil micromorphology, pollen and dating where appropriate material was recovered. A secondary objective was to investigate variability in wall construction techniques across the study area. These slot trenches also provided an opportunity to consider the form and chronology of the medieval leat. This feature is believed to be the Southill Leat,

a c.10km long water course serving the Southill tin stamping mill, first documented in the Court Rolls of Henry VII between 1491 and 1505 (Tom Greeves *pers. comm.*).

Initial fieldwork in January 2003 identified nine locations where the leat intersects the field system. Due to pressures of time, a sub-sample of these was chosen for full excavation. Leat Trench 1 was located approximately 150m southwest of Trench B, at the point where the leat cuts through the Shovel Down axial reave. This trench provided an additional opportunity to investigate variability in the form of the Shovel Down axial, further sections of which were examined in Trenches A, B, C and D. It had been noted that the reave appeared to be a particularly substantial feature in this area, and it is possible that this may relate to the proximity of the Stonetor Brook East settlement. Leat Trench 4 was located at the junction of the Southill Leat with the Scorhill reave. The decision to place a slot trench here was reached when it became apparent that the Scorhill reave had been substantially robbed out in the area of Trench A. Leat Trench 3 was located where the leat intersected with a north-south reave delineating one of the main blocks within the Shovel Down field system. Importantly, the continuation of this boundary was also investigated in Trench B. Again, this allowed examination of variability in construction techniques along the length of what appeared, on the basis of the survey evidence alone, to be a single constructional unit. Finally, Leat Trench 2 was located at the intersection with the wall of a small field within the Stonetor Brook East settlement area. This provided information on the nature of one of the smaller sub-divisions within the Shovel Down field system.

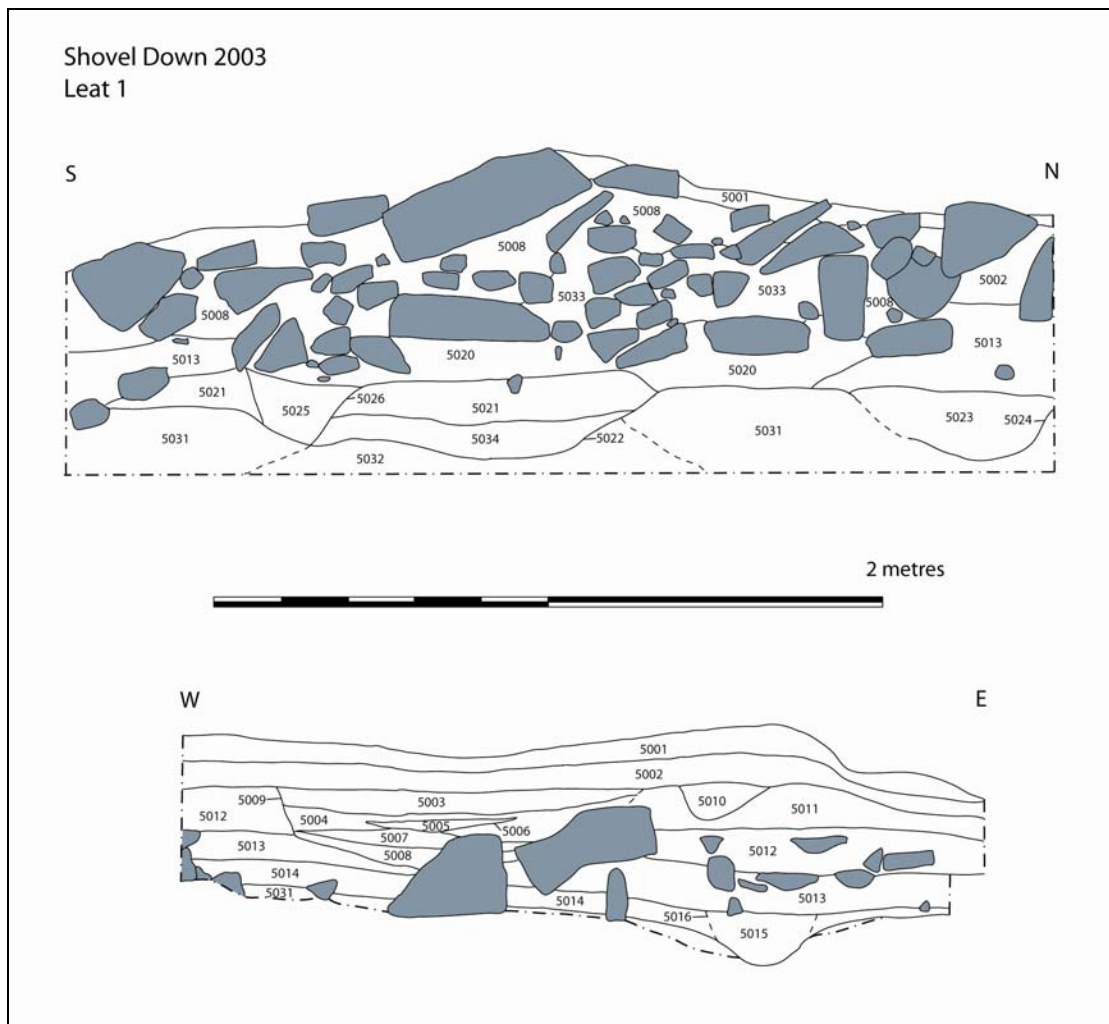


Fig 6 East and north facing sections, Leat Trench 1.

The leat consisted of a linear channel with a shallow dished profile (c.0.5-0.7m wide and c.0.3m deep), and a bank of peaty soil built up on the downslope side (Fig 6 – north facing section). Where the channel had been excavated through a prehistoric boundary, the cut was narrower and in places the stones had been carefully rearranged to form a stone lining. The remainder of the stones had been piled

onto the downhill side of the leat. The sequence of deposits within the channel was very localised, with variation apparent even within the few metres excavated in each of the trenches. The fill consisted of a series of interleaving fine gravel and peat sediments, indicating that periods during which the feature was maintained as a functioning watercourse were interspersed with intervals during which stagnant or slow-moving water allowed the build-up of vegetation. In Trench 1, the presence of a number of distinct lenses of fine gravel within the body of the bank (5010) suggested that the leat had been cleaned out at several points during its lifespan, with material derived from the leat being dumped onto the bank.

The structure of the prehistoric boundaries varied between the trenches. In Leat Trench 1, the boundary was a substantial feature revetted on both sides with large orthostats (Fig 6 – east facing section). Coursed infilling of smaller stones could be identified within the body of the wall. Although a similar construction technique had been employed to build the wall in Leat Trench 2, this feature was considerably less substantial. The wall in Leat Trench 3, on the other hand, included within its main body a number of very large boulders; possible facing stones could be identified only on one side of this boundary. A number of pre-boundary features were recorded within Leat Trench 1. These included a possible ditch / gully (>0.6m wide and c.0.25m deep) (5024) running along the same alignment as the later wall, as well as a putative ‘hollow way’, a broad linear feature (c.1.25-1.4m wide and c.0.2m deep), with an irregular base, running parallel and just to the south of ditch (5022). Unfortunately, animal and root disturbance in this area made it difficult to elucidate the precise nature of these pre-reave features.

SCIENTIFIC DATING

The employment of scientific dating techniques is crucial in addressing the chronology of the initial construction, expansion, use and abandonment of the field systems. It is hoped that this will facilitate a better understanding of how the histories of the individual boundaries relate both to one another and to changes in the intensity and character of land use across the landscape as a whole. This will not be an easy task, as there were only very few opportunities for recovering suitable samples, and the relationships between dated contexts may be difficult to establish. To that end, an integrated strategy has been adopted, in conjunction with a specialist in chronological modelling, which combines AMS and radiometric dating together with advanced statistical analysis of the results. In addition, the suitability of OSL dating techniques is being explored.

Only a small number of samples of charcoal were recovered from suitable contexts. These included the pit in Trench A, and from the possible ditch / gully fill beneath the wall in Leat Trench 1. Samples of peat were recovered from within the boundary walls in Trench B and in Leat Trenches 1, 2 and 3, and from above and below the stone bank in Trench C. OSL samples were taken from deposits in Trenches B and D and in Leat Trenches 1 and 4. None of the samples can be directly attributed to events linked with either the construction or use of the boundaries. However, in most cases it was possible to recover samples pre-dating and post-dating the walls.

ENVIRONMENTAL SAMPLING

One of the primary aims of the Shovel Down Project is to investigate the origins and development of the field system including the nature of land-use prior to the construction of the boundaries, during their main phases of use and after their abandonment. Palaeoenvironmental research constitutes a key element of this investigation.

Pollen analysis

Monolith samples for soil pollen were taken from sealed sediments identified in exposed sections through the prehistoric boundaries. The exact structural relationship between these buried soils and the reaves was carefully defined in each case to ensure accurate interpretation of the palaeoenvironmental results. In Trench C, monolith samples of peat sediments both overlying and underlying the reave were collected. This work will facilitate a clearer understanding of climate, vegetation and land-use on Shovel Down during later prehistory.

Off-site environmental sampling concentrated on the mires located at the heads of the tributaries of Stonetor Brook, on either side of Stonetor Hill. The westernmost of the mires covers an area of c.100x250m, it overlies up to three sections of the boundary system, and it is situated close to the large settlement of Stonetor Brook. The eastern mire is smaller (c.50x200m), it is crossed by one of the boundaries, and it is situated close to the main concentration of settlements and fields on Shovel Down. An auger survey of both mires was undertaken to examine the stratigraphy of the sediments and to recover samples for pollen analysis.

A further profile was excavated in an area of peat near the junction of the tributaries of Stonetor Brook. This exposed a deep section (>2m deep) indicating that peat formation has been taking place in parts of the study area for some considerable time. Near the base of the section, a large number of medium-sized pieces of waterlogged wood were identified. There was no evidence that these were worked. However, they hint at the former presence of scrub or woodland vegetation in stream valleys such as this.

Soil micromorphology

Monolith samples for soil micromorphological analysis were taken from buried soils beneath the boundaries as well as from other sediments which could be stratigraphically related to the walls. This will facilitate study of land-use practices in later prehistory. Samples were also taken from the medieval leat cut to enhance understanding of the processes involved in the formation of the sediments within this feature.

Bulk samples

Bulk samples were collected from all sealed contexts to aid recovery of charcoal, plant macrofossils, etc. The sampling strategy followed was in accordance with English Heritage guidelines on best practice.

COMMUNITY OUTREACH

Twenty-five local volunteers took part in the excavations. These included members of the Devon Archaeological Society and Dartmoor Preservation Association, as well as students taking A-Level and Adult Education archaeology courses at local schools and colleges. Guided tours were arranged for local interest groups, including the Devon Archaeological Society, Chagford Local History Society, Widecombe and District Local History Group, Gidleigh Commoners' Association, and pupils from Chagford Primary School. A highly successful Open Day including regular guided tours of the site was held on Sunday 13 July and attracted over 100 visitors. The excavations also featured on BBC Radio Devon, and in the Western Morning News.

ONGOING WORK

To date, preliminary post-excavation work has been carried out to facilitate the creation of a catalogued and fully cross-referenced archive. This work will be completed by the end of 2003 so that the structural report for the excavations can be written up during Spring of 2004. Analysis of pollen and soil profiles is ongoing, as is the processing and interpretation of the geophysics results. Flotation of bulk samples will be carried out by the end of 2003 using facilities at the Institute of Archaeology, UCL. Funding to support a programme of radiocarbon and OSL dating and to facilitate further specialist analyses will be sought in Spring 2004. In the meantime, short summary reports of the excavations will be submitted for publication in the newsletter of the Devon Archaeological Society and in *PAST* to ensure dissemination of provisional results to both the archaeological community and the wider public. A website outlining the project's work is currently under construction using facilities at University of Wales, Bangor.

SUMMARY & DISCUSSION

The 2003 season produced a number of significant results which highlight the potential of the Shovel Down area for further detailed study. Perhaps most importantly, it appears that the field system was not laid out in the manner initially expected. Earlier ground surveys suggest that the Shovel Down axial

reave was built as a single structural unit. It appears to abut the Scorhill reave and is in turn apparently used as a base-line for the series of north-south boundaries which divide the area into large blocks. The survey evidence alone therefore seems to corroborate Fleming's model according to which large areas of the moor were enclosed during major phases of agricultural expansion. However, the excavated evidence indicates a more complex and lengthy history for the Shovel Down block system. In both Trenches B and D, the t-shaped junctions comprised 'corners' abutted by later sections of boundary forming the third 'leg'. In other words, it can be seen that the Shovel Down axial reave was not built as a continuous feature but comprised a series of separate sections built at different points in time. The construction of the field system may perhaps therefore be characterised as an incremental process, rather than a largescale building project.

Trench B provided detailed information on wall building techniques as well as important evidence for the structural history of the boundaries. Episodes of rebuilding indicate the maintenance of the boundaries over time, while significant alterations such as the construction of the cobbled entranceway may indicate changes in patterns of land-use. This supports the argument that the construction and use of the field systems on Dartmoor must be seen as a dynamic and ongoing process. The possible ditch and 'hollow way' in Leat Trench 1 hint that the later field system was not 'imposed' on the landscape but may instead have built on a long history of pre-reave land-use practices.

Particularly interesting evidence for pre-reave activities were recovered from Trench A in the form of a scatter of lithics of probable later Neolithic/Early Bronze Age date. Further investigation of the extent and character of this material may cast light on the historical context in which the field system was constructed. Initial inspection of the peat profiles recovered from the mires that developed around Stonetor Brook indicate that these too will provide valuable evidence for pre-reave patterns of land-use as well as the subsequent environmental history of the area. Although many of Dartmoor's valley mires appear to have their origins in the early historic period, the wall in Trench C was sandwiched between layers of peat. This indicates that the Stonetor Brook East mire began to form prior to the construction of the field system and continued to develop both during and after the boundary was in use.

One of the main aims of this initial phase of the project was to test methodologies in advance of further work. On the whole, the methods chosen were broadly successful. However, the results from Trenches A and D underline the importance of investigating only relatively undisturbed junctions if good evidence for the constructional histories of the walls is to be recovered. The success of the pilot programme of geophysical survey suggests that this method may prove useful in identifying areas where the boundaries have been disturbed or substantially robbed out. The potential of both geophysics and detailed earthwork survey to provide information on the form and history of the boundaries is worth further exploration. For example, the proposed 'corner' identified in Trench D can also be discerned on the 1:100 scale pre-excavation survey of this junction.

It remains to be seen whether it will be possible to obtain absolute dates for the different structural elements excavated this season. Few stratified diagnostic artefacts or charcoal samples were recovered. This was not unexpected given the nature of the structures examined (field boundaries rather than settlement remains) and their landscape context (excavations in upland areas often produce relatively little artefactual material). Peat samples that could be stratigraphically related to the walls were collected wherever possible, although the low humic content of some of these may mean they are not amenable to radiocarbon dating. However, flotation of bulk samples may provide further fragments of charcoal or charred plant remains for radiocarbon dating, and the application of OSL dating techniques may also prove useful.

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