ARCHAEOLOGICAL EXCAVATIONS AT DALE VIEW QUARRY, STANTON IN PEAK, DERBYSHIRE

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SUMMARY

From November 2007–January 2008 Archaeological Research Services Ltd undertook an archaeological excavation on behalf of Carter Jonas for Stancliffe Stone Ltd at Dale View Quarry, Stanton in Peak, Derbyshire. This work was carried out in advance of hard rock quarrying.

Prehistoric lithics and a few tiny prehistoric pottery sherds indicate periods of occupation during the Mesolithic (c. 8000 BC–4000 BC) and Neolithic (4000 BC–2400 BC), with the Neolithic material perhaps representing an area of settlement somewhere within the vicinity of the site.

The principal discovery on site was a post-built structure with associated hearths. Radiocarbon dating has placed the structure in the 6th–7th centuries AD, a time when the Peak District may well have been a Brittonic or Anglo-Brittonic kingdom separate from the Kingdom of Mercia. This is the first scientifically-dated post-built structure belonging to this period in the region. Analysis of the form of the structure, alongside the palaeoenvironmental evidence adds to our understanding of the early medieval period in this area. However, no artefacts dating to this period were found on the site which means it is not possible to ascertain the cultural affiliation of its occupants.

Two Early Bronze Age dates obtained from within a posthole which appears to belong to this early medieval structure probably represent residual material from pre-existing Early Bronze Age activity on the site. Construction of the early medieval structure appears to have disturbed earlier deposits that include Mesolithic, Neolithic and Early Bronze Age material.

INTRODUCTION

The Dale View site is centred on SK 2478 6425 (Fig. 1) and lies within the Peak District National Park *c.*0.75km east of the village of Stanton in Peak and *c.*6km north-west of Matlock. The site is on Stanton Moor, raised ground which looks south-east towards

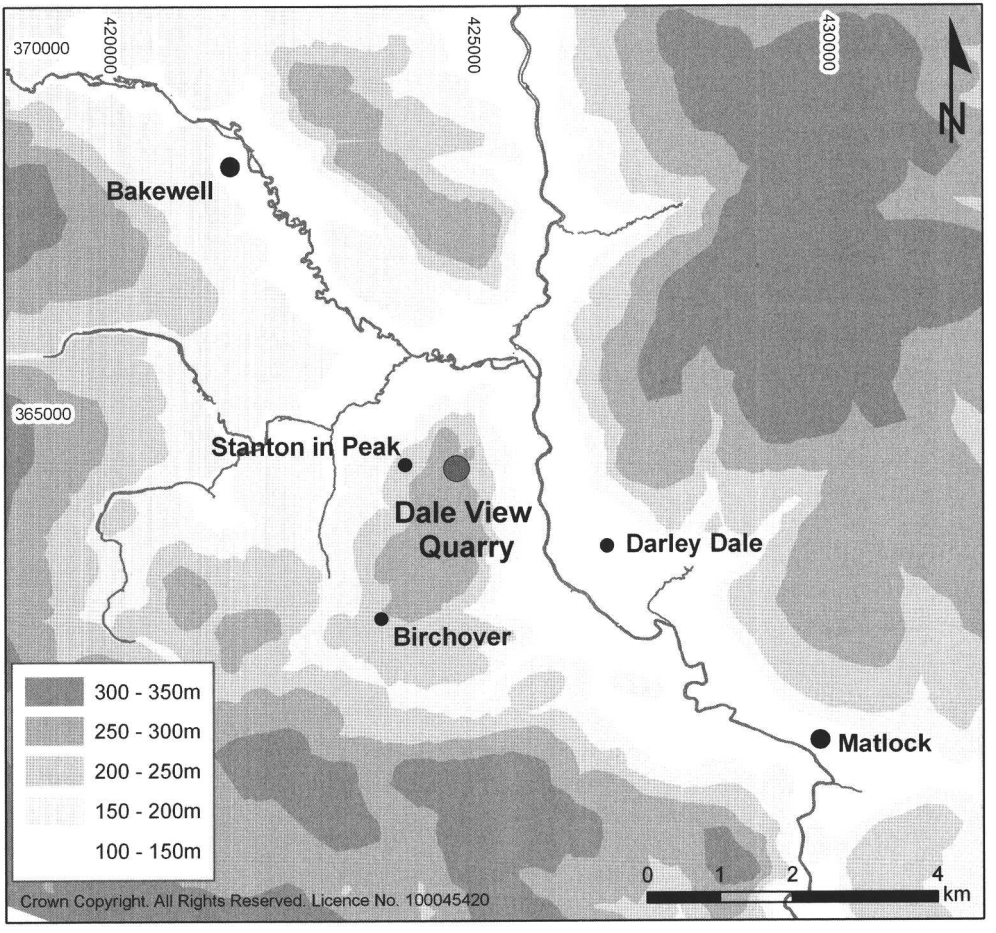

Fig. 1: Location of Dale View site.

the River Derwent, Darley Dale and Matlock. To the north and east, the site is abutted by both existing and disused quarry workings related to the stone extraction for which this site is earmarked. The site itself has been used as enclosed pasture land for a number of years.

Stanton Moor is a geological feature known as the Stanton Syncline, a dome of coarse sandstone and Ashover gritstone bordered on three sides by the Carboniferous Limestone of the White Peak. Gritstone forms the high ground to the west and east of this part of the Derwent Valley with shales forming the valley bottom (British Geological Survey 1978). In places across the site, the fractured sandstone brash lay just below the surface; where this did not outcrop, the drift geology was represented by a sandy substratum.

Less than half a kilometre to the south of the site is the Scheduled Ancient Monument of Stanton Moor which encompasses archaeological remains dating predominately to

the Early Bronze Age. Stanton Moor contains approximately 70 stone cairns, sometimes referred to as barrows, as well as a number of stone circles and ring ditches (Hart 1981, 57; Barnatt and Collis 1996). Cremations within the cairns on Stanton Moor were generally associated with Bronze Age pottery types such as Collared Urns and Food Vessels *(ibid.)*.

To the south-west, on and around Harthill Moor, there are a number of sites with possible Early Neolithic origins, including several panels of cup and ring rock art (Barnatt and Reeder 1982; Guilbert *et al.* 2006). A search of the Historic Environment Record (HER) showed Neolithic sites in the immediate area are largely clustered to the south and west of the dome of Stanton Moor. The two HER references to Neolithic features on Stanton Moor (HER 1613 and 30315) are both single lithic findspots and do not represent any structure or archaeological feature. Interestingly, the closest entry to the Dale View site (HER 30315) is an Early Neolithic leaf-shaped arrowhead similar to the arrowhead found during previous evaluation work on site, though unlike the leaf-shaped arrowhead found during these excavations, this was made with bifacial retouch.

Further to the west on Harthill Moor, there is a cluster of HER entries relating to a number of finds and sites of possible Neolithic origin. Two sites at Cratcliff Rocks (HER 6701 and 6702) comprise a possible enclosure site (Cratcliff Ring) which produced a quern, pottery and a number of lithics, and an enclosing stone bank around the summit of the outcrop (Heathcote 1947; Makepeace 1999).

Previous work undertaken on the Dale View site has included a desk-based assessment (Adams 2005), geophysical survey (Elks 2006) and an archaeological evaluation (Adams 2006) incorporating evaluation trenches and large test pits. The evaluation found limited evidence for surviving archaeological deposits earlier than post-medieval, but did retrieve an assemblage of prehistoric lithics and pottery from an unstratified context in the topsoil, including an Early Neolithic leaf-shaped arrowhead and a sherd of Beaker pottery dating to the Later Neolithic/Early Bronze Age (*c.* 2400–2000 cal BC).

EXCAVATION

Method

Three trenches (Fig. 2) were located so as to take account of previous geophysical survey and evaluation trenching results. The overburden was removed by machine under archaeological supervision, the trenches were cleaned by hand and all archaeological features were recorded in plan prior to excavation.

Each of the features identified during the stripping process was half-sectioned to determine and record their form and dimensions, and any artefacts and samples suitable for environmental sampling were taken. Following initial recording, the remaining halves of structural features were removed, as were the remaining halves of any features which showed evidence of burning *in situ*. As part of the sampling strategy, the contents of all deposits with the potential for providing organic material was subject to flotation through graduated sieves (5mm, 2mm, 1mm, 500μm). Any small finds not from the fill of a feature were plotted onto the overall site plan, or if found in unstratified topsoil, were bagged by trench.

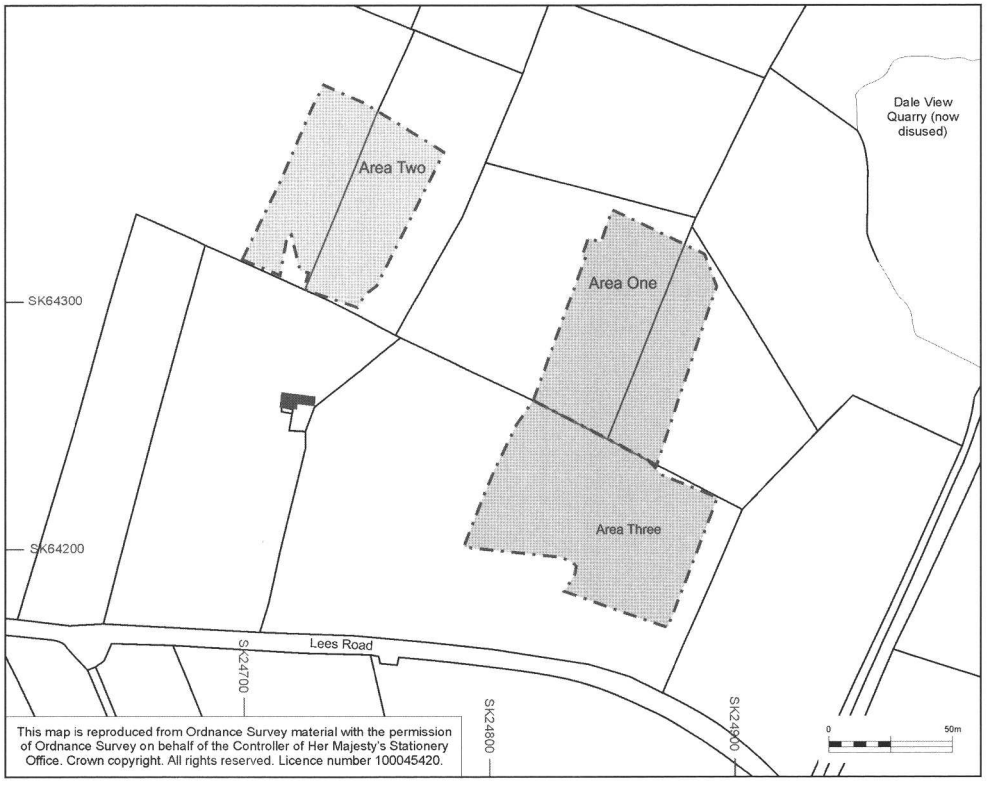

Fig. 2: Site plan showing the location of the three trenches.

Trench 1 (Figs 3, 5–6)

The topsoil at Dale View was a sandy loam. As expected, due to the elevation of the site, the overburden was reasonably shallow and in places directly overlay the outcropping sandstone brash and bedrock. In areas where the sandstone did not outcrop directly below the topsoil, there was a natural sandy substratum which formed the top of the first archaeological horizon containing cut features.

Portions of each trench, when stripped, exposed the natural fractured stone brash across which it was impractical to hand clean to maximise identification of features. Following consultation with the Peak District National Park Authority Conservation Archaeologist, these areas were subjected to a thorough walkover and visual inspection. The only archaeological features observed in these areas were F1065 in Trench 1 and F2053 in Trench 2.

Post-built structure and associated hearths

A post-built structure (Fig. 4; Plate 1) was exposed, which comprised six heavily truncated postholes (F1013, F1015, F1017, F1023, F1025, F1073), a stakehole (F1075), and two hearth features (F1019, F1021). All of the postholes were heavily truncated

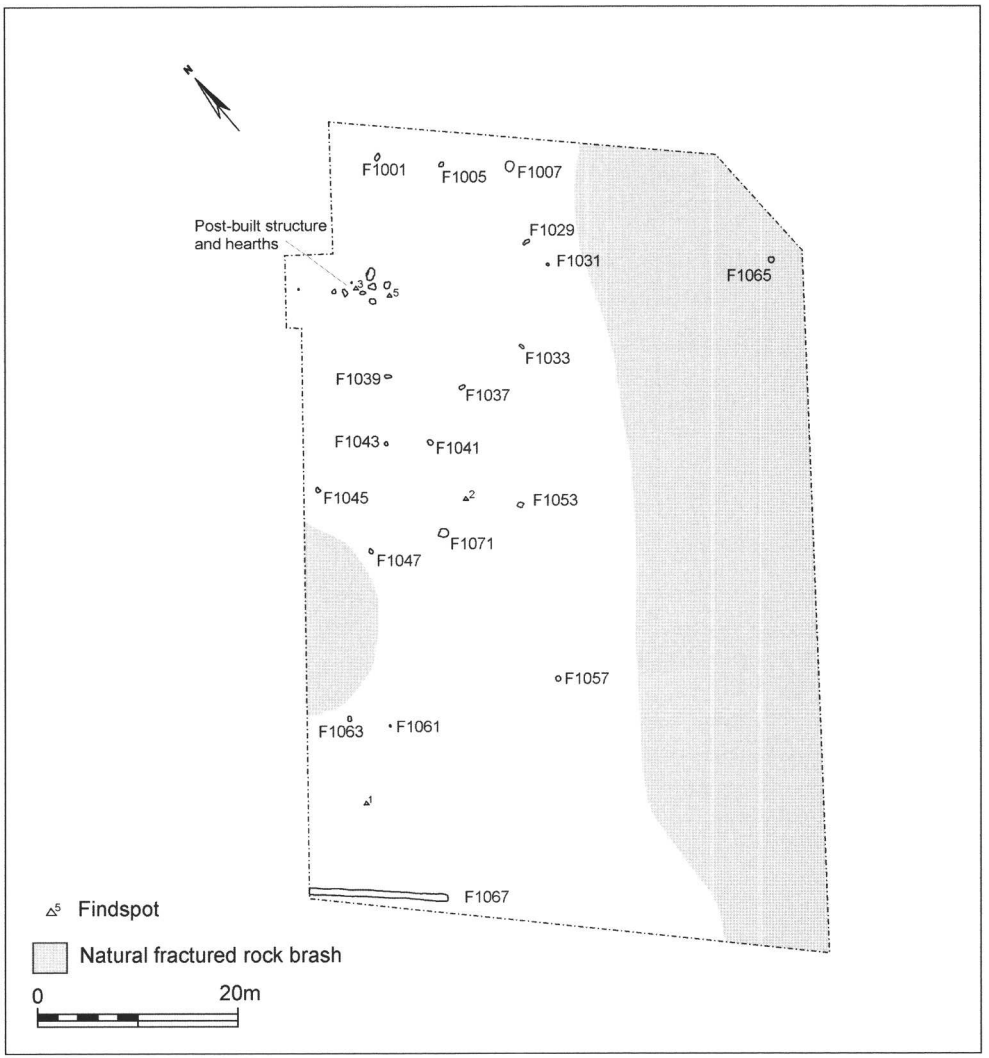

Fig. 3: Plan of Trench 1 showing location of all features.

with only the very base of their fills surviving. Five of the postholes (F1013, F1015, F1017, F1023, F1025) were clustered in a 'T' formation aligned east-west and were all of similar dimensions with F1015, F1023 and F1025 the most regular in plan, being sub-circular or sub-oval. F1013 and F1017 were more irregular.

A final posthole (F1073) lay *c.*3.5m further to the west and it was unclear whether this posthole was a part of the same structure. F1073 was circular in plan, smaller than the other posthole features described, and also survived to a greater depth below the top of the archaeological horizon than the other features within the structure. Posthole F1073 contained a Neolithic flint end scraper (see lithics report below: find 10).

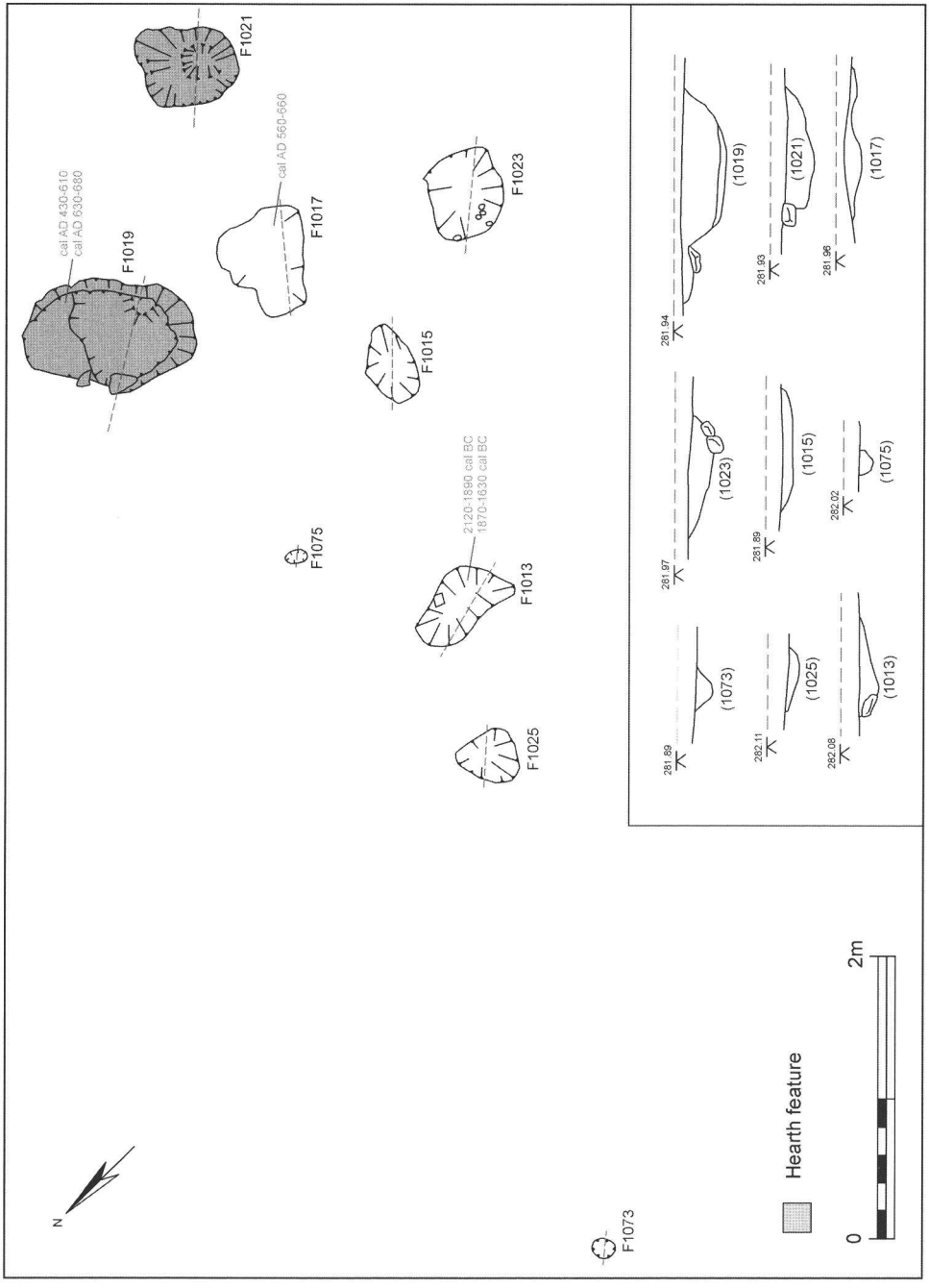

Fig. 4: Overall plan and individual feature sections of post-built structure in Trench 1.

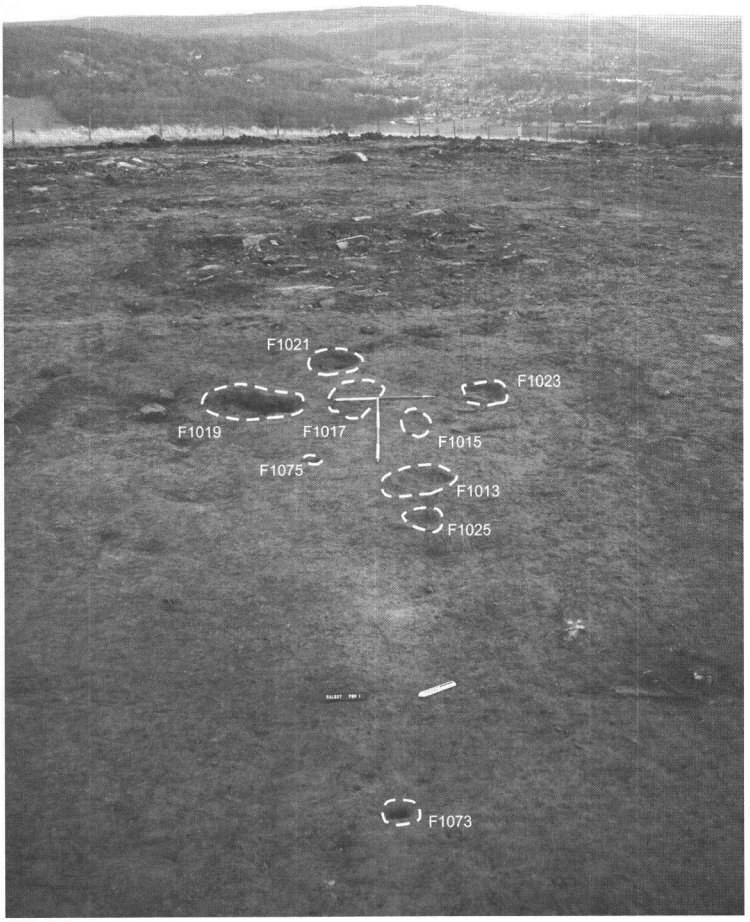

Plate 1: Post-built structure post-excavation with two large associated hearth features — F1019, F1021 facing north-east. (Scale = 2m × 1m).

Postholes F1013 and F1023 contained small quantities of medium-sized angular/sub-angular stones which were poorly sorted and may represent some form of packing material, although no obvious post pipe was evident in the section of either feature. F1013 also contained a larger flat stone in the top of the section which may have represented a post pad. While a stone post pad would be expected at the base of the fill, the severe truncation of the site meant that the features observed were probably the basal remains of what were once deeper features. Posthole F1015 had a more scoop-shaped profile in section than the other postholes forming the structure and this truncation leaves interpretation of this feature ambiguous. It is possibly a small truncated pit, but it could equally represent a round-based posthole. F1015 contained a

small piece of fired clay or daub (see ceramics report below: find 15) and a possible flint knife dating to the Neolithic (see lithics report below: find 3).

Features F1019 (Plate 2) and F1021 to the immediate north and east of the possible structure contained a large volume of charred burnt material and are interpreted as hearths. Both features were similar in form with a small depression in the base, though no difference in fill was observed, suggesting that this cut was made as part of primary usage and is not evidence of re-use. The fill of both features was sandy-silt, black in colour due to the quantity of charred material in the fill. Both features contained 2–3 large stones, but these did not show any signs of burning *in-situ*, and were not of a size or form to represent querns or other artefacts associated with food processing. The fill of F1019 gradually graded from a very dark brown to a black towards the base and, although recorded as a lower separate fill (1077), there was no clear demarcation between the two and for the purposes of analysis the fill was flotated as one context. The only finds from the hearth features were two small pieces of flint (see lithics report below: finds 6 and 7), from F1021.

The hearths' proximity to the possible structure suggests that together these represent one associated phase of activity on the site; this association was one of the key questions identified for the radiocarbon dating programme, which demonstrated that hearth F1019 and burning pit F1007 (see below) are contemporaneous with at least one of the postholes (F1017).

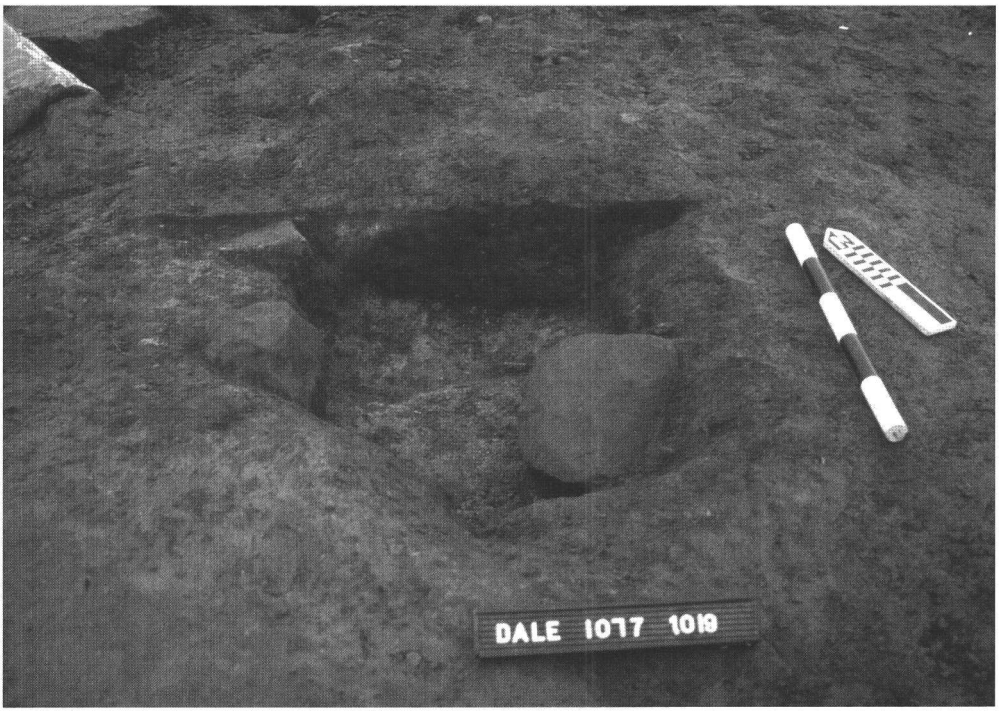

Plate 2: Hearth feature F1019 showing section (scale = 0.5m).

Pits

The pit features across Trench 1 (Figs 5 and 6) were similar in form, varying between sub-circular and sub-oval with a few displaying an irregular plan form. All the deposits encountered were also similar, containing a sandy fraction, and none displayed unusual cut features. The only pit feature of note in Trench 1 was F1007. This pit was sub-circular in plan with shallow near-vertical sides and contained evidence of *in situ* burning with a fire-reddened and fused base to the fill, and also a heavily burnt flint blade (see lithics report below: find 31).

Linear

Feature F1067 was a narrow (*c.*0.5m width) truncated linear feature running for 14m from the western trench edge to a rounded terminal (Fig. 7). The feature was shallow and no small finds or charred material was recovered from the fill.

Trench 2 (Figs 8–10)

A number of archaeological features were observed and excavated within Trench 2 but whilst there were 'clusters' of pit and stakehole features, none formed a coherent arrangement or observable structure. The two main 'clusters' were an arc of four small pits against the western trench section (F2017, F2019, F2021, F2023), and a group of two pits and two small stakeholes in the southern area of the trench (F2009, F2011, F2013, F2015). As with all features in Trench 1, it was evident that archaeological deposits on the site had been severely truncated and what survived represented only the basal portions of original features.

No small finds were recovered from features in Trench 2, although three sherds of prehistoric pottery were found in the northern end of the trench on the surface of the sandy substratum (002), close to features F2033 and F2035 during hand cleaning of that area (see ceramics report below: finds 15–17). A number of lithics were also recovered from the topsoil (see lithics report below: 13, 18–19, 35–37, 41, 43–47).

Postholes

Possible postholes in Trench 2 were identified on account of having a more steep-sided profile in section, in comparison to pit features which were more bowl-shaped (Figs 9 and 10). Due to the truncation of these deposits this interpretation is by no means certain and a number of those features categorised as postholes may actually represent small pits.

Stakeholes

Four stakehole features were observed in Trench 2 which had smaller, more circular plans than the postholes and were generally shallower with an average depth of 70mm (Figs 9 and 10). The fills of stakeholes were very similar in composition and colour to the fills of the posthole and pit features within Trench 2.

Pits

Pit features could be split into two general forms (Figs 9 and 10). The smaller pits tended to be oval or sub-oval in plan with rounded bowl-shaped profiles and were similar to the smaller pit/posthole features observed across the site. The second type of

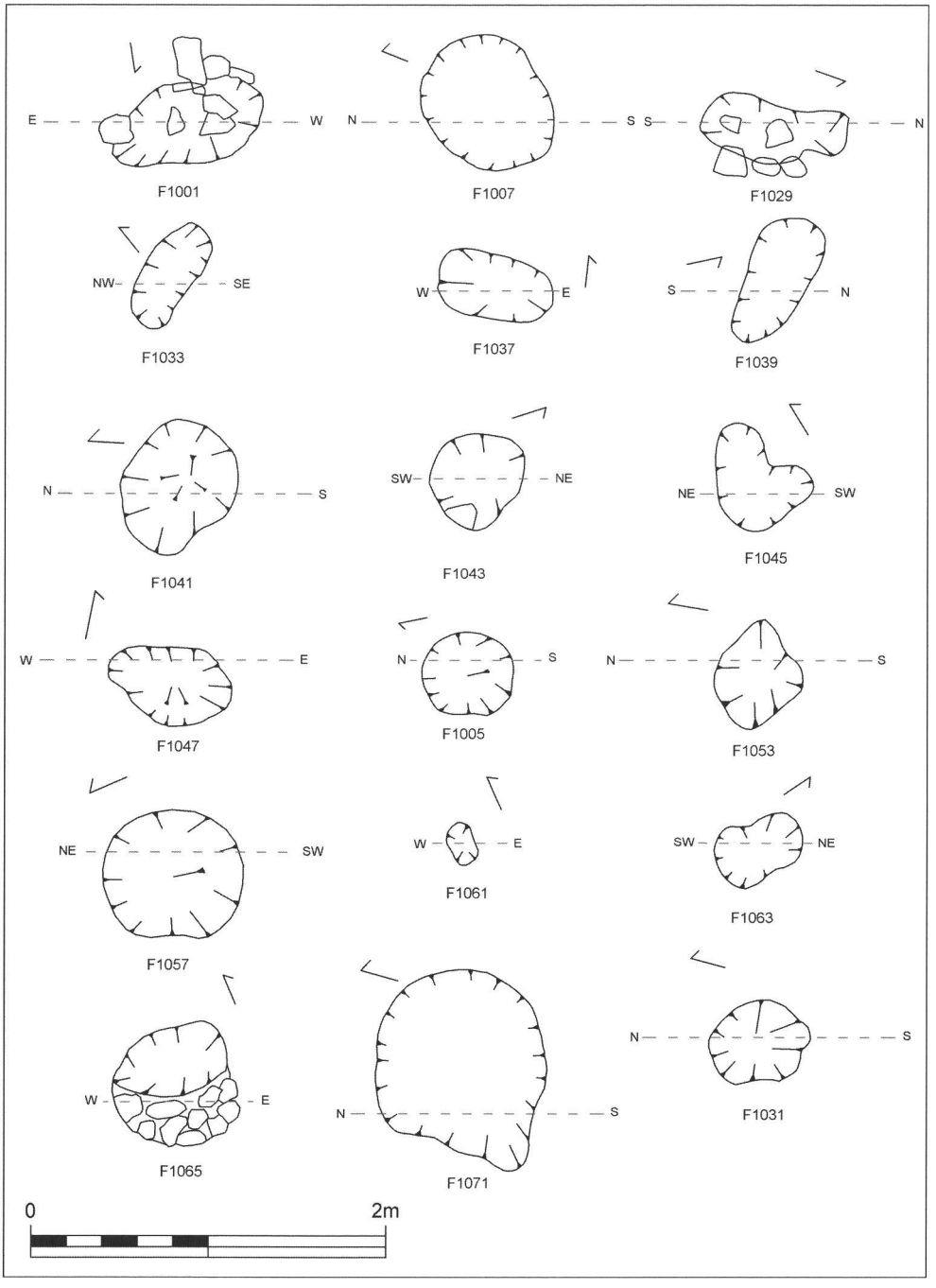

Fig. 5: Individual plans of the features within Trench 1.

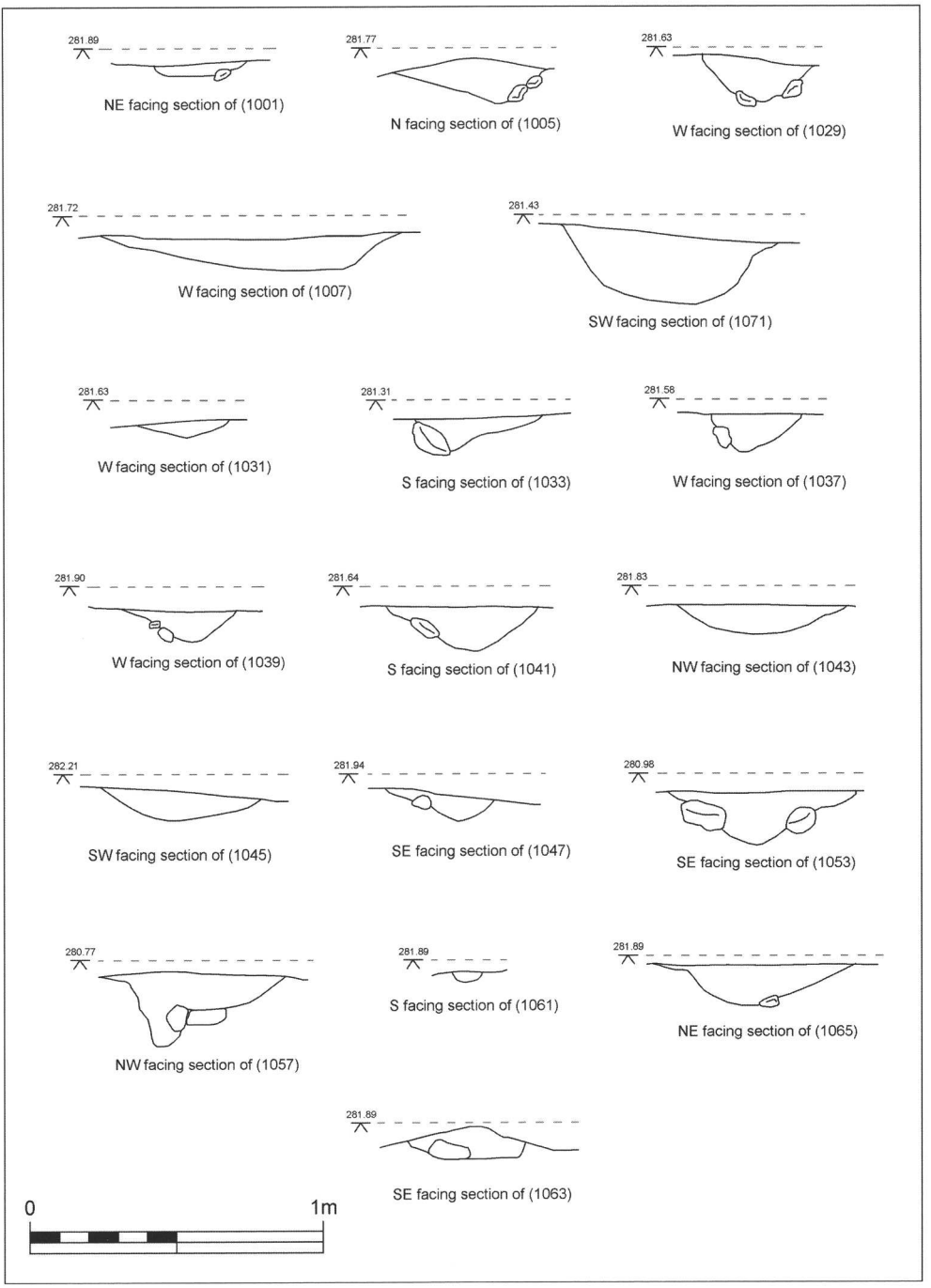

Fig. 6: Individual sections of the features within Trench 1.

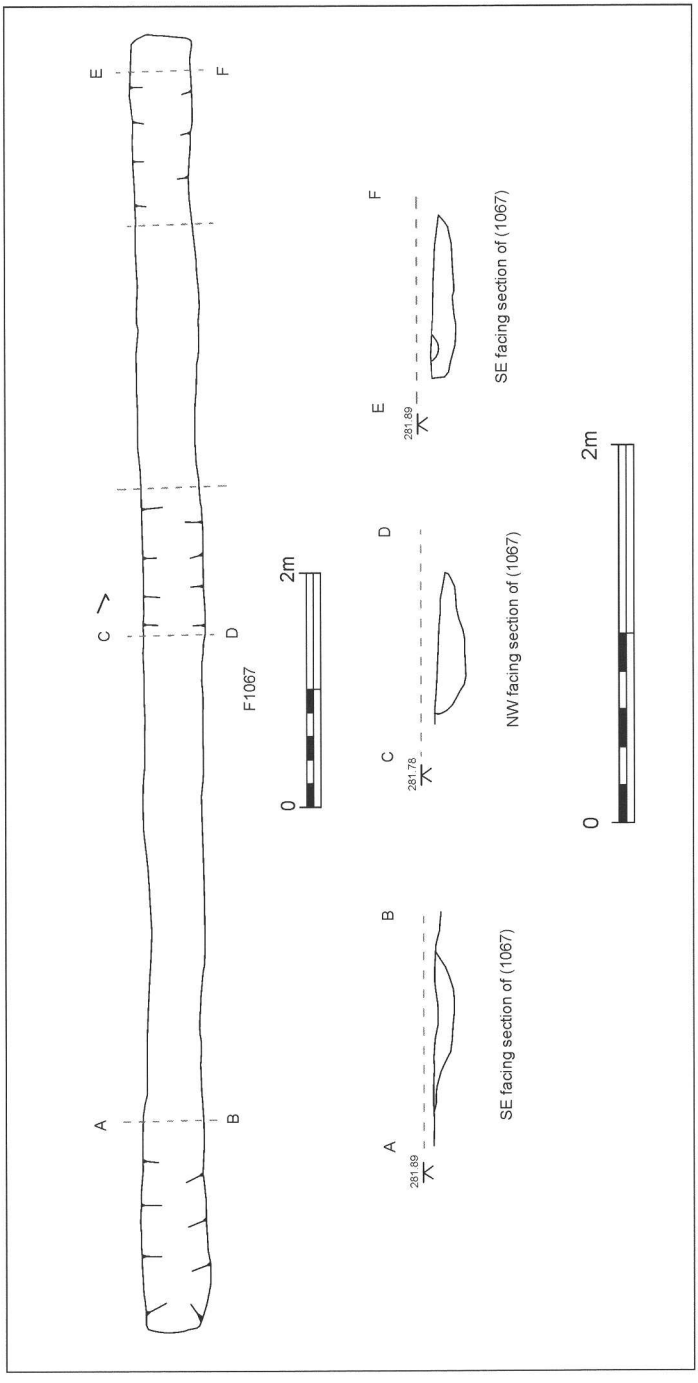

Fig. 7: Plan and sections of the linear feature F1067 in Trench 1.

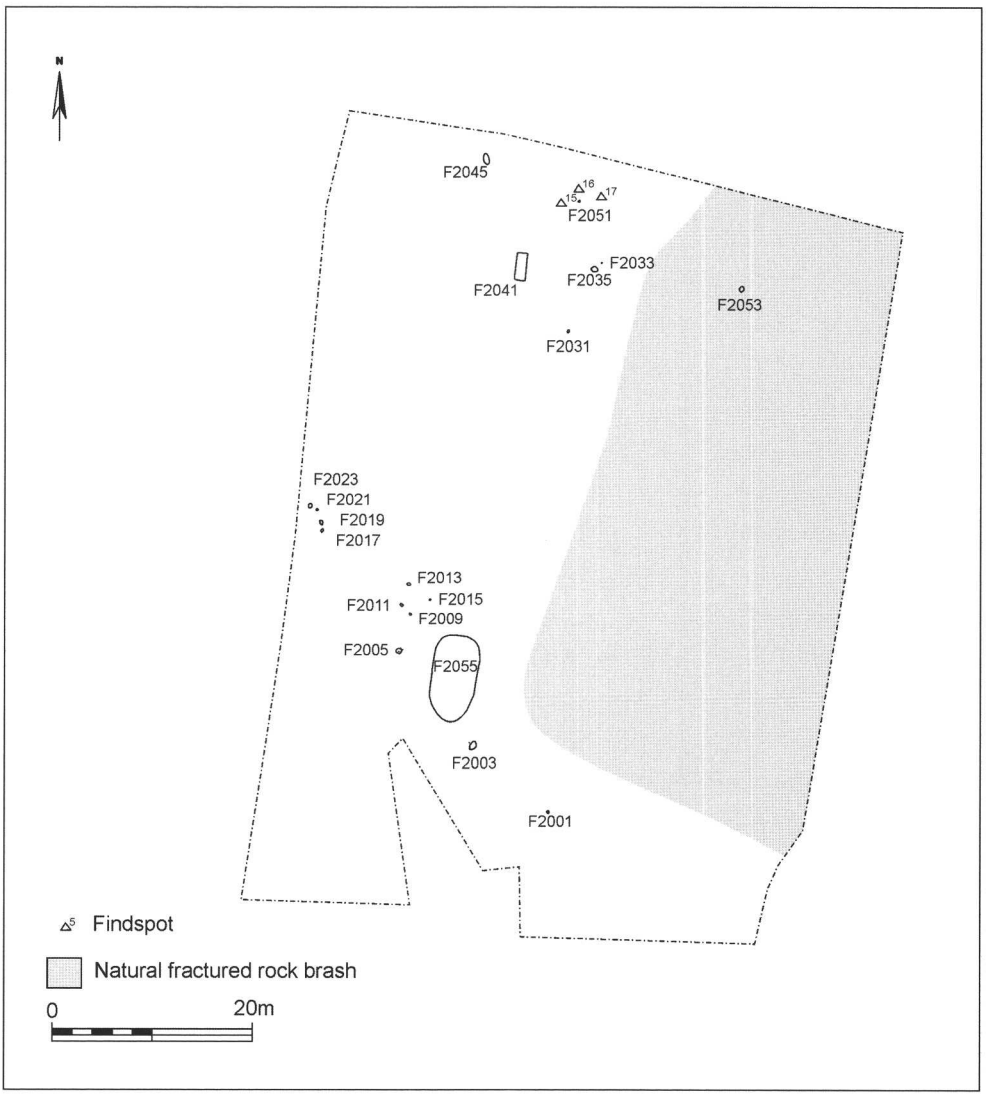

Fig. 8: Plan of Trench 2 showing location of all features.

pit was larger and roughly rectangular in plan. Three of these rectangular pits are not included here because modern material was found in the fill; a fourth rectangular pit (F2041), very similar in form and probably also modern in origin, is included because no evidence was found within its fill to support this.

Linear/Irregular Feature

Feature F2055 is included as a linear feature, although it could also represent a large irregular-shaped pit (Figs 8 and 10). At first this feature was interpreted as a natural

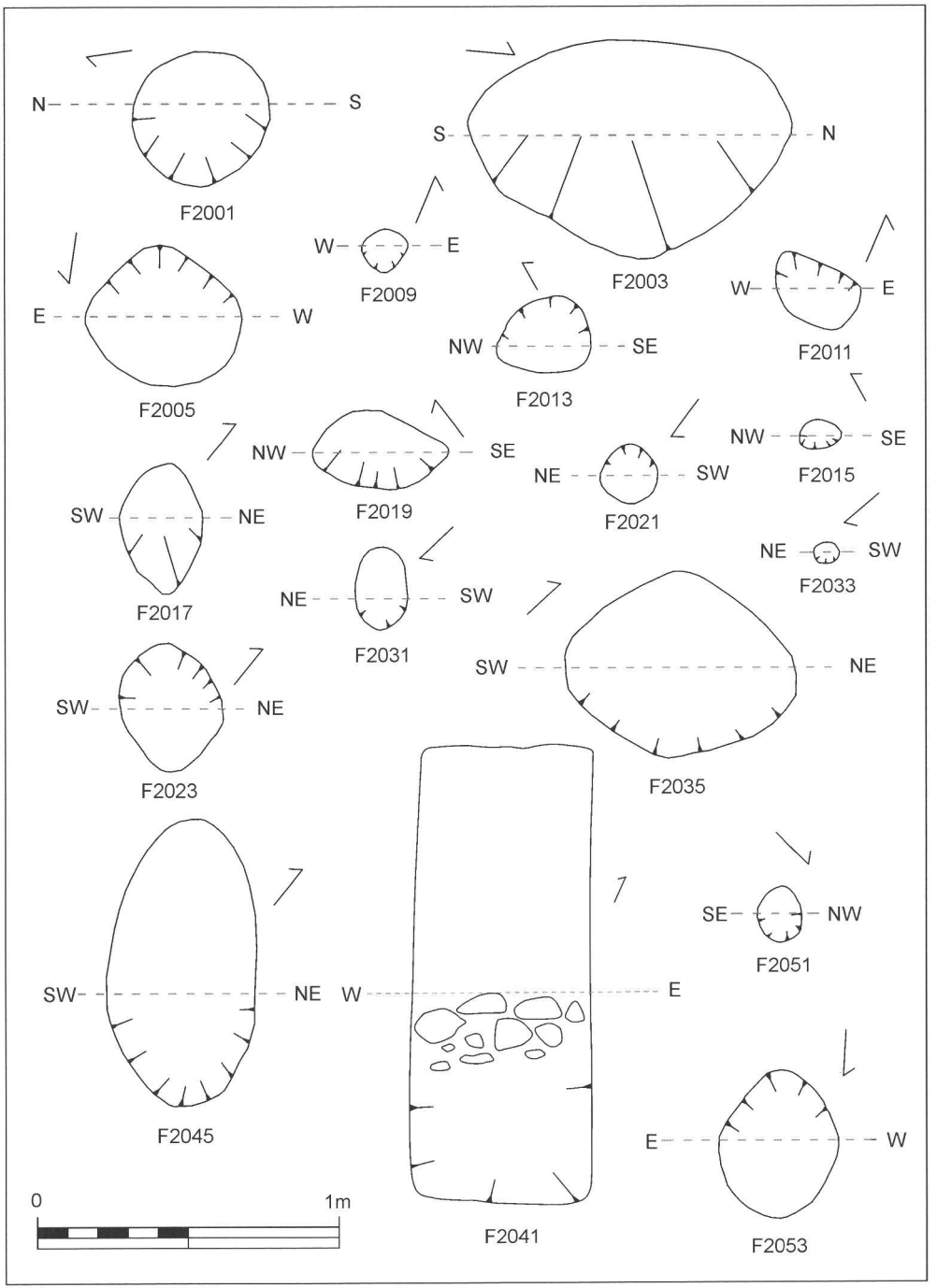

Fig. 9: Individual plans of the features within Trench 2.

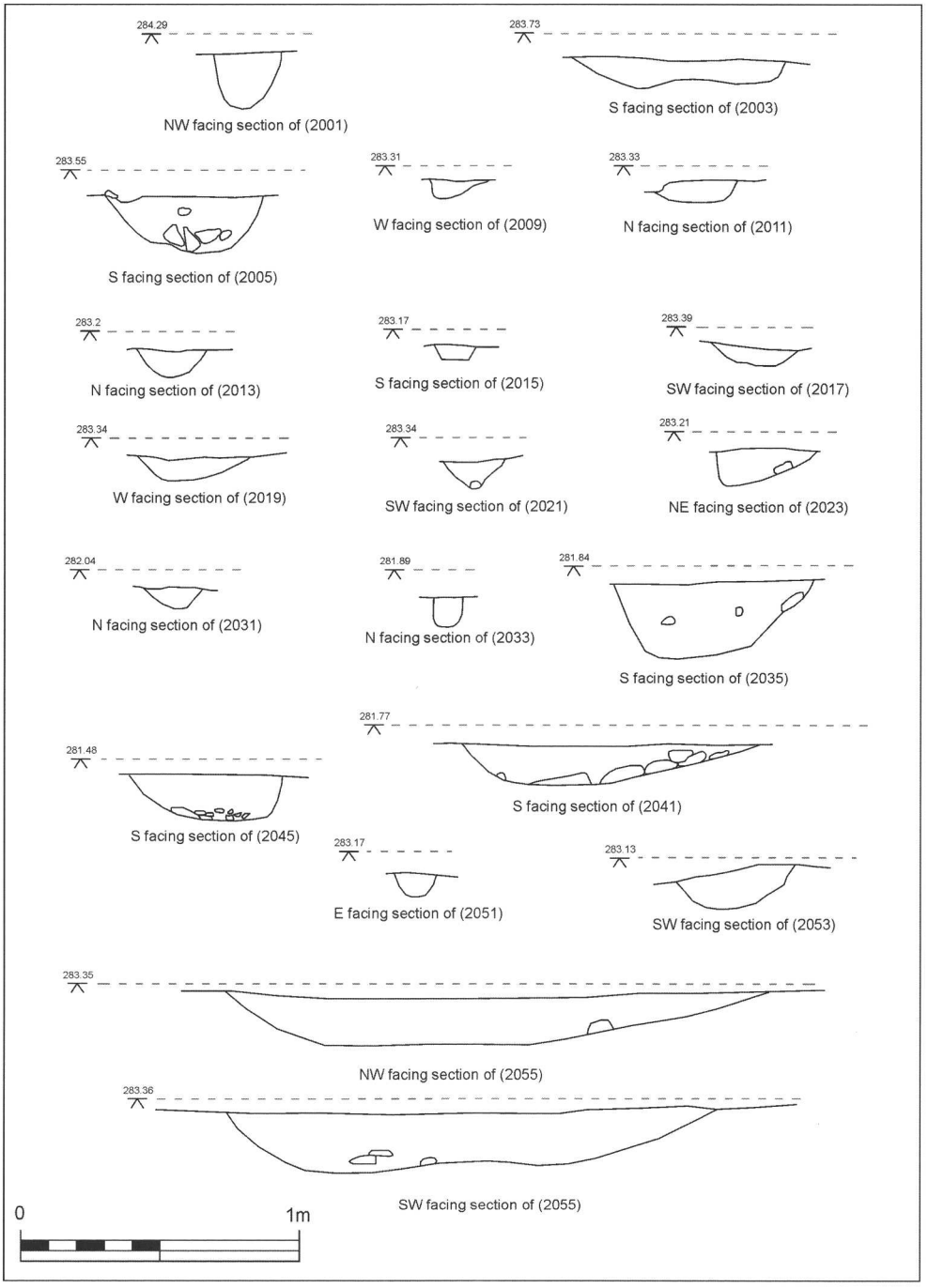

Fig. 10: Individual sections of the features within Trench 2.

deposit lying at the lowest point of Trench 2, also the lowest point of the site. However, a portion of this linear feature may represent an anthropogenic cut feature, as there was an ephemeral edge partially visible. It is this approximate cut which is shown as the extent of F2055 on the plan of Trench 2 (Fig. 8). The fill was a dark yellow-brown silty sand similar to the fills of other features excavated in this area; it also contained infrequent flecks of charred burnt material and some small fragments of modern ceramics and was interpreted as a modern intervention.

Trench 3 (Figs 11–13)

Linears

The principal features within Trench 3 were a series of long, shallow linear features in the south-east area of the trench. Two of these features were encountered and sampled during the evaluation trenching conducted on the site (Adams 2006, 6), features F3043 and F3047, and were found to be reasonably shallow measuring on average *c.*250mm from the start of the archaeological horizon. These two features ran roughly parallel north-east to south-west across the south-east area of Trench 3. During cleaning this area it was noted that the natural substratum between the two features was slightly more compacted than across the rest of the site, although it had the same sandy composition. Speculative interpretation could be that originally there was a form of trackway between the two linear features which has been lost through later agricultural processes.

In form, F3041 was different to the other linear features, as it comprised two parallel channels filled with the same deposit, as opposed to a single wide shallow ditch. The channel to the north-west is the deeper cut of the two and contained a graded fill at the base (3048) different to the upper deposit (3041). The lower deposit appeared to result from a mixing of the main fill with the natural substratum through bioturbation. The fill of F3041 contained fragments of post-medieval/modern ceramics, post-medieval clay pipe, and animal bones showing signs of modern butchery (see non-prehistoric finds report below: finds 23, 24, 48, 49, 50, 51). A tentative interpretation for these linear features is that they represent the truncated remains of trackways across the moor perhaps in use in the post-medieval period as routeways to small sandstone quarries in this area.

The close association and similarities of form and fill between all the linear features suggests they are related and that, therefore, a tentative post-medieval/modern date for all these linear features seems probable.

Pits

The pit features identified in Trench 3 were noticeably different in compaction and composition to those excavated in Trenches 1 and 2 (Figs 12 and 13). Whilst all the fills were similar in colour and basic composition to each other, and to features from the other trenches, they contained a higher proportion of bulky charred material and were all of a looser consistency than the fills in Trenches 1 and 2. There were no small finds from the pits in Trench 3 and so no date range can be attributed; although their proximity to post-medieval/modern features, and their notable differences with prehistoric features in the other two trenches, could suggest a more modern date.

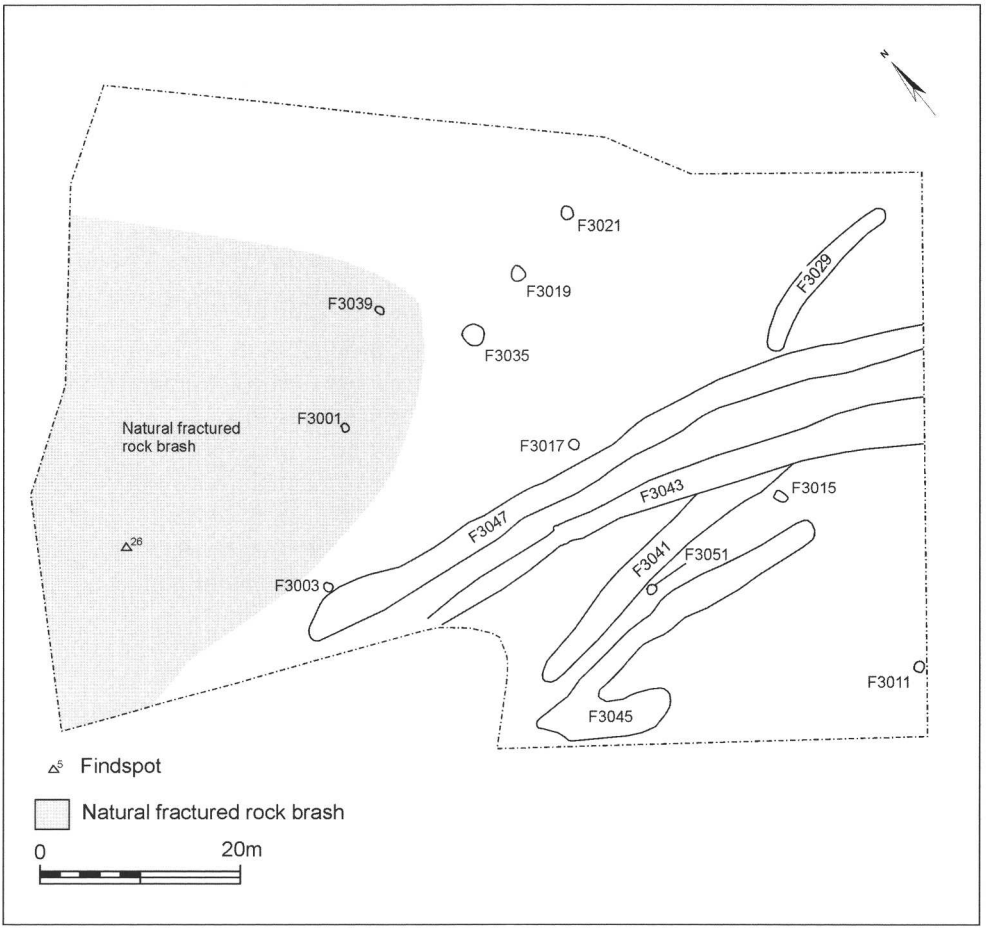

Fig. 11: Plan of Trench 3 showing location of all features.

THE FINDS

Lithics by Clive Waddington

Introduction

A total of 29 lithics was submitted for analysis from a range of contexts from Trenches 1–3. Most were retrieved from the unstratified topsoil and the contact zone between the top of the sandy substratum and base of the overlying topsoil. Those from the unstratified topsoil were bagged by trench whilst those from the top of the substratum and from archaeological features were point referenced. A catalogue with details of each lithic piece is in the archive. Measurements are given for complete pieces in accordance with lithic recording conventions (Saville 1980). Although the assemblage appears relatively small (29), a large proportion of these pieces (34%) are formal tools that include many chronologically diagnostic pieces which allows some important

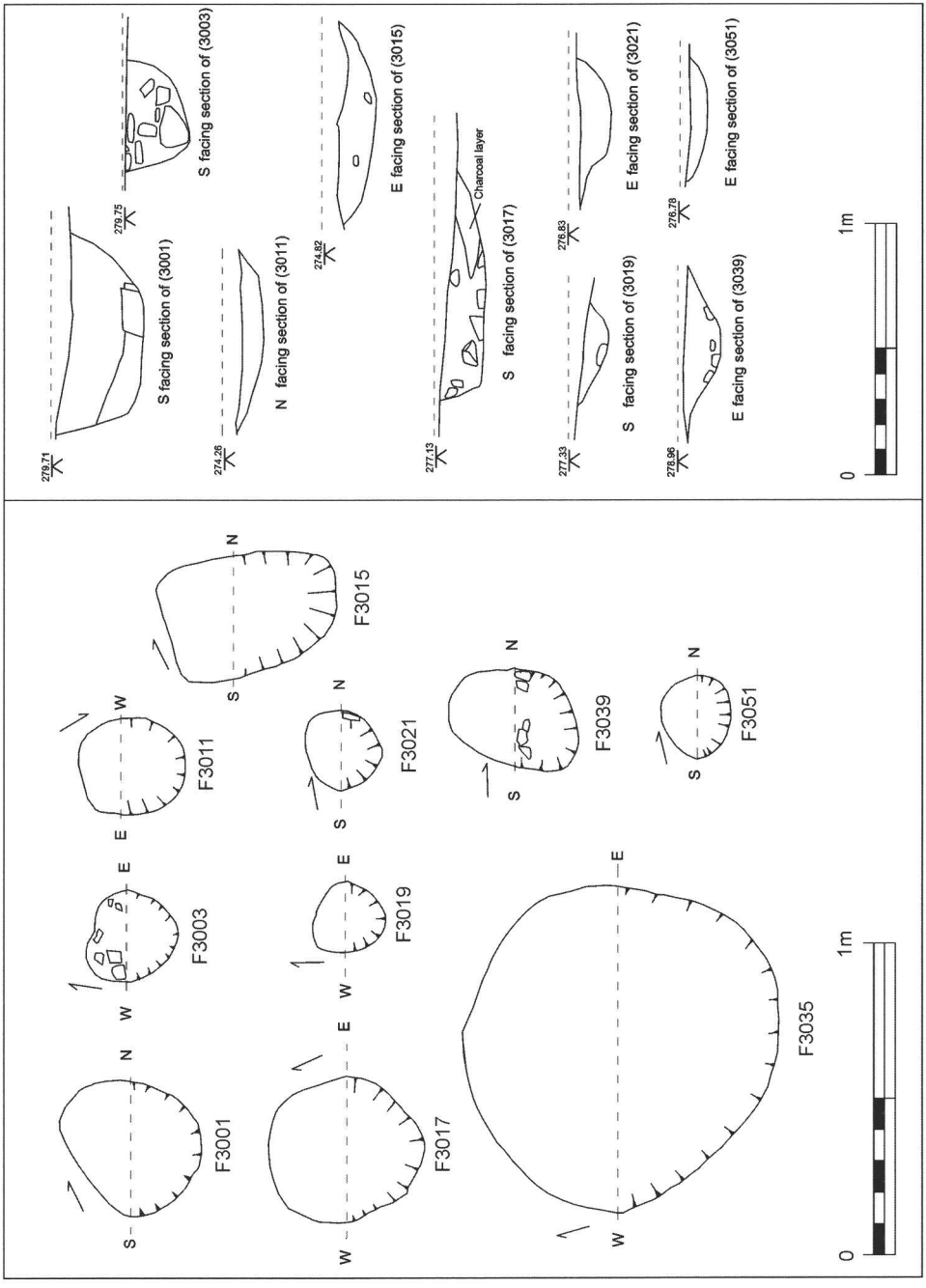

Fig. 12: Individual plans of the features within Trench 3.

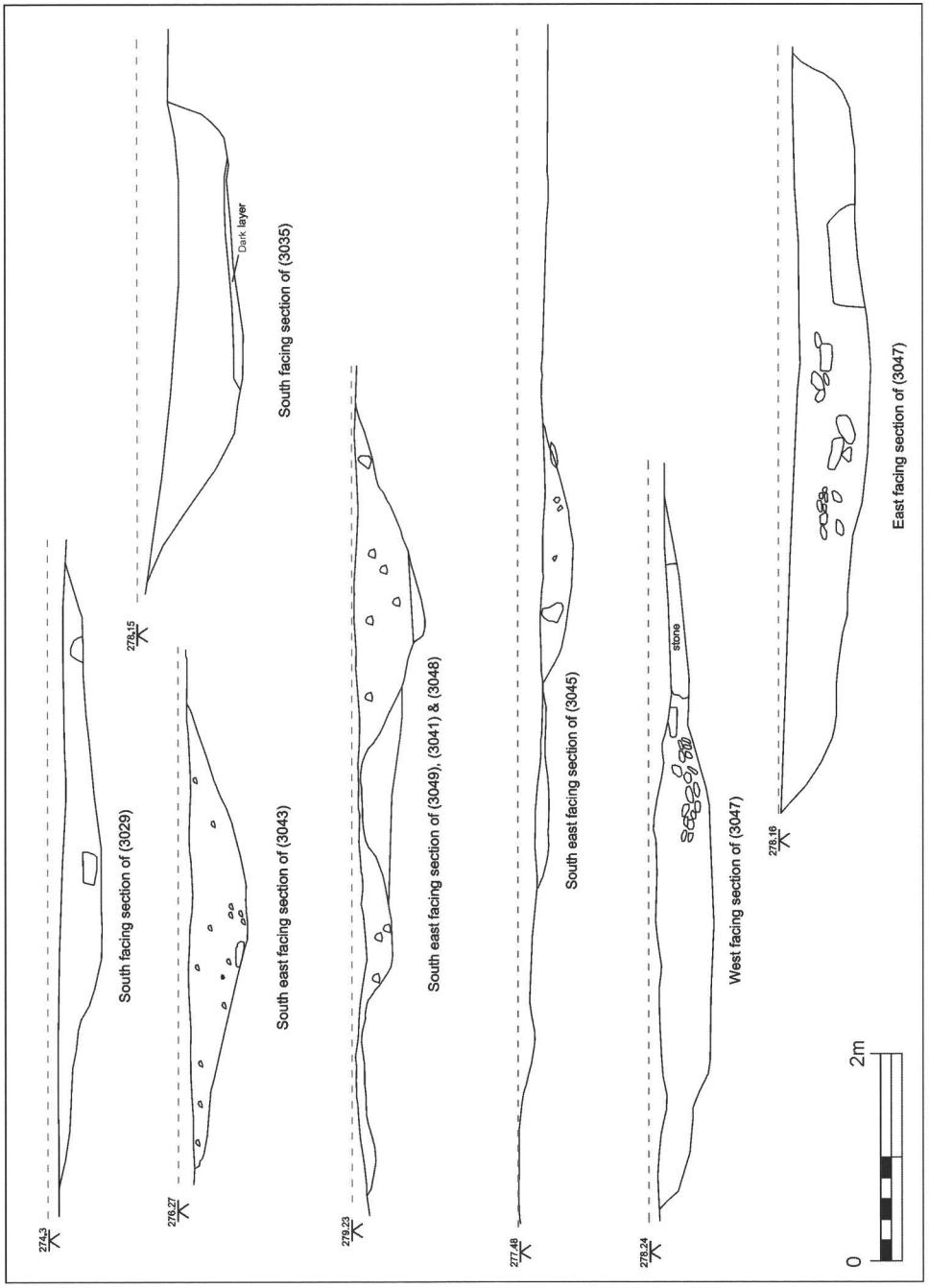

Fig. 13: Individual sections of the features within Trench 3.

inferences to be drawn from this assemblage. Selected pieces are illustrated (Fig. 14; Plate 3).

Chronology

There is both a Mesolithic and Neolithic component in the lithic assemblage with most of the Mesolithic and probable Mesolithic material occurring in Trench 2, whilst most of the Neolithic material occurs in Trench 1 and appears to be spatially associated with the area around the post-built structure. The Mesolithic material is represented by a platform core (22) with microlithic blade scars resulting from the production of narrow parallel-sided bladelet blanks. Such cores are typical on 'narrow blade' Mesolithic sites and, based on recent dating of narrow blade assemblages, could date from as early as *c.*8400 cal BC through to *c.*4000 BC (Waddington 2007). There is also a small stubby microlith (43) that does not conform to any of the typical snapped blade types. Such pieces are found on settlement sites, such as at Howick in Northumberland (*ibid.*, 83–5), and on the basis of the latter site could date from as early as *c.*7800 BC. There are a number of other probable Mesolithic pieces (e.g. 37, 39, 45) which include a bi-polar blade (45) struck off an earlier scraper-like tool, which could provide evidence for recycling, and therefore a frugal use of flint, during the Mesolithic.

Neolithic material is more amply represented (e.g. 1, 2, 3, 8, 10, 19, 26, 27, 35) and includes classic diagnostic forms such as a leaf-shaped arrowhead (1), a variety of scrapers including end and a 'D'-shaped side scraper, as well as retouched and utilised blades and a possible knife (3). The leaf-shaped arrowhead is interesting as it has been produced using unifacial retouch only, and this is something that has been observed by the author in other Neolithic assemblages. It is possible that these are very early forms of leaf-shaped arrowhead because they display the more typical 'Mesolithic' habit of unifacial retouch but on a distinctive Neolithic form. The Neolithic pieces recovered from Dale View sit most comfortably in an Early Neolithic context and are thought most likely to date from *c.*4000–3000 cal BC.

One of the more interesting pieces is the Mesolithic platform core (22) which utilises a previously chipped artefact. In fact this recycled piece had acquired a thick patina by the time it was rechipped in the Mesolithic implying that it had first been worked sometime in the Palaeolithic. This provides two important insights: firstly that Palaeolithic activity took place somewhere in the vicinity of the Dale View site and secondly, that Mesolithic groups using the Stanton Moor area undertook opportunistic collection and reworking of locally available material. In contrast to the Neolithic preference for imported material this indicates that Mesolithic groups were more self-reliant and used raw materials close to hand as well as recycling pieces in a frugal way. This habit has been recognised in other Mesolithic assemblages across northern England (Waddington 2004) and suggests that self-reliance was an important feature of Mesolithic economic and social organisation.

Distribution

The lithics distribution reveals a degree of patterning. Of five Mesolithic or probable Mesolithic flints, four occurred in Trench 2 and one in Trench 3. Of eleven Neolithic or probable Neolithic pieces, six occurred in Trench 1 close to or in deposits associated with the posthole and hearth defined structure, three occurred in Trench 2 and two

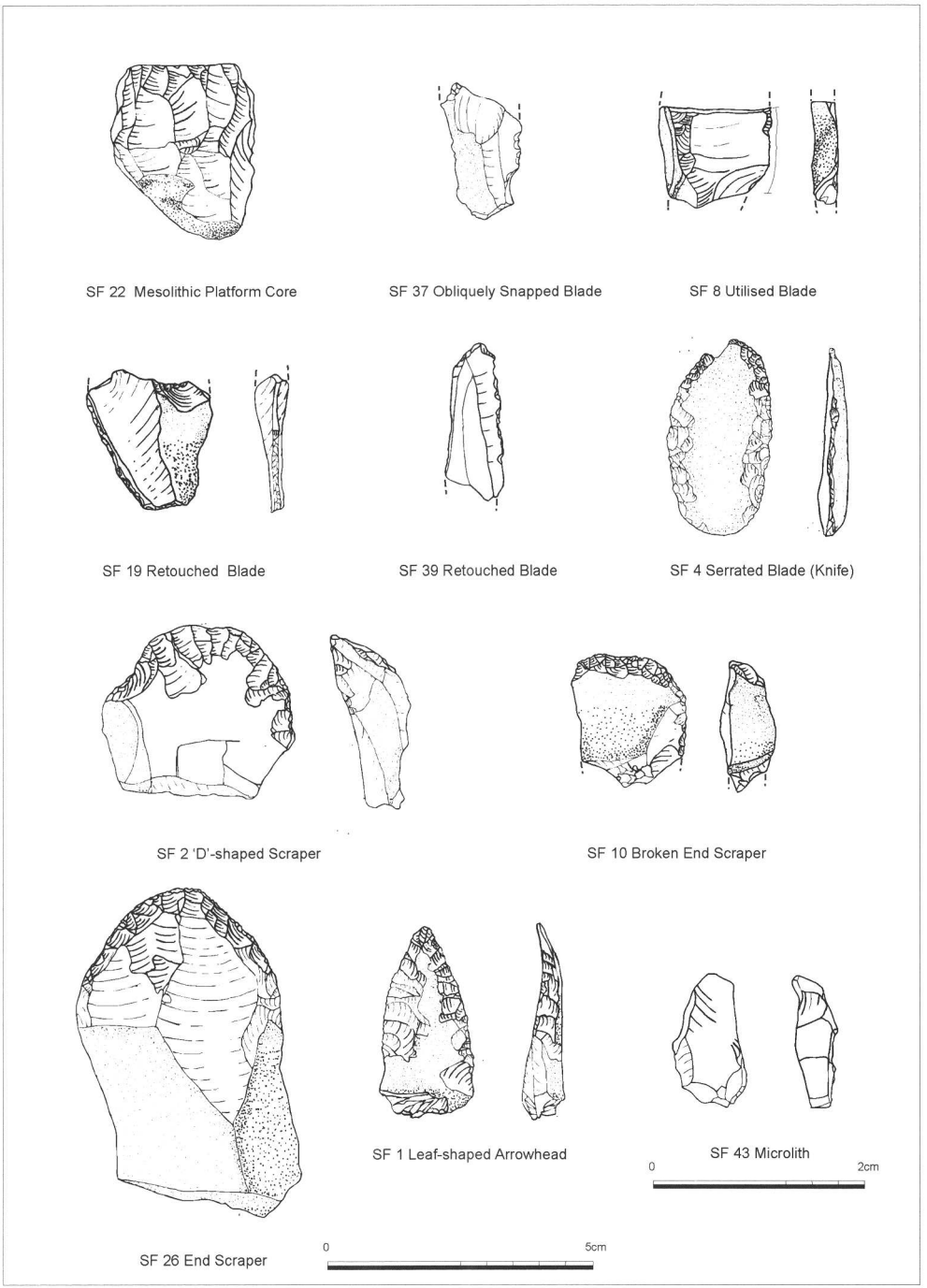

Fig. 14: Selection of the Neolithic tools from Dale View.

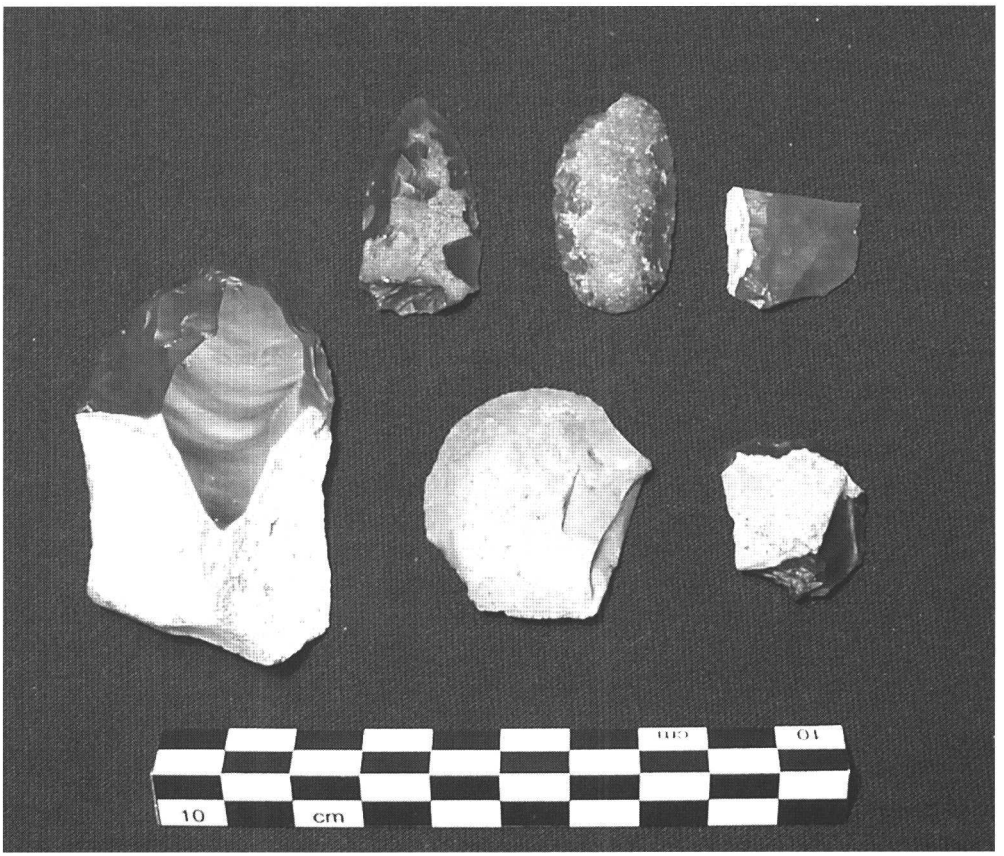

Plate 3: A selection of lithic artefacts from Dale View. Clockwise from left: 26 end scraper, 1 leaf-shaped arrowhead, 3 serrated blade/knife, 8 broken utilised blade, 10 broken end scraper, 2 'D'-shaped scraper (scale = 10cm).

in Trench 3. The Mesolithic material appears to focus around a flat shelf set back from the edge of the hillside in Trench 2, whilst the Neolithic material is more widely distributed across the site. This could imply slightly different preferences for locating activities between the two periods, with the Mesolithic activity being in a slightly more sheltered location, and presumably within a woodland setting, whereas the Neolithic activity was located closer to the breaks of slope in more exposed positions affording wide views as well as a place that could be seen from a distance. However, the assemblage is small and the patterning therefore tentative and such an inference must remain only a possibility based on the current evidence.

Raw material

The lithics are predominantly of flint (24), although some are of chert (5), which equates to 83% and 17% of the assemblage respectively. The Neolithic flint pieces are generally of very high quality and include a relatively large proportion of tools made on

nodular flint (as indicated by the survival of patches of chalky cortex on many of the surfaces) imported to the area. The nearest sources are the Yorkshire and Lincolnshire Wolds and East Anglia, and some of the flint is of such high quality (e.g. 8, 10, 19, 26, 27, 32) that it may be the prized 'floorstone' flint obtainable from Neolithic flint mines in Norfolk (Barber *et al.* 1999). The presence of nodular flint indicates that an exchange system existed in the Neolithic which allowed groups inhabiting the Peak District to obtain materials from distant sources. With the exchange of materials there must also have been an exchange of ideas giving Neolithic groups in the Peak District access to widespread communication networks. In contrast, the Mesolithic pieces, or probably Mesolithic, occur on flint of more local origin, probably collected from river valley fluvio or fluvio-glacial deposits, as indicated by the surviving cortex on some pieces.

Flaking and manufacture

The assemblage displays evidence for the use of both hard and soft hammer flint working, with most retouch being unifacial. Manufacturing tradition in both Mesolithic and Neolithic material relies on a blade-based technology, although Neolithic pieces tend to be larger. The concern for producing parallel-sided blades is a characteristic common during both the later Mesolithic and Early Neolithic (Pitts and Jacobi 1979), and this assemblage is in keeping with this wider trend. A few hinge fractures are evident, suggesting some flawed nodules and/or novice flaking, and there is one example of a bi-polar blade struck off using the hammer and anvil technique.

Types

A wide range of tool types are present (Table 1).

The lithics ascribable to a point in the core reduction sequence revealed a relatively even distribution between secondary (14) and tertiary (11) reduction stages but no material belonging to the primary stage of the sequence. This means that primary flint working and acquisition did not take place at or around the site; and the very high proportion of tertiary material indicates that the site formed a locale where processing activities took place.

Type	**Number**
Core	1
Chip	2
Flakes	7
Blades	9
Utilised Blade	2
Retouched Blades	2
Serrated Blade (knife?)	1
Scrapers	3
Arrowhead	1
Microlith	1
Total	29

Table 1: Dale View Quarry: summary of lithic types.

The presence of processing tools, such as retouched and utilised blades (8, 19, 27, 39), including a probable knife (4), end scrapers (10 and 26) and a'D'-shaped scraper (2) and an arrowhead (1), suggests a wide range of activities, which are usually taken to indicate settlement sites (Schofield 1991; 1994). The presence of scrapers suggests that hide preparation and working was an important activity while the arrowhead and probable knife indicate tasks such as hunting and other processing activities.

Discussion

The site has evidently been visited over a long period by Stone Age people including Mesolithic and Neolithic groups. Continued interest in this locale no doubt reflects the strategic importance of a location which commands wide views especially to the south along the Derwent Valley.

During the Mesolithic local acquisition and recycling of flint, and possibly chert, took place. This suggests Mesolithic groups were largely self-sufficient and obtained most of their raw materials from relatively local sources.

The Neolithic assemblage from Dale View Quarry contains a high proportion of tools and this equates directly with other small upland Neolithic sites, such as that excavated near Bolam Lake, Northumberland (Waddington and Davies 2002). Most of the Neolithic pieces are made on imported nodular flint that must have travelled to Dale View by way of long distance exchange networks. The low density of material and absence of primary waste, together with the high tool count, suggest that this locale may have been used as a habitation site for a small Neolithic group (Table 2).

Activity	Density	Primary Waste	Tools	Cores
Settlement	Low	Low	High	High
Industrial	High	High	Low	Low

Table 2: Schofield's 'Expected assemblage characteristics for domestic and industrial areas assuming a policy of extra-home range production' (i.e. where flint is imported from a source area some distance from the main settlement area) (1991, 119).

Prehistoric pottery by Clive Waddington

Introduction

A very small assemblage of prehistoric pottery was recovered from the topsoil and pit features in Trenches 1 and 2. There are six sherds, including three sherds probably belonging to the Early Neolithic Carinated Bowl/Plain Ware series (3, 16 and 17), two undiagnostic crumbs (54 and 15) and a small piece of fired clay or daub (5).

The ceramic assemblage from Dale View Quarry is very small but the probable presence of Early Neolithic pottery corresponds with the lithic evidence which demonstrates the presence of early farming groups on the gritstone uplands of the Peak District. Neolithic activity is well documented on the limestone plateau but little is known of how the surrounding gritstone hills were utilised at this time and the presence of Neolithic ceramics on the Stanton Moor gritstone massif would be an important

addition to our knowledge of the first farmers in the region. The lithic assemblage from the site is dominated by Early Neolithic forms and suggests Early Neolithic habitation in this location. The three sherds are all from different vessels, whilst the two crumbs may or may not be from two different vessels but they are too fragmentary to determine. The piece of daub was from posthole feature 1015 which forms part of the posthole-defined structure in Trench 1.

Neolithic pottery

One of the sherds (3) (Fig. 15) displays the typical attributes associated with Early Neolithic Carinated Bowls and related pottery with a well-fired highly burnished fabric, a thickened rolled-over rim and the beginnings of a very slack shoulder detectable below; others show a rounded profile (e.g. 16) and an absence of decoration (Gibson and Woods 1997, 175–8).

The three fabrics all contain small crushed stone inclusions as an opening agent up to 3.5mm across. These inclusions have clearly been specially prepared for the purpose and are usually made out of sandstone. The fabrics are, generally, evenly fired throughout making the pots strong and durable. The three vessels are relatively thin-walled ranging between 5mm and 8mm in thickness and it should not be assumed that all are necessarily from the Carinated Bowl tradition. The consistent colouring on each pot indicates an even firing process which is likely to have taken place in a reducing atmosphere given the dark colour of many of the sherds. The ceramics are quite finely made and have a highly burnished finish on both the inner and outer surfaces, with grass-wiping visible on one (16).

Discussion

Carinated Bowls typically date from the period 3900–3600 cal BC (e.g. Sheridan 2007) which would tie in with the broad attribution of many of the Neolithic flints found on the site. This represents the earliest phase of the Neolithic in Britain suggesting that even the high moors of the Peak District were settled and utilised by the first farming groups. The presence of ceramics suggests a certain degree of sedentism as manufacture and use of ceramics does not lend itself to highly mobile ways of life. Whether the Neolithic occupants of the site were transitory herding groups or more settled agriculturalists, the presence of ceramics suggests that occupation was more than just an overnight stay.

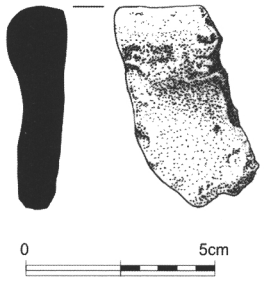

Fig. 15: Pottery rim sherd from Dale View.

Non-Prehistoric small finds

Clay pipe

Three fragments of broken post-medieval clay pipe were recovered. The first piece, find number 21, a broken bowl, was recovered from the fill of linear feature F3041 (3041). Find numbers 29 and 52 are both broken stems; one was found in an unstratified context in Trench 3 and the other in the topsoil of Trench 1.

Post-Medieval/modern pottery

Six fragments of china or pottery dating from the post-medieval to modern periods were also found; one in topsoil in Trench 1; three in fill of linear feature F3041 in Trench 3; and two in context 2055 in Trench 2.

Animal bone

Three fragments of animal long bone were recovered from within the fill of linear feature F3041 (3041). Two are sawn off at one end, typical of a bone which has been obtained from the butcher, suggesting that these are modern finds.

Archaeobotanical assessment

A preliminary assessment on the flot samples from the post-built structure by Palaeoecology Research Services Ltd revealed small fragments of largely unidentifiable charcoal to be the only ancient biological remains. Further analysis on the flot samples from the two hearth structures was undertaken by Archaeological Services Durham University (see below).

Hearth features within post-built building by Dr Helen Ranner

Methodology

The flots were examined at ×40 magnification. The soil from this site is free-draining, therefore only carbonised plant material will have been preserved; any uncharred plant remains would be later intrusive material and have not been included in this analysis. Identification of the charred plant remains was undertaken by comparison with modern reference material held in the Environmental Laboratory at Archaeological Services Durham University. Plant taxonomic nomenclature follows Stace (1997).

Results

The flots were large in volume (1000–1600 ml), and consisted almost entirely of small pieces of oak timber charcoal, with occasional clinker and charred plant rhizomes (underground stems). Very small amounts of hazel and birch charcoal were also present in context (1019). Single seeds from wide niche taxa were recorded in each context. Modern material, consisting of roots, a few uncharred seeds, and insect remains was also present. The hazel and birch charcoal in context (1019) is suitable for radiocarbon dating (Table 3).

Discussion

The contents of the flots from both contexts were very similar, consisting almost entirely of oak timber charcoal, with single seeds from wide niche taxa, and indeterminate rhizomes that may have been associated with plants such as sedges, ferns, or creeping

Context		1019	1021
Sample		29	28
Material available for radiocarbon dating		✓	–
Volume of flot (ml)		1600	1000
Flot matrix (relative abundance)			
Charcoal		5	5
Clinker		1	1
Insect		1	1
Roots (modern)		2	2
Uncharred seeds		3	3
Charcoal (g)			
(t) Betula spp (Birch)	charcoal	0.019	–
(t) Corylus avellana (Hazel)	charcoal (incl. roundwood)	0.055	–
(t) Quercus spp (Oak)	charcoal	350	238
Charred remains (total counts)			
(x) Fabaceae undifferentiated (Pea family)	seed	1	–
(x) Potentilla sp (Cinquefoils)	achene	–	1
Indeterminate seed		1	–
Indeterminate plant rhizomes		5	6

Table 3: Dale View Quarry: data from plant macrofossil analysis.
[t-tree; x-wide niche]. Relative abundance is based on a scale from 1 (lowest) to 5 (highest).

grasses. The notable difference was the presence of very small amounts of charcoal from hazel (0.016%) and birch (0.005%), in context (1019). The homogenous nature of both flots suggests that oak was selected, perhaps for its qualities as a slow burning wood with high heat production, as would have been preferred for activities such as pottery-firing, charcoal production or cremation. Alternatively, the uniformity could indicate that the charcoal derives from a single tree, or that it is the remains of burnt structural timbers.

The analysis provides no information about cereal production, agricultural practices or diet, due to the absence of charred macrofossils from food plants. The limited variety of plant macrofossil remains do, however, suggest the presence of local oak woodland, perhaps with ferns, creeping grasses or sedges growing on the woodland floor. Birch and hazel formed minor components of the woodland, growing either in open areas, for example at the woodland perimeter, or as understorey vegetation.

Radiocarbon dating by P.D. Marshall, C. Prior and C. Waddington

Introduction

Six single entity charcoal samples were submitted to Rafter Radiocarbon Laboratory, New Zealand in 2008. The samples were processed using the acid/alkali/acid protocol of Mook and Waterbolk (1985) and measured by AMS as described by Zondervan and Sparks (1997). The laboratory maintains a continual programme of quality assurance procedures, in addition to participation in international inter-comparisons (Scott 2003) which indicate no laboratory offsets and demonstrate the validity of the precision quoted.

Objectives and sampling strategy

The scientific dating programme was designed to achieve the following objective:

> *To provide estimates of the start, end, and duration of the activity associated with the post-built structure in Trench 1 and associated hearth feature.*

The first stage in sample selection was to identify short-lived material, which was demonstrably not residual in the context from which it was recovered. Four of the six samples were on *Corylus* (Hazel) charcoal; one on *Betula* (Birch); and the last on *Quercus* (Oak). While hazel and some birches are reasonably short-lived, none of the samples dated was 'ideal'. With regard to this site, however, the focus of the radiocarbon dating programme was on obtaining a general chronology so the suitability of the samples was not a factor. The taphonomic relationship between a sample and its context is the most hazardous link in the selection process, since the mechanisms by which a sample came to be in its context are a matter of interpretative decision rather than certain knowledge. Material was selected only where there was evidence that a sample was fresh on arrival in its context. The main category of material, which met these taphonomic criteria was charcoal – which is functionally related to its context (i.e. the hearth) and can reasonably be assumed to represent fuel.

Other samples were submitted with a less certain taphonomic origin and included material from the fill of post-holes; interpreted as relating to the use rather than the construction of structures, as suggested by experimental archaeology (Reynolds 1995). Where possible duplicate samples from these contexts were submitted to test the assumption that material was of the same age.

Results

Radiocarbon results (Table 4) are quoted in accordance with the international standard known as the Trondheim convention (Stuiver and Kra 1986). They are conventional radiocarbon ages (Stuiver and Polach 1977).

Calibration

Calibrations of the results are given relating the radiocarbon measurements directly to calendar dates (Table 4; Fig. 16). All have been calculated using the calibration curve of Reimer *et al.* (2004) and the computer program OxCal v4.0.5 (Bronk Ramsey 1995; 1998; 2001; in press). The date ranges cited in the text are those for 95% confidence and are quoted in the form recommended by Mook (1986), with the end points rounded outwards to ten years. The ranges quoted in italics are *posterior density estimates* derived from mathematical modelling of archaeological problems (see below). The ranges in plain type in Table 4 have been calculated according to the maximum intercept method (Stuiver and Reimer 1986). All other ranges are derived from the probability method (Stuiver and Reimer 1993).

Methodological approach

A Bayesian approach has been adopted for the interpretation of the chronology from this site (Buck *et al.* 1996). Although the simple calibrated dates are accurate estimates of the dates of the samples, this is usually not what archaeologists really wish to know.

Laboratory Number	Feature Number	Material & context	Radiocarbon Age (BP)	$\delta^{13}C$ (‰)	Calibrated date range (95% confidence)	Posterior Density Estimate (95% probability)
NZA-30312	F1013	Charcoal, *Corylus* sp. from posthole; structure 1	3622±30	–24.8	2120–1890 cal BC	–
NZA-30281	F1013	Charcoal, *Betula* sp. from posthole; structure 1	3415±30	–24.4	1870–1630 cal BC	–
NZA-30317	F1019	Charcoal, *Corylus* sp. from hearth ass. with structure 1	1515±25	–26.3	cal AD 430–610	*cal AD 530–630*
NZA-30311	F1019	Charcoal, *Corylus* sp. from hearth ass. with structure 1	1372±30	–24.8	cal AD 630–680	*cal AD 590–680*
NZA-30291	F1017	Charcoal, *Corylus* sp. from posthole; structure 1	1442±30	–25.4	cal AD 560–660	*cal AD 570–660*
NZA-30315	F1007	Charcoal, *Quercus* sp. from hearth pit	1486±25	–25.4	cal AD 540–660	*cal AD 540–640*

Table 4: Radiocarbon dates from Dale View Quarry.

It is the dates of the archaeological events, which are represented by those samples, which are of interest. In the case of Dale View, it is the chronology of the structure that is under consideration, not the dates of individual samples. The dates of this activity can be estimated by using not only the absolute dating information from the radiocarbon measurements, but also the stratigraphic relationships between samples.

Fortunately, methodology is now available which allows the combination of these different types of information explicitly, to produce realistic estimates of the dates of interest. It should be emphasised that the *posterior density estimates* produced by this modelling are not absolute. They are interpretative *estimates*, which can and will change as further data becomes available and as other researchers choose to model existing data from different perspectives.

The technique used is a form of Markov Chain Monte Carlo sampling, and has been applied using the program OxCal v4.0.5 (http://c14.arch.ox.ac.uk/). Details of the algorithms employed by this program are available from the online manual or in Bronk Ramsey (1995; 1998; 2001; in press). The algorithm used in the model described below can be derived from the structures shown in Figure 17.

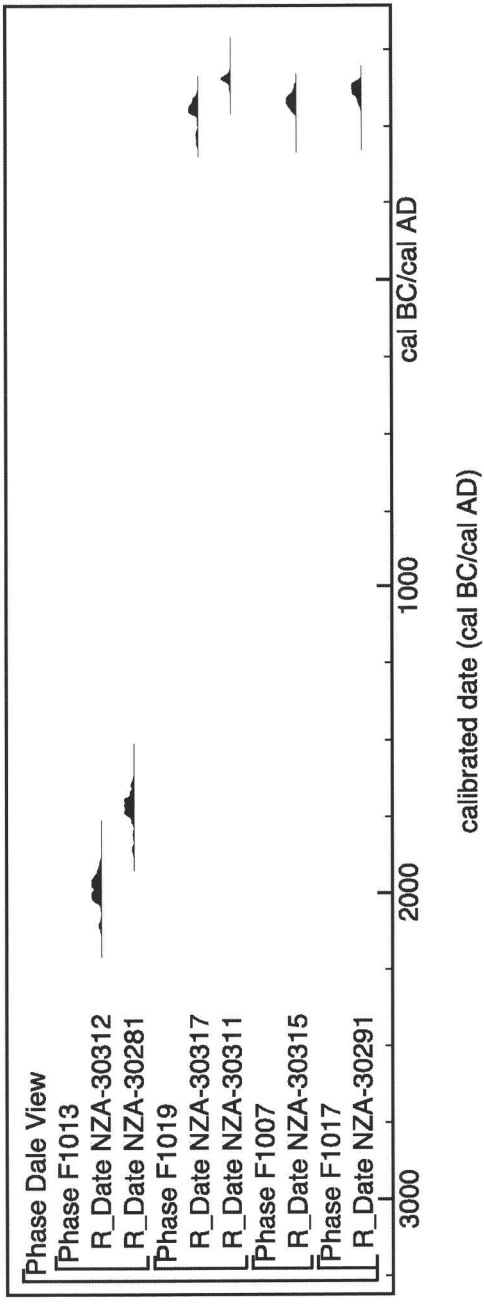

Fig. 16: Probability distributions of dates from Dale View. Each distribution represents the relative probability that an event occurred at a particular time. These distributions are the result of simple radiocarbon calibration (Stuiver and Reimer 1993).

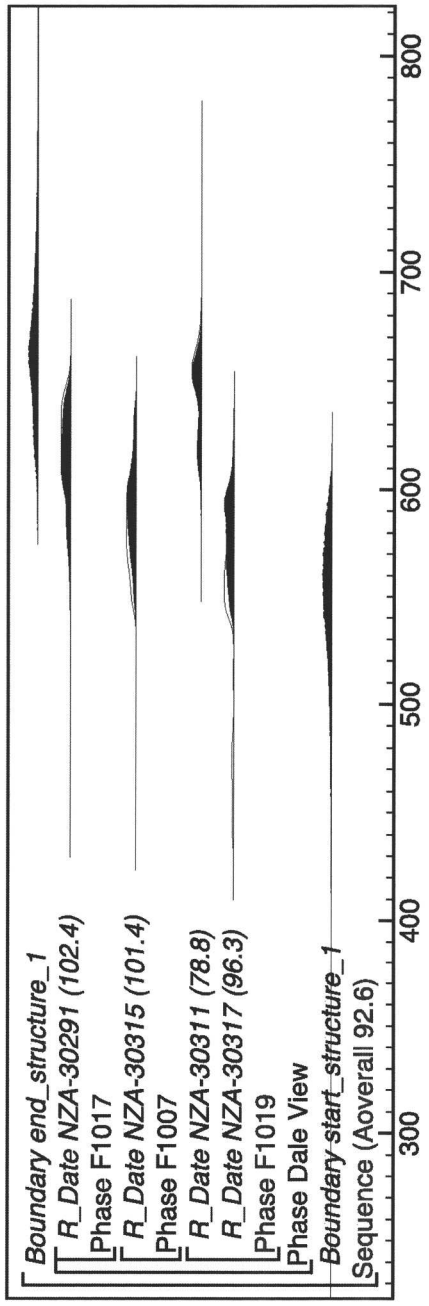

Fig. 17: Probability distributions of dates from Dale View, structure 1: each distribution represents the relative probability that an event occurs at a particular time. For each of the radiocarbon dates two distributions have been plotted, one in outline, which is the result of simple radiocarbon calibration, and a solid one, which is based on the chronological model used. Distributions other than those relating to particular samples correspond to aspects of the model. For example, the distribution *Boundary start structure_1* is the estimated date when activity associated with structure 1 started. The large square brackets down the left hand side along with the OxCal keywords define the model exactly.

Interpretation

The results clearly indicate two chronologically distinct episodes of activity dating to the Early Bronze Age and early medieval periods. The two measurements from posthole F1013 are not statistically consistent ($T'=23.1$; $\nu=1$; $T'(5\%)=3.8$; Ward and Wilson 1978) and clearly represent material of different ages, although both are Early Bronze Age in date. The latest date NZA-30281 (3415 ± 30 BP) 1870–1630 cal BC therefore provides the best estimate for the date of the posthole.

The other four measurements are early medieval in date. The two measurements from the hearth (F1019) are not statistically consistent ($T'=13.4$; $\nu=1$; $T'(5\%)=3.8$; Ward and Wilson 1978) and although all four measurements fail a chi-squared test ($T'=14.8$; $\nu=3$; $T'(5\%)=7.8$; *ibid.*) they probably represent a short episode of activity.

The model shown in Figure 17 shows good agreement ($A_{overall}=92.6\%$) between the radiocarbon results and the prior information that they represent a continuous discrete episode of activity (Buck *et al.* 1996). It provides an estimate for the start of the activity of *cal AD 390–640 (95%_probability; Boundary start structure 1*: Fig. 17) and probably *cal AD 510–600 (68% probability)* and the end of activity of *cal AD 590–830 (95% probability; Boundary end structure 1*: Fig. 17) and probably *cal AD 610–700 (68% probability)*. The span of use of structure 1 is estimated at *1–390 years (95% probability; span structure 1*; Fig. 18) and probably *30–190 years (68% probability)*.

Discussion

Structure 1 at Dale View represents the first scientifically dated early medieval structure from the Peak District; the only other purported post-hole structures from the wider region, from Cossington, Leicestershire, have been dated only by association with probable Anglo-Saxon pottery (Barrett 2006).

DISCUSSION

Dale View is a multi-period site with phases of activity associated with the following periods:

- Later Mesolithic
- Early Neolithic
- Early Bronze Age
- Early medieval
- Post-medieval

The Later Mesolithic

The presence of a small Mesolithic flint assemblage with diagnostic tool forms demonstrates the presence of Later Mesolithic 'narrow blade' groups on Stanton Moor.

The Early Neolithic

The Neolithic flints and ceramic fragments from Dale View are suggestive of domestic activity, and perhaps a habitation site, during the Early Neolithic period, as discussed in the specialist section above. In a similar way to the Early Neolithic settlement site

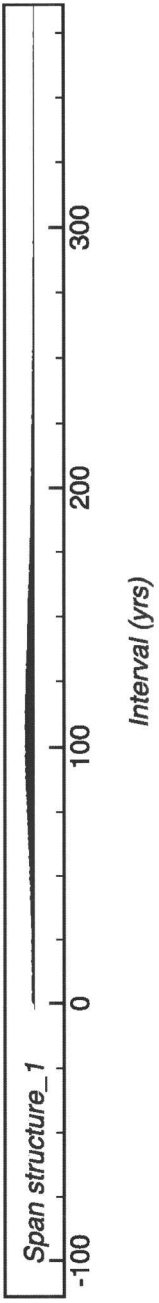

Fig. 18: Probability distribution showing the number of calendar years during which structure 1 was in use. The distribution is derived from the model shown in Figure 17.

at Bolam Lake, Northumberland (Waddington and Davies 2002), which lies on a low sandstone slope above more fertile ground, Dale View sits on a sandstone/gritstone hillside overlooking an agriculturally attractive landscape on the lower ground. Both sites are located next to areas of modern day moorland not far from cup and ring marked outcrops which are now thought to be a primarily Neolithic phenomenon. It has been suggested that the cup and ring symbols could be linked with the exploitation of wooded upland landscapes in this period, possibly for hunting and/or stock-herding, rather than with more sedentary agriculture (Waddington 2007).

The traditional focus for Neolithic activity within the Peak District is the limestone plateau to the west of Dale View which offers fertile terrain well-suited to sedentary farming. The best example of what is probably an Early Neolithic residential site within the area is at Lismore Fields, Buxton (Garton 1991, 11–14). Analysis of charred plant remains showed that arable agriculture was practised near this site as well as gathering of wild resources such as hazelnuts (*ibid.*, 13), although preliminary analysis of pollen from peats *c.*70m away showed evidence for a number of phases of forest clearance (*ibid.*, 14). The lithic analysis from Lismore Fields revealed that there were several discreet patches of debitage associated with knapping and the tool production process (*ibid.*, 13). While the exploitation of the landscape at Lismore Fields and Dale View may have differed, and no doubt this can be attributed to one being located within an area suited to arable cultivation and the other on higher ground in a landscape better suited to hunting or herding, one interesting parallel between the two sites is that neither are insular communities. The inhabitants of both sites were involved in much wider exchange networks as evidenced by the occurrence of artefacts with a non-local provenance. At Lismore Fields a Group VI polished stone axe head was found, originating in Langdale, Cumbria (*ibid.*, 13), while at Dale View, a number of the Neolithic flint tools were made on high-quality nodular flint from chalk-bearing rocks, possibly coming from as far afield as Norfolk (see above).

The Early Bronze Age

One posthole within the posthole cluster in Trench 1 returned two Early Bronze Age dates (2120–1890 cal BC (3622 ± 30 BP, NZA-30312) and 1870–1630 cal BC (3415 ± 30 BP, NZA-30281)) though they are not statistically consistent. It is unsurprising that there should be use of the Dale View landscape in the Early Bronze Age, as the site lies less than half a kilometre from the cluster of burial and ceremonial monuments on Stanton Moor which are also thought to date to this period.

The Early Medieval Period

The key feature of the Dale View site revealed through these excavations is the post-built structure in Trench 1. There are three possible interpretations for the structure based on the dating evidence. The first interpretation is that the structure is prehistoric in origin, possibly dating to either the Neolithic period (associated with the lithic and ceramic finds) or the Bronze Age (suggested by the two results from posthole F1013), with the later dates representing later intrusive material perhaps brought in by animal action. The second interpretation is that the postholes which appear to form the post-built structure date to different periods, as suggested by the radiocarbon dates, and therefore represent coincidental habitation of the same place. The third theory is

that the structure and hearth features are early medieval in date and the Bronze Age dates and Neolithic finds represent residual material from earlier activity on the site. While each of these interpretations is possible, the dates obtained from the hearth features are the most secure dates as these date the act of burning *in situ* and are least likely to represent residual material. The fact that the hearth features date to the early medieval period, and posthole F1017 is probably contemporary with them, lends greater strength to the third interpretation: that the post-built structure and hearths most likely date to the early medieval period.

If accepted that the post-built structure is early medieval, then it is a rare feature in the Peak District. There are possibly contemporaneous sites at Carsington Water to the south, which yielded 5th–6th century pottery from the fill of a boundary ditch (Guilbert and Taylor 1992), and the 'Grey Ditch' further up the Derwent valley at Bradwell which may represent a post-Roman boundary feature (O' Neil 1945; Guilbert and Taylor 1992a).

One of the key interpretational problems with the Dale View structure is the severe truncation of the surviving remains. This means that while the footprint of the most substantial posts remain, it is likely that originally there were other posts forming the structure which have left no trace as they only ever rested on, or penetrated a little way within, the topsoil. The area enclosed by the recorded postholes is too small to have functioned as a viable shelter or living space. It is possible that the triangular arrangement forms a robust central support for a more extensive superstructure, although the exact form of this remains elusive. It is likely that the hearths were located within the building suggesting that the full building was of some size.

During the period of the 6th–7th centuries AD, known archaeology of the Peak District and wider Derbyshire area is dominated by funerary monuments. Cemeteries in the Trent Valley, such as Loveden Hill (Fennell 1964), Newark (Kinsley 1989) or Little Chester (Kinsley 2002), contrast markedly with barrows within the Peak District, some of which have been excavated by local antiquaries, most famously Thomas Bateman in the mid 19th century, and thought to represent the 'aristocracy' of the local *Pecsaetan* or 'Peak-Dwellers' (Hart 1981, 111). The other form of archaeological evidence relating to the early medieval period is the body of sculpture (Routh 1937) such as the carved crosses at Bakewell church, but these are generally dated to the later years of the early medieval period (Sidebottom 1999) after the Dale View structure had fallen out of use. There are currently no other examples of scientifically dated settlements dating to the start of the early medieval period in the Peak District to equate with the Dale View site.

The beginning of Anglian-era barrows in the Peak District is generally dated to the second half of the 7th century AD (Fowler 1954; Barnatt 1996, 83), just as the Dale View structure is going out of use, although more recent re-analysis has shown there may be a continuous tradition of barrow burials dating back to the late Romano-British period (Jones 1997). The later use of barrows of the Peak District has attracted much comment since the excavations of Bateman in the mid 19th century (see Bateman 1848; 1861; Fowler 1954; Ozanne 1963; Collis 1983; Barnatt 1996). This is largely due to the differences between the barrow inhumations and the earlier cremation cemeteries in the Trent Valley which indicate the route and extent of Anglian movement in the 6th century (Elliott *et al.* 2004, 163). This dichotomy suggests that there may have been

two distinct cultural groups based respectively in what became the heartland of Mercia to the south, and in the Peak District proper to the north. The 7th century Tribal Hidage records the Peak District as being the kingdom of the *Pecsaetan* and it has been argued that the barrows are the main archaeological footprint of a people who may have been Brittonic, a sub-group of the Anglian invaders, or a mix of the two (Fowler 1954; Linton 1956; Ozanne 1963). It is supposed that the Peak District only became fully absorbed into the Kingdom of Mercia by the end of the 8th century (Barnatt 1996, 84), although it may have become a buffer state between Mercia and Northumbria as is suggested by the later accession of Uhtred of Northumbria as an Earl in the lands of the *Pecsaetan*, which could explain why many of the Bakewell sculptures are in the Northumbrian style (Stetka 2001).

A more general point regarding the Dale View site is that it represents a multi-period site with a coincidence of Neolithic and early medieval settlement. The use of the same sites in both the Neolithic and early medieval period is something that has been observed and commented on by both Burgess (1984) and Waddington (1999). Examples of sites with both Neolithic and early medieval components include: the royal Anglo-Saxon township of Yeavering, Northumberland (Hope-Taylor 1977; Harding 1981); the nearby settlement of Thirlings (O'Brien and Miket 1991; Miket *et al.* 2009); Lanton Quarry near Milfield, Northumberland (Waddington 2009); Cheviot Quarry also near Milfield (Johnson and Waddington 2008); The Hirsel at Coldstream (Cramp 1980); and also sites within Derbyshire such as Wigber Low (Collis 1983) and the site at Willington Quarry in the Trent Valley (Wheeler 1979). There is no clear reason for this coincidence of settlement location between two very chronologically distant peoples, except that the areas chosen must have been attractive and provided for the needs of both groups, both of which were perhaps newcomers who initially settled areas by following the main river valleys and geared their subsistence activities around stock-keeping and cereal agriculture.

Post-Medieval

Post-medieval archaeology at Dale View is represented by the linear features and pits in Trench 3. These features probably represent the remains of slight 'hollow-ways', tracks or stock routes leading on to the moor tops, which may point to an intensification of agricultural use, or possibly small-scale stone extraction, during this period.

ARCHIVE

The archive resulting from this work is deposited with Buxton Museum and Art Gallery, and the archive report is available in digital format from the Archaeology Data Service (ADS) through the OASIS website: www.oasis.ac.uk.

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