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Excavation and Survey at Dyffryn Lane Henge Complex, Powys, and a Reconsideration of the Dating of Henges

By ALEX GIBSON[1]

The henge monument and round barrow at Dyffryn Lane, near Welshpool, Powys, represent a rare instance of earthwork survival amongst the Neolithic and Bronze Age monuments of the upper Severn Valley. Antiquarian excavation in response to agricultural degradation suggested that the monument represented a round barrow covering a stone circle. Whether these stones represented a stone circle sensu stricto *or a stone kerb for a turf barrow, was not determined at the time. Aerial photography subsequently demonstrated that the barrow as surrounded by a single-entranced henge monument. The present excavation was designed to assess the degree of plough damage to the site, determine the nature of the circular arrangement of stones, investigate the development of the site, and retrieve absolute dating and palaeoenvironmental material for the various phases encountered. Excavation has demonstrated that the site saw the ritual deposition of Impressed Ware pottery prior to a stone circle being erected on the site. This circle was allowed to decay before being encircled by a henge and subsequently covered by a round mound. The site adds to a small but growing body of evidence suggesting the lateness of the henge element within multi-phased monuments.*

INTRODUCTION

The henge at Dyffryn Lane, Berriew, Powys (SJ 204 104) lies in the fertile upper Severn Valley 6 km south of Welshpool and near the confluences of the Camlad (flowing from the east) and Rhiw (flowing from the west) with the main river (Fig. 1). The site forms part of a complex of monuments, some of which still survive as slight earthworks while the majority are only visible as cropmarks. The standing stone of Maen Bueno (SJ 203 012) may also be a broadly contemporary part of this complex.

The various elements that comprise this complex and the possible development of the area have already been described elsewhere (Gibson 1995a; 2000; 2002; 2006); suffice to say that the Dyffryn Lane group represents one of several concentrations of Neolithic and Bronze Age funerary and ritual sites in this part of the Severn Valley all of which appear to focus on confluences with the main river (Gibson 1994; 2002). The earliest elements of the Dyffryn Lane monumental complex so far discovered comprise a long barrow and sub-rectangular enclosure to the north at Lower Luggy (SJ 200 019) both dating to the middle of the 4th millennium BC (Gibson 2006). Other elements consist of a number of ring ditches and a large circular pit, the former generally assumed to be Bronze Age in date (Fig. 2).

Antiquarian interest

The first known record of the henge at Dyffryn Lane appears in a letter dated 1 December 1856 that was written to the then Editor of *Archaeologia Cambrensis*, the Rev. Harry Longueville Jones. Signing his or herself as 'An Antiquary' the correspondent drew attention to the destruction of a tumulus by a land-improving farmer 'on an estate in this neighbourhood' (Anon 1857, 70). The letter has significance beyond its years and the arguments presented, if somewhat academically dated, are equally well rehearsed today. The correspondent continues to deliver a rant against farmers and their destruction of ancient monuments and accuses

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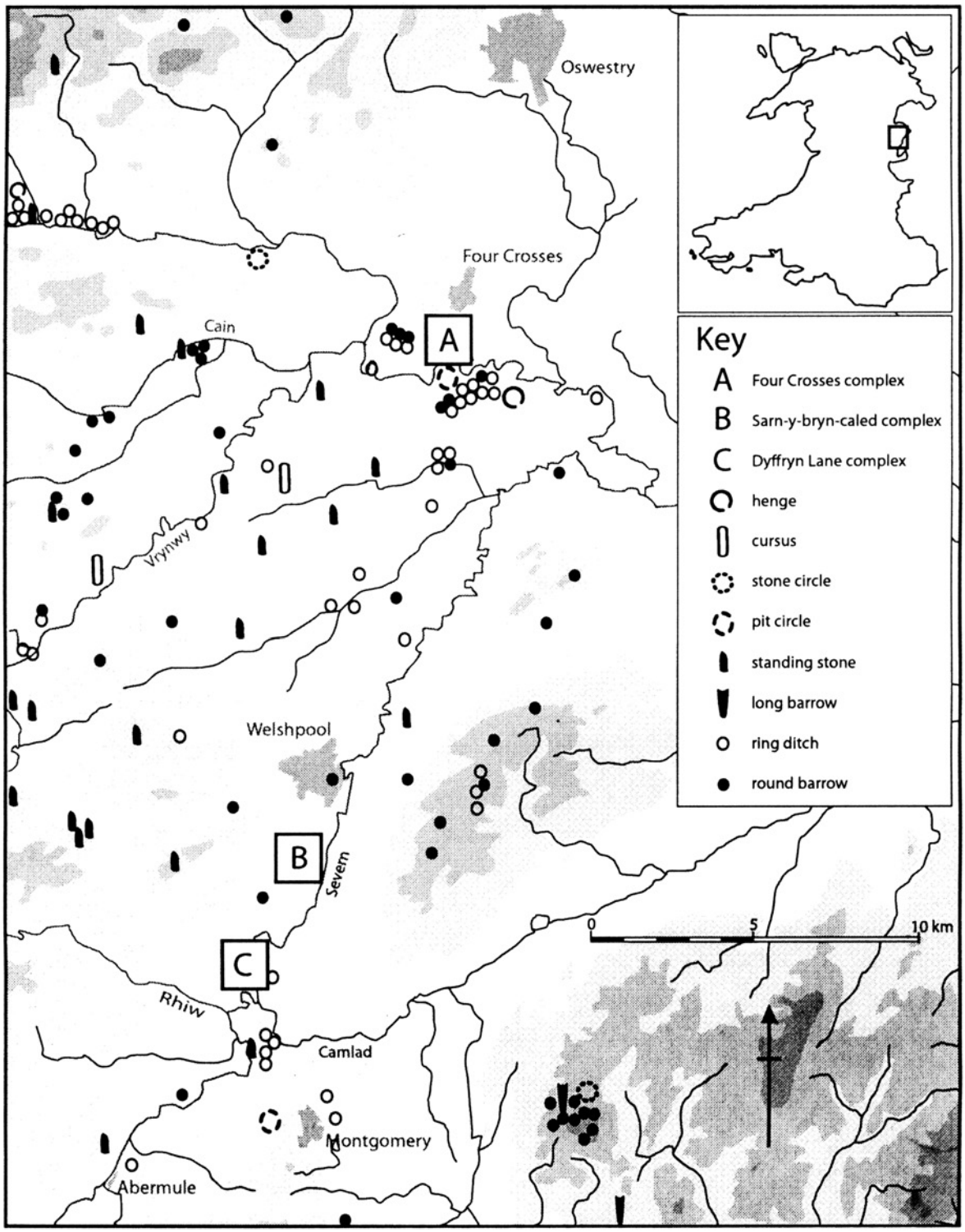

Fig. 1.
Neolithic & Bronze Age funerary & ritual sites in the upper Severn Valley & location of the Four Crosses (A), Sarn-y-bryn-caled (B), & Dyffryn Lane (C) complexes (from Gibson 2006)

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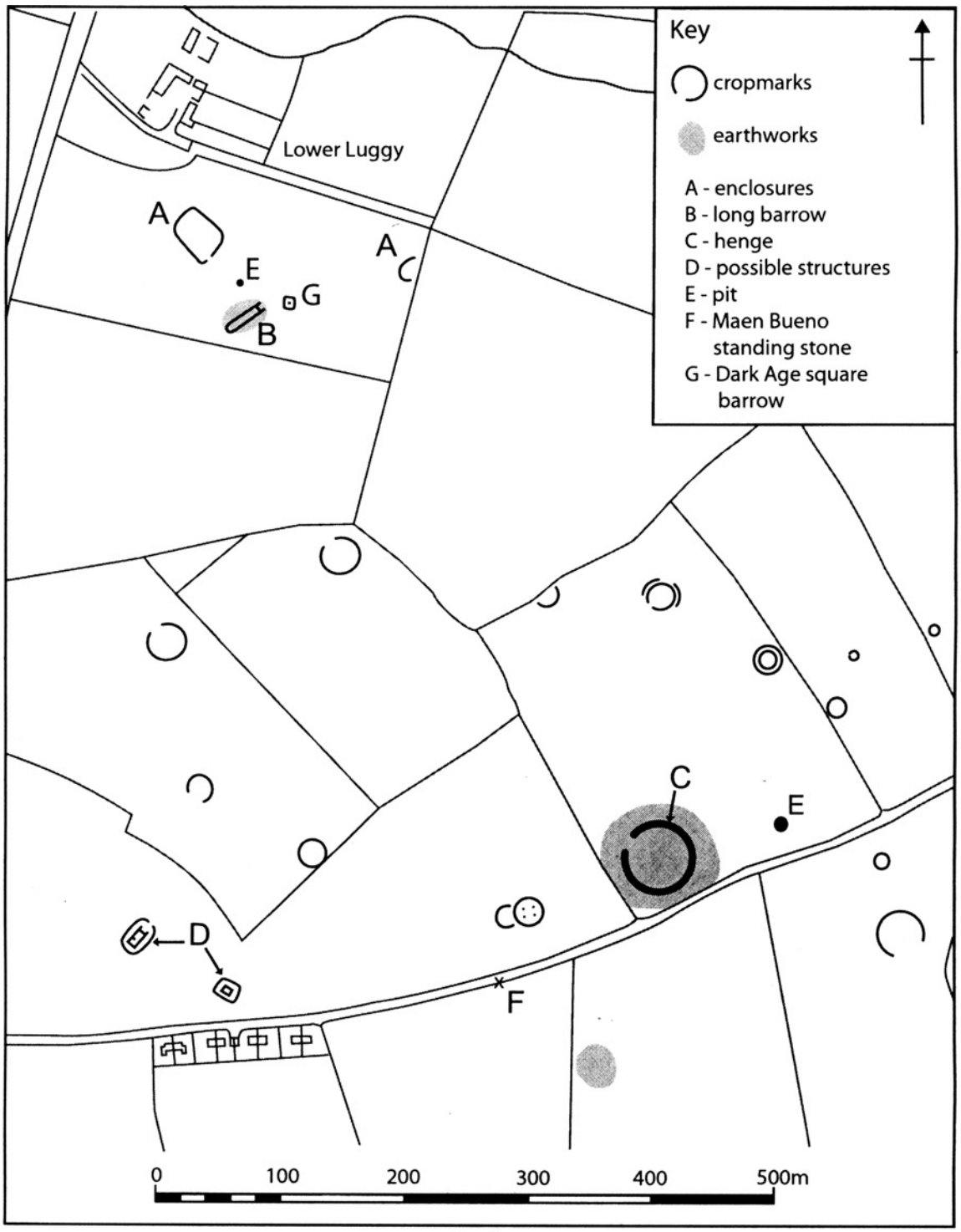

Fig. 2.
Currently known monuments in the Dyffryn Lane complex. The earlier Neolithic long barrow & enclosure at Lower Luggy (A & B) define the northern edge of the known complex. The Dyffryn Lane timber halls (D) are not certainly Neolithic

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landowners of disinterest. This is a pointed remark as the President of the Cambrian Archaeological Association at this time was the *local* landowner, the Earl of Powis. There follows a plea to preserve plough-threatened barrows by taking them out of active agriculture, compensating the tenant with a slightly reduced rent. Failing this, however, the antiquary threw down a challenge to the then President of the Cambrians, to appoint someone to investigate the mound prior to its destruction. The debate has a very contemporary ring to it and can still be heard echoing down curatorial corridors and the offices of the national agencies. It presages the 'non-renewable finite resource' argument of *PPG*16 by over a century.

What went on behind the scenes in the winter of 1856–7 is not recorded but only four months later, on 14 April 1857, D. Phillips Lewis, then vicar at nearby Buttington, was on site assisted by the Aberystwyth secretary of the Cambrians, Mr T.O. Morgan and the Rev. J.J. Turner of Berriew (one wonders if the Rev. Turner was the original correspondent). They were aided by a team of workmen. Phillips Lewis submitted his short account for publication three days later on 17 April (Phillips Lewis 1857).

However, Phillips Lewis's account is at once contradictory. It starts with reference to the letter discussed above but then makes the curious statement that, as a result of ploughing, the mound had 'become little more than a slight undulation in the land, and, at its highest point, did not rise more than eight or nine feet (*c.* 2.4–2.8 m) above the level of the field' (*ibid.*, 296, my brackets). By any stretch of the imagination eight or nine feet constitutes a substantial mound and Phillips Lewis must have got it wrong. He goes on to state that it was difficult to determine the limits of the original mound because it had been so plough-spread. This suggests that Phillips Lewis was no fieldworker.

The encircling ditch and external bank visible as earthworks today must have been so visible over a century ago, but neither feature is mentioned in the account. Furthermore, Phillips Lewis records that one stone had already been removed from point A on his accompanying plan (Fig. 3). If the tops of the stones were interfering with the plough in 1856, then it suggests that the monument was not much higher than it survives today (see below) unless, of course, the stones were graded in height, increasing towards the west. This nevertheless seems unlikely from the results of the recent excavations discussed below.

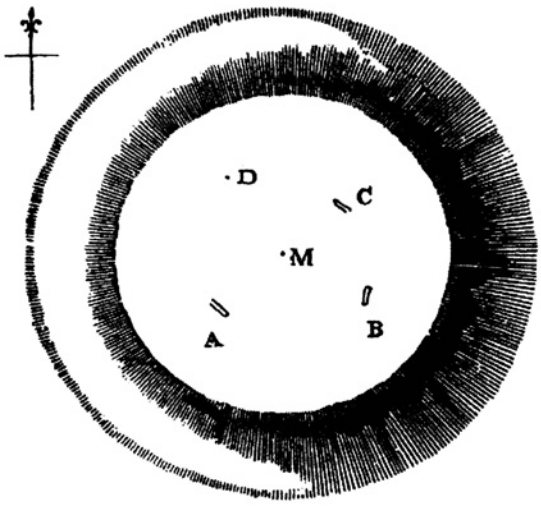

Fig. 3.
Phillips Lewis's excavation plan. It appears that the shading represents the edge of the mound rather than the henge bank & ditch, which seem to have gone unnoticed by Phillips Lewis's team (from Phillips Lewis 1857)

The tenant was also proposing to move another stone at point B on Phillips Lewis's sketch plan (on the eastern side of the mound) and so his workmen 'commenced cutting a *broad* trench between the two stones, a distance of 9 yards (*c.* 8.3 m)' (*ibid.*, 297, my emphasis and brackets). They excavated to below the level of the stones but found nothing in this trench save for: 'now and then a small quantity of charcoal together with slight traces of cinders. Here and there a small seam or stratum of discoloured earth was observed. The burnt substances were present near A in much larger quantities than in any other part of the mound' (*ibid.*). Meanwhile another team of workmen were excavating northward from A to an arbitrary point D, a distance of 10–11 yards (*c.* 9.2–10.0 m) (Fig. 3) but found 'nothing to reward our toils'. They then chose a point equidistant between stone B and point D, which they denominated M, and 'began to drive a trench through the middle of the mound' towards this point. At point C (Fig. 3) they discovered another upright stone. Phillips Lewis concluded that the stones were of unweathered 'trap' and probably had come from Montgomery Hill. He also observed that the ground was easily worked unlike the silty clay

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soil of the rest of the field. 'Moreover we found clay, gravel and mould all mixed together. As one workman expressed it, "the earth was all turned and tossicated about"'.

Referring to the 'charred substances' around stone A and 'in smaller quantities … in other parts of the mound' Phillips Lewis then goes to give a brief description of a cremation burial described in B. Hall's *Travels in India* (Basil Hall (1788–1844) *Travels in India, Ceylon & Borneo*) which leads us to conclude that they must have been fragments of cremated bone. He also observed that the colour changes in the soil were due to the presence of iron, that 'three tumuli of a similar appearance are still to be seen in the fields around' and that following the excavation the farmer proposed 'covering the large stones up again after he had lowered them into a position that will not interfere with the plough'. Subsequently, in a short description of the nearby Maen Bueno standing stone situated by the side of the lane to the south-west of the tumulus, the then editor of *Archaeologia Cambrensis,* Rev. Longueville Jones, describes Phillips Lewis's excavation as 'so well described … and so judiciously conducted' (1857, 301). This compliment, it would appear, was over-generous.

The tumulus seems then to have been forgotten by all, though probably not the farmer. It was not recognised by the surveyors of the Welsh Royal Commission who, in their inventory of 1911, quote the references described above and refer to 'a mound of which no further information is procurable' (RCHAMW 1911, Berriew No. 28).

Rediscovery and modern interest

It was not until the 1960s that interest was renewed in the Dyffryn Lane area fueled by the increased application of aerial photography in archaeological survey. Photographs by St Joseph had shown the barrow to be a class I henge and it was scheduled following a field visit in 1966 (inf. P. Hobson, Cadw). Furthermore, the complexity of the area was demonstrated first by St Joseph in 1967 and again in 1976 and subsequently by Chris Musson flying for both the Clwyd-Powys Archaeological Trust (hereafter CPAT) and the RCAHMW from the 1970s. Some aerial photographs suggest that there may be some incomplete causeways in the south-eastern arc of the ditch (Harding with Lee 1987, 341) similar to the 'sunken' causeway encountered at Coed-y-dinas (Gibson 1994) with which the site is comparable. In a particularly striking colour photograph by Chris Musson (Fig. 4 – here produced in greyscale) an arc of lighter patches might suggest the positions of buried stones. A further field visit by Cadw in 1988 extended the scheduled area to cover the other two barrows visible as earthworks in the same field. A topographical survey of the henge by CPAT in 1987 revealed a mound 0.6 m high by *c.* 40 m in diameter and a low outer bank surviving to about 0.3 m high, 15 m wide and with an external diameter of 85 m. The bank and ditch are both very rare survivals of earthwork evidence on this type of monument within the upper Severn Valley. Subsequent geophysical survey commissioned by CPAT and undertaken by Geophysical Surveys of Bradford in 1992 confirmed the mound, the ditch with an entrance causeway to the north-west, the outer bank, and the suggestion of internal features, possibly stones (see Ovenden in Gibson 1995a).

In 2006, Cadw: Welsh Historic Monuments granted Schedule Monument Consent to the present writer to investigate the monument further. The excavations were undertaken jointly by the University of Bradford, Division of Archaeological Sciences, and the Clwyd-Powys Archaeological Trust. The aims of the project were both managerial and academic. Plough scarification had been detected on the 1992 geophysical survey but the extent of the damage that this was causing to the surviving archaeological deposits was uncertain. It was therefore deemed appropriate to investigate and document any agricultural effect on the monument in order to better provide for its preservation. There were also academic questions relating to the site and stemming from previous research on other monuments in the complex (Gibson 2000; 2006). First, were we correct in seeing the henge as a focus for later ritual activity given that earlier monuments lie a short distance to the north-north-west? Was Phillips Lewis correct in identifying the standing stones as a stone circle or did the stones represent a continuous kerb for a barrow such as found at the nearby Trelystan barrow 1 (Britnell 1982)? If a stone circle, could Burl's assumption that stone circles are later additions to henge monuments be demonstrated at this site (Burl 2000, 285)? What was the date of the henge and what was the sequence at this clearly complex monument?

Ahead of excavation, a geophysical survey of large parts of the field was undertaken by Stratascan. The

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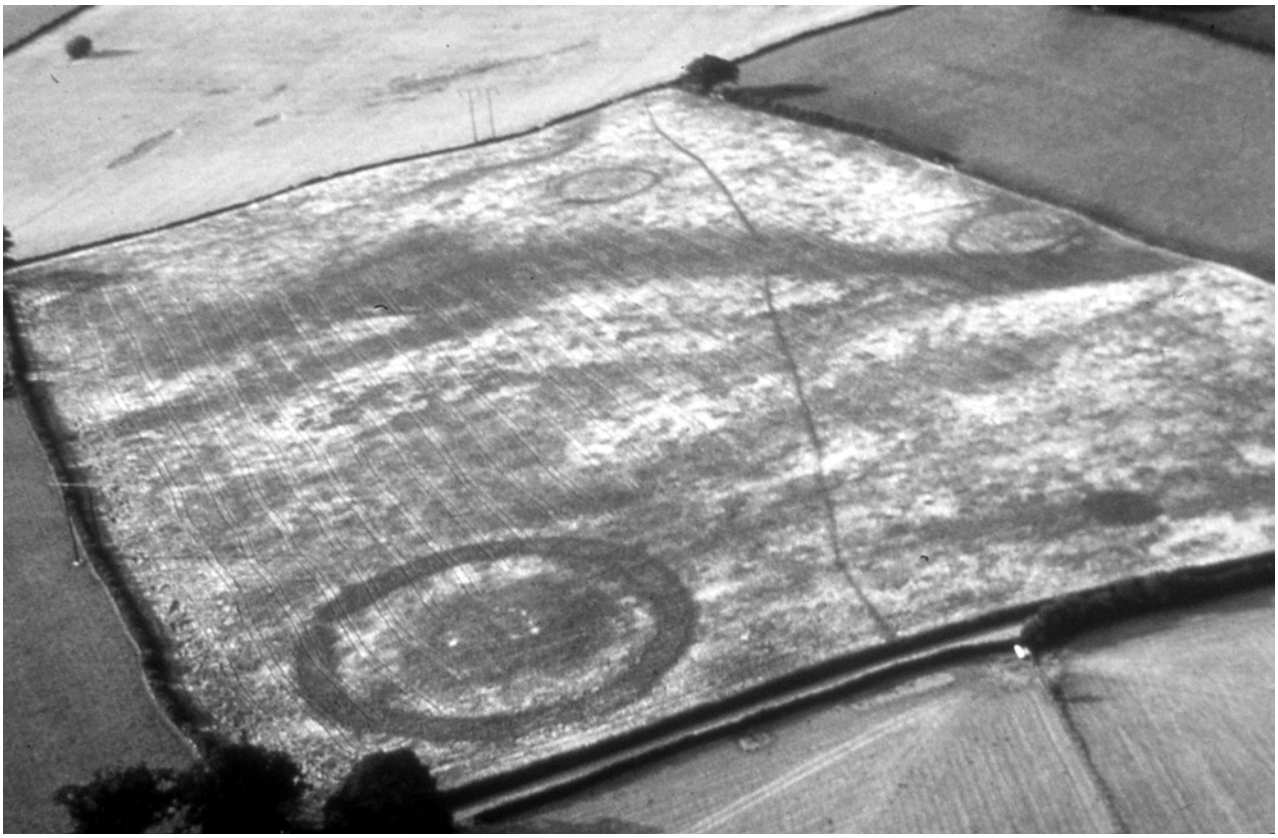

Fig. 4.
Dyffryn Lane henge monument from the south. Light patches within the mound may hint at the position of stones (photo: Chris Musson, by permission of CPAT, copyright reserved)

surveys complimented a detailed topographical survey undertaken by Nigel Jones and Wendy Owen of CPAT assisted by students from the University of Bradford for the entire field containing the henge (Fig. 5). Full details of these surveys including detailed methodology have been deposited with the site archive. The excavation took place from 3 July until 11 August 2006.

THE EXCAVATION SEQUENCE

The excavation concentrated on the north-east quadrant of the henge (Figs 5 & 6), with the aim of identifying and re-excavating one of the antiquarian trenches (as it happened, two antiquarian trenches were encountered). After topsoil stripping, five stones became immediately apparent (Fig. 7). Following cleaning, the tops of six stones were subsequently seen to protrude through a deposit of leached and iron-stained soil [7] (hereafter context numbers are indicated [-]) which was interpreted as the remnants of a mound composed of turfs and other mixed material. The tops of some stones had obvious signs of plough damage and the top of stone 22 was particularly shattered with a detached plough-share lying beside the fragments. A fragment of stone 22 has subsequently been identified as dolerite (Cotton *et al.* 2008). The top of the mound [7] was also plough scarred. The ditch and bank were recorded below the ploughsoil though the edges of both these features were not located until after subsequent cleaning.

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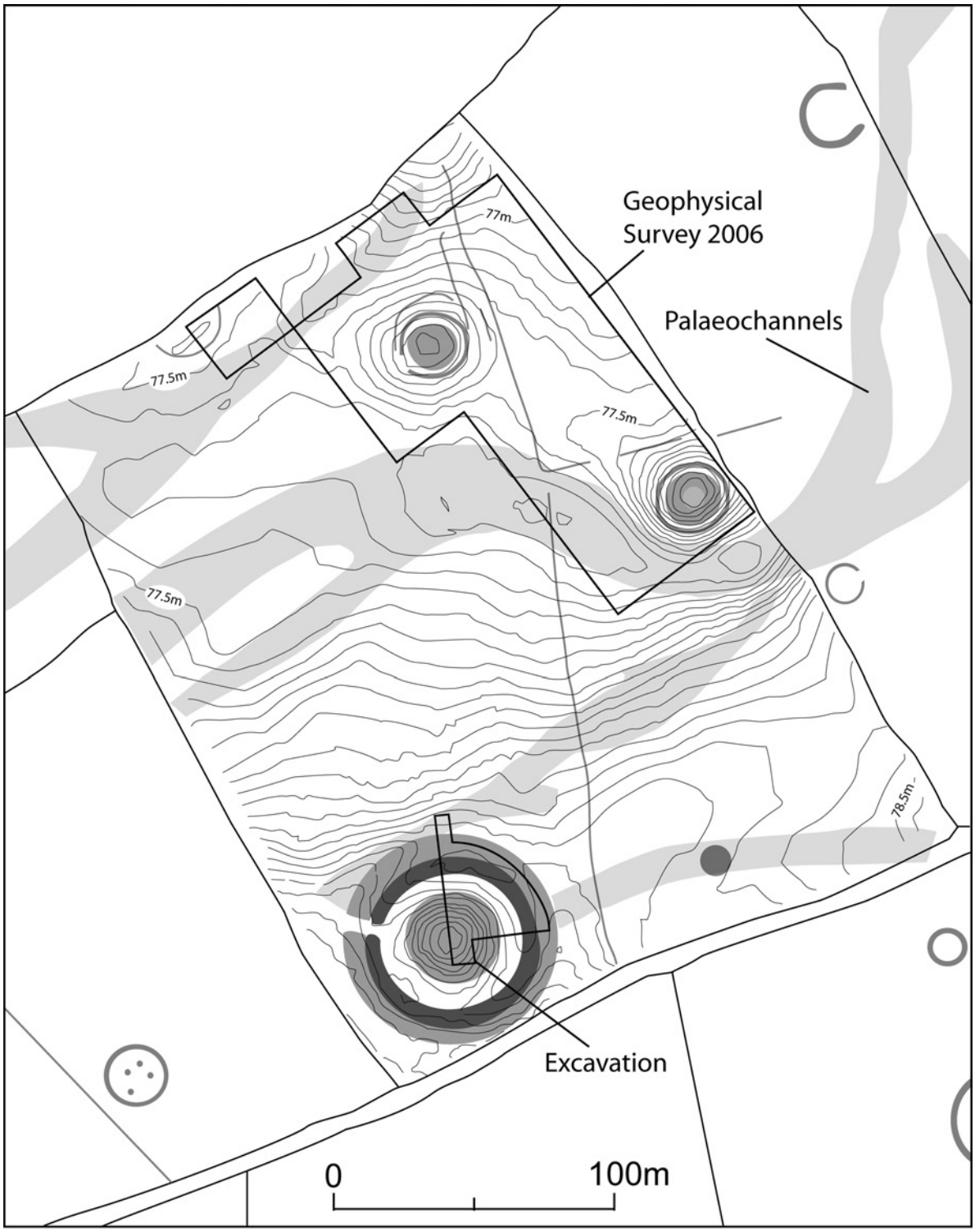

Fig. 5.
Contour survey of the Dyffryn Lane henge (50 mm intervals) & location of excavation trench

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Fig. 6.
Dyffryn Lane henge from the south-west during the excavations. The narrow antiquarian trenches can be seen in the centre of the monument demonstrating how little of the monument Phillips Lewis investigated (photo: Alex Gibson)

Antiquarian trenches

Phillips Lewis's trenches proved difficult to find. They had been dug through a mound composed of redeposited soil [7] and backfilled with the same material. Despite watering, the heatwave of July 2006 quickly bleached and baked all exposed contexts. Although Phillips Lewis described his trenches as 'broad', when finally located they proved to be about one shovel's width wide and rather less extensive than had been anticipated.

Two trenches were identified within the excavated area and correspond to the eastern part of trench A–B ([17]) and trench C–M ([28]) as described by Phillips Lewis (Figs 3, 8–10). Cut [17] (Fig. 9) was little more than 0.50 m wide and vertical-sided. It cut through the turf mound and ended at stone 23 (Phillips Lewis's stone B). The stone had been undermined and toppled forward. With the exception of a small unidentifiable fragment of calcined bone all the finds from the fill of this trench were modern. Some better preserved modern food bones suggested that Phillips Lewis (or members of his team) had had duck and rabbit or hare for lunch (Mainland 2008).

Cut [28] (Figs 8 & 10) corresponds to Phillips Lewis's trench C–M and stone 21 can be identified as his stone C. Rather than encountering stone C as he

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Fig. 7.
The central mound of the Dyffryn Lane henge from the south after topsoil stripping & cleaning. The tops of the stones can clearly be seen protruding through the mound & the pit in the lower left of the frame results from the removal of a stone. Plough-scarring of the mound can be seen in the foreground (photo: Alex Gibson)

drove his trench to the centre of the mound as his account suggests, it appears that the stone was fortuitously unearthed at or very close to the beginning of the trench. A pit was excavated around the stone presumably to investigate it thoroughly; the stone was undermined and then a narrow trench was continued towards the centre of the monument. This trench was rather more irregular than [17] and varied from 0.8 m to 1.0 m wide at the top, narrowing to a fairly consistent 0.6 m wide at its base. With the exception of three flint fragments and a possible fragment of polished stone axe (see below) all finds were once again modern.

The antiquarian activity had removed all contextual data from these two stones. The trenches had sliced through a mound of redeposited material presumably with a high turf content accounting for the iron staining mentioned in Phillips Lewis's account and the 'tossicated' nature of the soil as observed by one of his workmen. The trenches had cut through a layer of iron panning [41], a buried soil [47], and, in places a second iron pan layer [48] and underlying soil [44]. Other than the small fragment of burnt bone mentioned above, no traces of charcoal or 'burnt substances' as reported by Philips Lewis were found either in the backfill or *in situ* in the sides of these narrow cuts.

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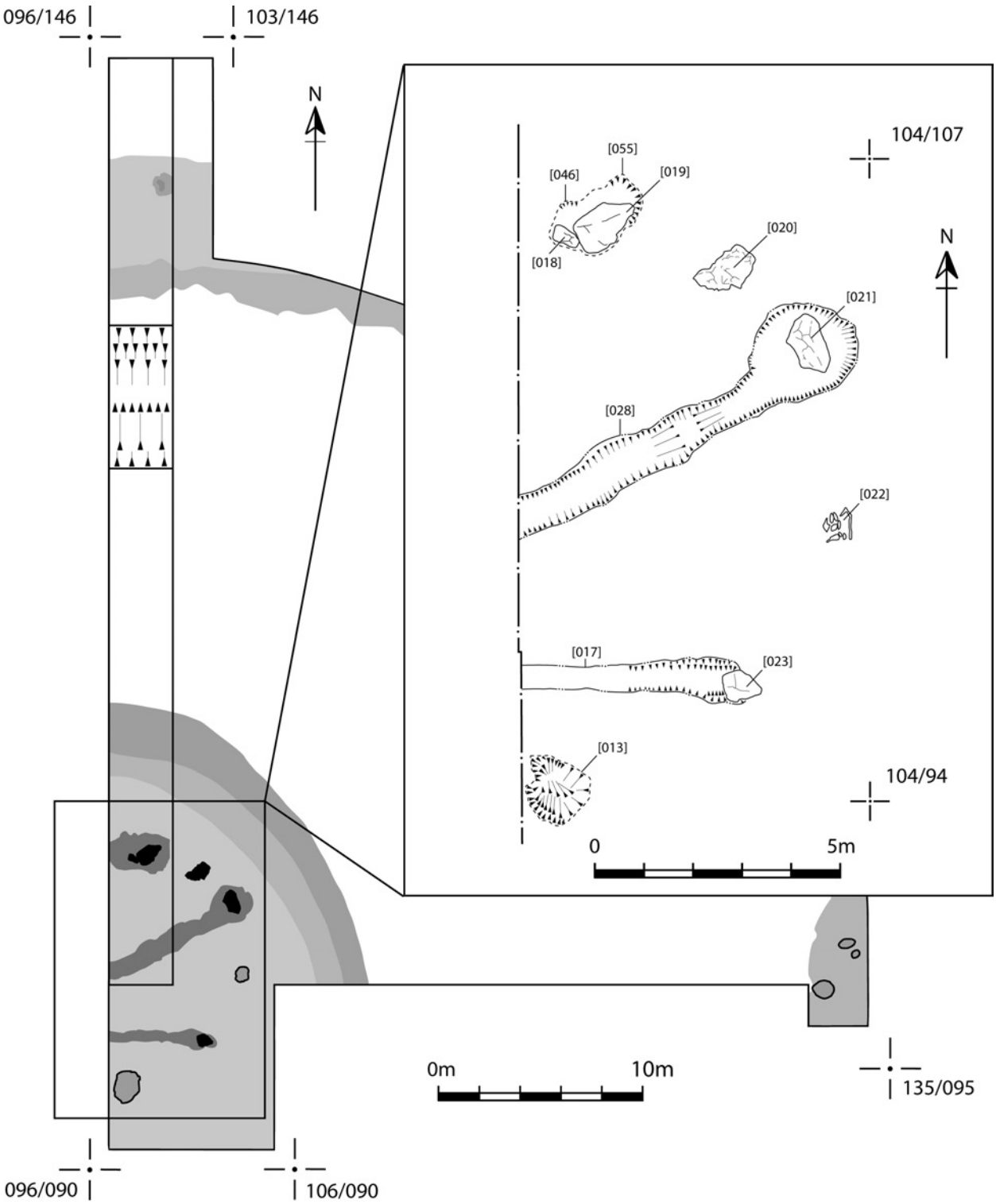

Fig. 8.
Plan of the antiquarian trenches

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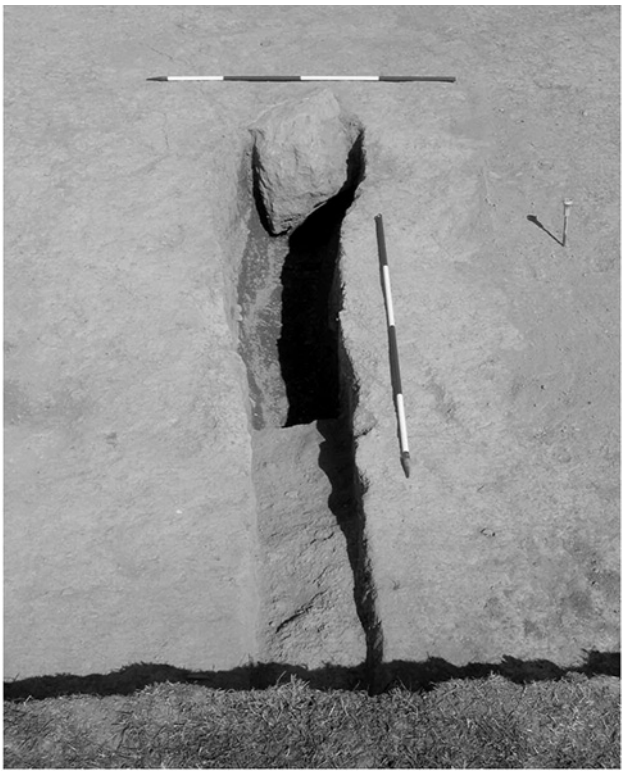

Fig. 9.
Cut [17] equating to the eastern part of Phillips Lewis's trench A–B. The stone has been undermined & toppled forward removing all contextual evidence
(photo: Alex Gibson)

Fig. 10.
Cut [28] equating to Phillips Lewis's trench C–M. Once again the stone has been undermined & toppled forward
(photo: Alex Gibson)

Mound

The central mound [7] survived to a height of around 0.4 m, with an excavated radius of *c.* 20 m, and was composed of gleyed clayey-silty material with iron pan streaks (Fig. 11). This was interpreted as a decayed mound of redeposited turf by the excavators, but soil micromorphology suggests that material (including waterlogged material) other than just turfs was used to construct the barrow (McKenzie 2008). Apart from ploughmarks, the antiquarian trenches and the stone robbing hole [13] no other features were identified cutting into the mound. A small collection of flint artefacts was recovered from the surface of the mound, including both a kite-shaped and a barbed and tanged arrowhead (see below) but these cannot be regarded as stratified.

The outer edge of the mound was composed of a silty soil [4] and more gravelly material [6], the latter presumably incorporating redeposited river gravels. At first it was thought that these deposits marked the upper fills of an internal ditch but later it became apparent that they represented subsequent augmentations of the mound and may possibly even derive from cleaning of the henge ditch.

The excavations revealed part of a large oval pit [53] beneath the centre of the mound filled with a soft, dark brown, mottled soil (Fig. 12). One of the antiquarian trenches [28] extended into the centre of the mound so that the relationship of the pit to the mound is not immediately apparent in the main section. However, no trace of this pit could be seen in the turf mound in the south-east of the excavated area until it cut through the pre-mound iron pan [41]. It therefore appears that this pit [53] immediately pre-dates the turf mound and is, in all likelihood, associated with the mound construction. Scheduled Monument Consent did not permit the excavation of this pit but it is probable that it contained a burial.

The henge

The henge (Figs 4 & 6) consists of a large broad circular ditch with a low plough-spread external bank and an entrance on the north-western side, outside the area of the excavation. A single section was cut across the ditch, along the western edge of the excavated area, extending through the external bank (Fig. 6). The ditch (Fig. 13) was around 6.5 m wide and up to 2.1 m deep below the surface of the natural river gravels. The pattern of silting was suggestive of

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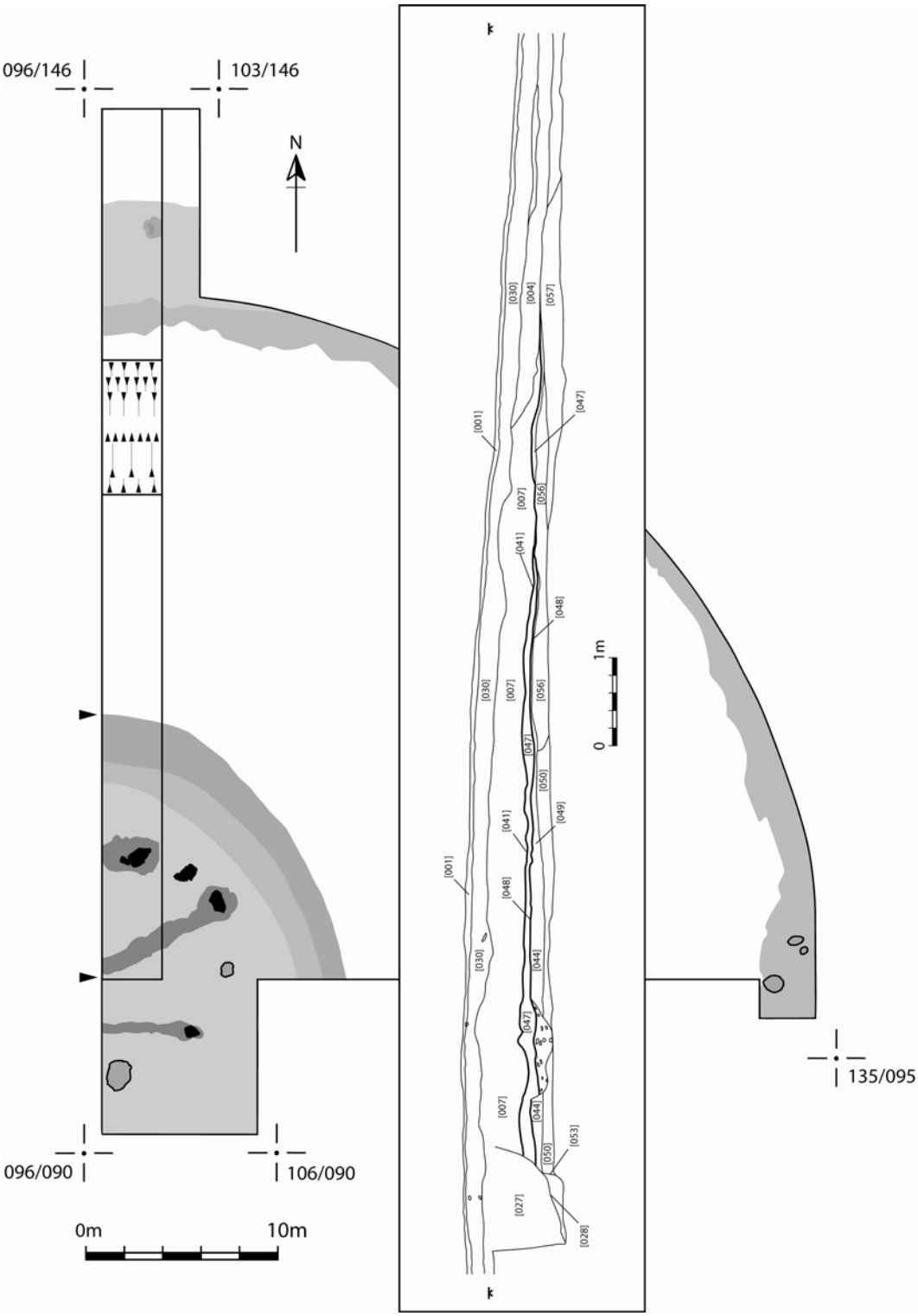

Fig. 11.
Main section through the central mound

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Fig. 12.
Central oval pit [53], cut into the upper of the iron pan layers [41] (darker area is the result of watering). (photo: Adam Stanford, AerialCam)

material having been derived from both sides of the ditch, but with a very slight bias to the outside (compare [65] & [64] (Fig. 13), though the recut [62] makes this interpretation subjective), and the external bank. The section suggests that the ditch had been cleaned out on at least one occasion. Other than a sherd of medieval green-glazed pottery from [25], a flint flake from the same context, and a second flint flake from [43], there were no finds from the section across the ditch.

Charcoal from elm roundwood (seven rings) from [42], 1.0 m deep into the ditch silts, provided a radiocarbon date of 790–490 cal BC (Beta-231836, 92.2% probability) (Table 1) suggesting that the monument still survived as a substantial earthwork in the Iron Age.

The remnants of the outer bank comprised a relict layer of redeposited gravels on average 0.1 m thick [8], sealing, in places, a leached deposit of clayey material [59] which may have been deliberately laid as part of the henge construction (McKenzie 2008). The gravel layer [8] was heavily plough-scarred (Fig. 14). The remains of a pre-bank soil [33] were identified beneath the bank. This shows signs of disturbance and/or the addition of dumped material presumably connected with the construction of the bank (McKenzie 2008). Within this layer was a small hearth [32], comprising an area of heat-reddened soil with charcoal patches (Figs 15 & 16). Charred fragments of hazel from the hearth provided two statistically identical radiocarbon dates that calibrate to *c.* 2574–2401 cal BC (Beta-223792, 91.5% probability) (Table 1) providing a *Terminus post quem* for the henge bank.

Stone circle

Although the results from Phillips Lewis's excavations suggested the presence of a stone circle its nature was far from clear. It was uncertain whether it represented

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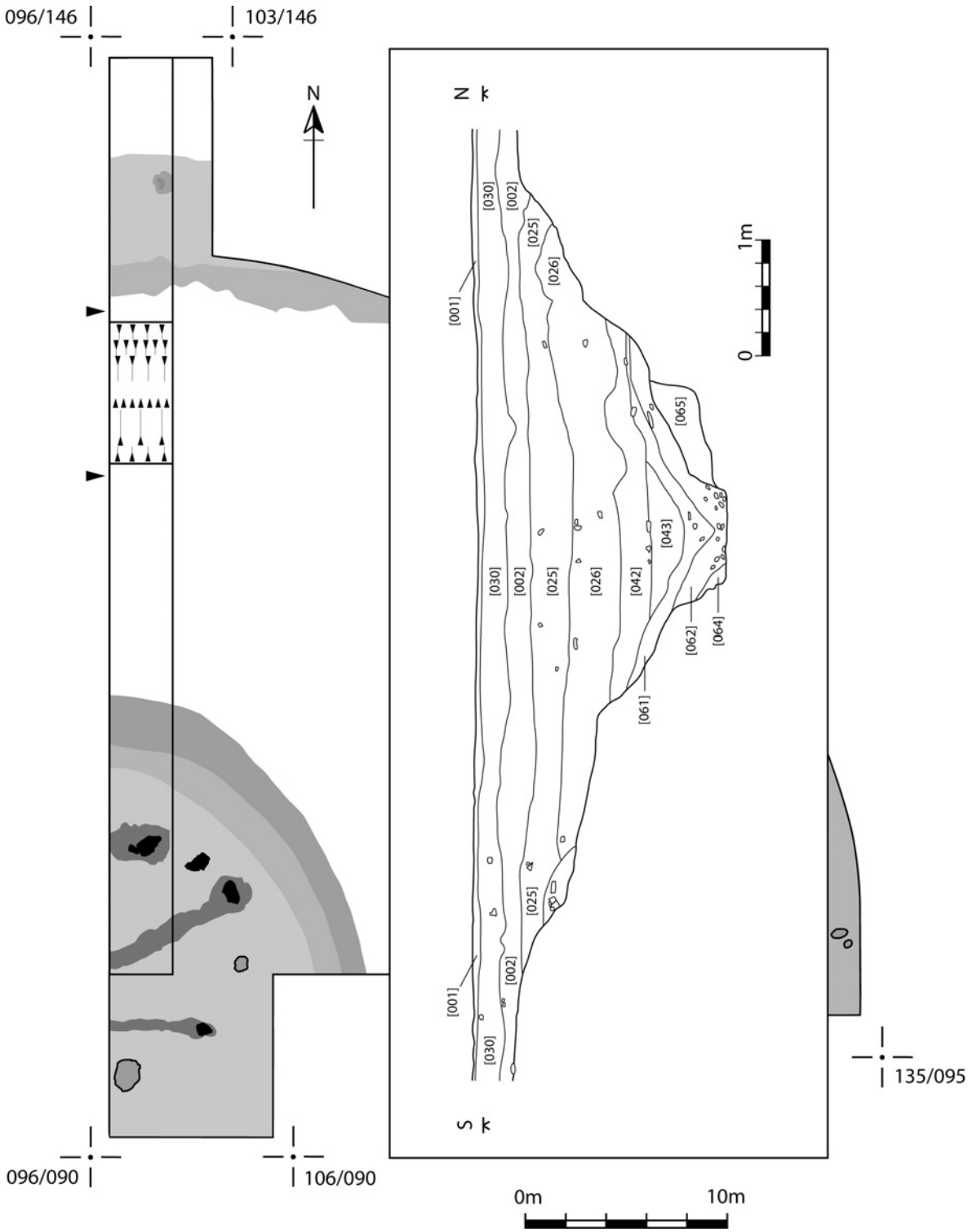

Fig. 13.
Section through the henge ditch. Recutting can be seen in the lower silts

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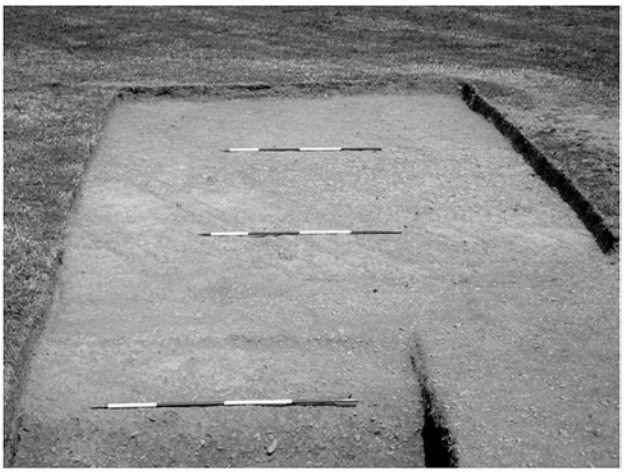

Fig. 14.
Remains of the gravel bank of the henge looking north with the outer edge of the ditch visible in the foreground. Plough scarification can be seen running diagonally across the bank (photo: Alex Gibson)

a circle of free-standing or of contiguous stones such as might be used to contain a turf, earth, or even primary stone mound as at nearby Trelystan Barrow 1 (Britnell 1982) or further afield at Corn Du in the Brecon Beacons (Gibson 1997). The present excavations identified six spaced stones forming a circle approximately 11 m in diameter (Figs 7 & 17), the tops of which protruded through the surviving mound material into the ploughsoil. It was immediately evident that the stones were unweathered, as observed by Phillips Lewis, but were suffering from plough damage, as mentioned above. In addition to the extant stones, a large hole [13] filled with grey silty clay was identified on the southern side, indicating the former position of a seventh stone. Artefacts such as thin metal foil, probably from a cigarette packet, recovered from the fill suggest that the stone had been removed comparatively recently.

Of the six stones identified within the excavated area stones 21 and 23 had been displaced by Phillips Lewis. Stone 20 had been toppled in antiquity. A layer of iron panning [41], interpreted as a pre-barrow turfline, apparently subject to waterlogging (McKenzie 2008), clearly ran up to and over this stone (Fig. 18). Stones 18 and 19, however, were *in situ*, stood to *c.* 0.9 m high, and had originally been set within a fairly shallow hole cut into [50] a silty clay layer with some gravel which overlay the natural terrace gravels (Figs 19 & 20). Buried soil [44], another loamy deposit, then appears to have formed around the stones, there being no evidence for a cut through this layer. This soil [44] shows some anthropogenic activity and seems to be a genuine old land surface as opposed to other higher layers which suggest dumped or introduced material (McKenzie 2008). A flint core and some large flint flakes were recovered from [44] immediately below iron pan [48] (see below). At least one of these blades appears to have been used for hide and plant working (Evans & Donahue 2008). A second iron pan layer [48], again interpreted as a relict turfline, sealed [44] and ran up to stones 18 and 19 and there was once again no evidence of stone-holes within this turfline. It would appear, therefore, that [44] and [48] developed after the stones had been set in place.

Two radiocarbon dates (Table 1) from hawthorn/rowan twig charcoal from [44], the soil overlying the stone-holes of stones 18 and 19 provide a *Terminus ante quem* for the construction of the stone circle which was probably built before *c.* 2900–2500 cal BC (95.4%).

Two dates were obtained from [41] (the context directly overlying the collapsed stone 20). These dates were statistically different. Therefore, coming from a deep and sealed context, the younger must be regarded as more accurate as it could not be intrusive while the older sample may represent residual material. The younger date was obtained from birch twig charcoal and calibrates to 2487–2268 cal BC (95.4%) (Beta-223794; Table 1). This acts as a *Terminus ante quem* for the stone circle's collapse. If the mound is composed of material associated with the topsoil stripping of the henge ditch, then this also may date the henge construction, or at least be a *TPQ* for it.

Pre-henge activity

Three pits [11], [36], and [38] were identified at the eastern edge of the excavation, within the buried soil [33] where it had been protected by the outer bank (Fig. 21). Excavation suggested that all three had been sealed by the bank and all produced sherds of middle Neolithic Peterborough Ware (see below). The largest pit [11] also contained heat-fractured stones (both

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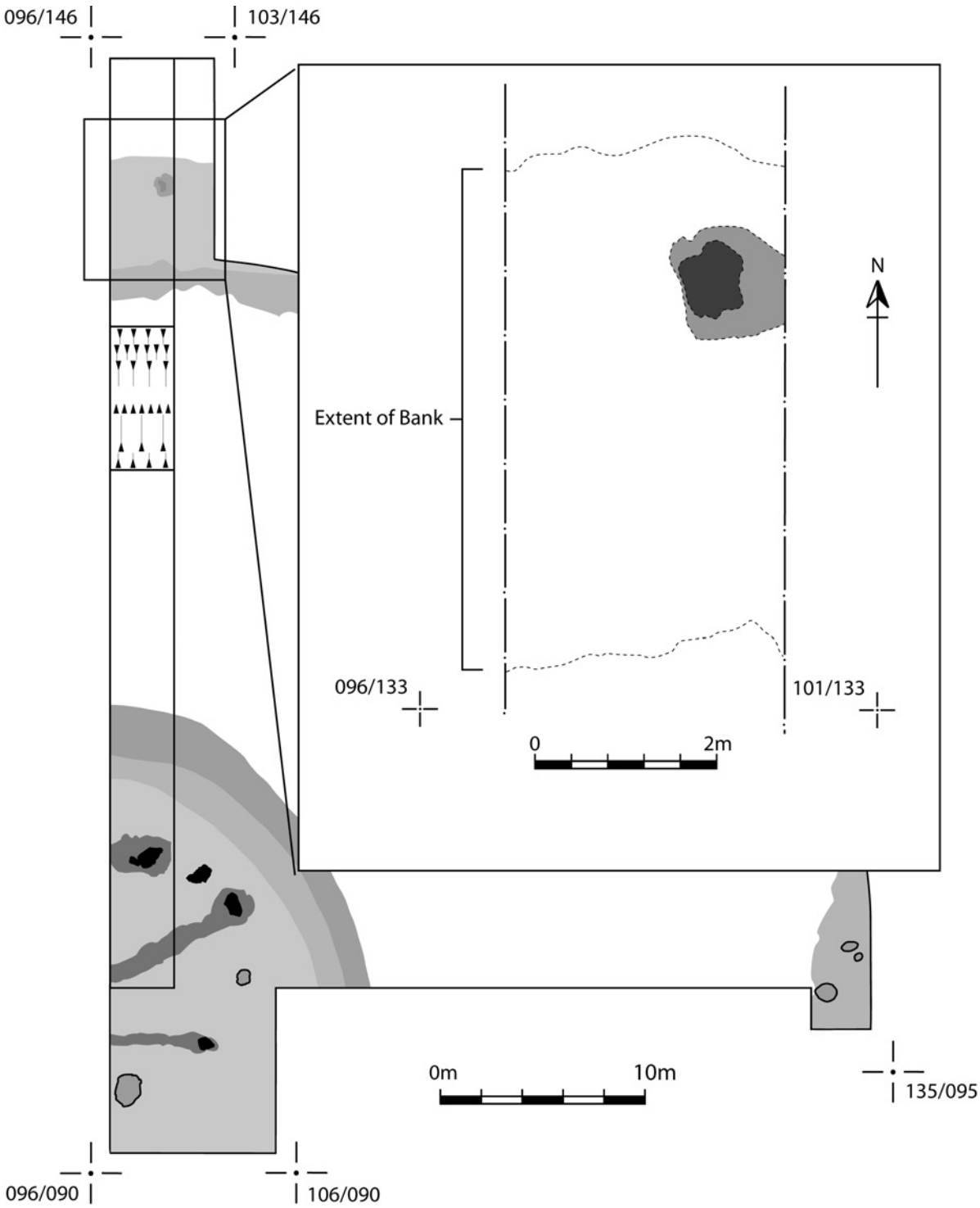

Fig. 15.
Location of hearth 32 below the henge bank. Density of the shading represents charcoal density

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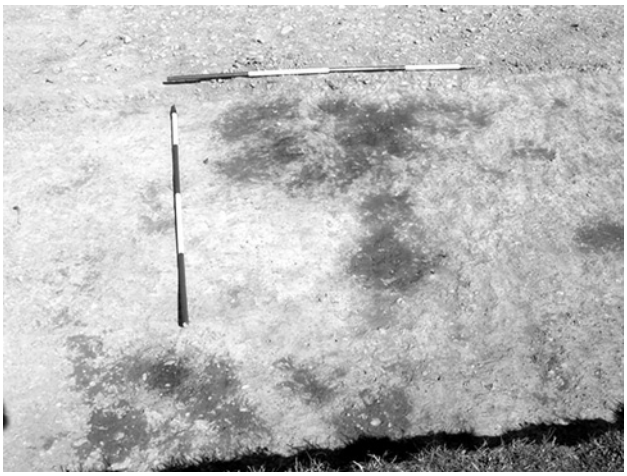

Fig. 16.
The pre-bank hearth [32] during excavation looking east. The upper of the two ranging poles lies on the top of the remnant bank demonstrating the shallowness of this deposit. Ranging poles = 2 m (photo: Alex Gibson)

sedimentary and dolorite) in the uppermost fill (Cotton *et al.* 2008). A rubber or pounder stone also came from this context.

Hazelnut shells from pits [11] and [38] suggest that they are broadly contemporaneous, dating to the last quarter of the 4th millennium. Pit [36] may be a little later in the 31st to 29th centuries cal BC. There are, however, some problems with these dates. The first series of dates obtained seemed a little too young for Peterborough Ware in this area and the two dates from the upper and lower fills of Pit [11] (respectively [9] and [10]) were statistically different with the older date coming from the upper fill. (The lower fill was recognised only by slightly denser charcoal fragments. The two fills do not seem to have resulted from discretely different episodes or to have been significantly different in date.) After discussion with Beta Analytic, the dates were re-run and the revised dates from [11] and [38] proved significantly earlier than the originals (Table 1). The revised date for [36], however, was statistically compatible with the first. To try and resolve this issue a second sample from Pit [11] (fill [10]) was sent for analysis. This date (Beta-236462) matched the revised dates better than the originals and so the revised dates have here been considered the more reliable.

SUMMARY OF THE THE SITE SEQUENCE

Phase 1 – pit deposition

The first phase of anthropogenic activity encountered during the excavations is represented by the deposition of Peterborough Ware, carbonised hazelnuts, and charcoal in three small pits in the east of the excavation trench within the pre-bank soil [33] in an area that would subsequently be covered by the henge bank [8] (Fig. 21). Not withstanding the problem radiocarbon dates mentioned above, the dates indicate that Pits [11] and [38] are broadly contemporaneous dating to *c.* 3330–3020 cal BC. Pit [36] may be a little later at *c.*3024–2867 cal BC (Beta-231250R; Table 1). This suggests that, on the evidence identified, the pit deposition phase at Dyffryn Lane lasted from the 3rd quarter of the 4th millennium to the 1st quarter of the 3rd millennium cal BC. Unfortunately, whether this pit deposition activity is small scale and restricted to this eastern area or whether the pits form a small part of a much more widespread episode of deposition cannot at this stage be determined nor can any direct stratigraphic relationship of the pits to the area of the stone circle (see below). The radiocarbon dates, however, suggest that these pits pre-date the next phase of activity, the stone circle, by a minimum of 100 and a maximum of 500 years (Fig. 22).

Phase 2 – the stone circle

An 11m diameter circle of spaced upright stones was set into the natural gravel surface (Fig. 17). No datable material was recovered from the stone-holes, however radiocarbon dates for soil [44] indicate a date range of *c.* 2900–2500 cal BC which may therefore be regarded as at least a *Terminus ante quem* for the construction of the circle. Soil micromorphology suggests that this soil [44] has a substantial anthropogenic input (McKenzie 2008) and may well, therefore, be the context associated with the construction and use of the stone circle. The circle appears to have become ruined and not repaired so that iron pan layer [41], developed over the lower portions of the collapsed stone 20 (Fig. 18). The younger of two Radiocarbon dates from this upper, immediately pre-barrow, iron pan indicate that this stone was collapsed probably by 2487–2268 cal BC (Beta-223794, 95.4% probability). This date also provides a *Terminus post quem* for the construction of the mound – see below phase 4 (Fig. 22).

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TABLE 1: RADIOCARBON DATES FROM DYFFRYN LANE

Context	*Material*	*Determination BP*	*Lab. No.*	*Date cal BC (68%)*	*Date cal BC (95%)*
9 (fill Pit [11])	hazelnut frags	4480±40	Beta-231247	3248 (11.0%) 3212 3192 (47.0%) 3086 3061 (10.2%) 3030	3331 (95.4%) 3022
10 (fill Pit [11])	hazelnut shell	4340±40	Beta-231248		
10 (R)	hazelnut frags	4490±40	Beta-231248R	3246 (65.5%) 3089 3047 (2.7%) 3037	3331 (85.5%) 3081 3069 (9.9%) 3026
10	hazelnut frag	4530±40	Beta-236462	3216 (68.2%) 3102	3354 (95.4%) 3091
35 (fill Pit [36])	hazelnut frags	4330±50	Beta-231250	3015 (40.7%) 2951 2940 (27.5%) 2901	3091 (10.1%) 3044 3036 (85.3%) 2885
35 (R)	hazelnut frags	4280±40	Beta-231250R	3001 (2.6%) 2995 2924 (65.6%) 2878	3078 (0.3%) 3074 3024 (95.1%) 2867
37 (fill Pit [38])	hazelnut frags	4350±40	Beta-231251		
37(R)	hazelnut frags	4480±40	Beta-231251R	3248 (11.0%) 3212 3192 (47.1%) 3087 3061 (10.1%) 3030	3332 (95.4%) 3022
44	*Corylus avellana* (hazel)	4050±50	Beta-223795	2843 (18.1%) 2813 2666 (50.1%) 2556	2861 (23.1%) 2806 2756 (5.2%) 2719 2704 (67.1%) 2501
44 (2)	hawthorn/rowan	4020±40	Beta-231837	2836 (17.6%) 2816 2627 (50.6%) 2540	2855 (22.2%) 2811 2743 (1.1%) 2730 2678 (72.0%) 2496
32	*Corylus avellana* (hazel)	4000±50	Beta-223792	2527 (68.2%) 2460	2574 (91.5%) 2401 2379 (3.9%) 2350
32	*Corylus avellana* (hazel)	3980±40	Beta-231249	2542 (8.9%) 2516 2505 (59.3%) 2458	2569 (87.6%) 2432 2424 (3.8%) 2402 2378 (4.0%) 2351
41 lower	*Betula sp* (birch)	3840±50	Beta-223794	2472 (68.2%) 2389	2487 (95.4%) 2268
41 upper	*Corylus avellana* (hazel)	3980±50	Beta-223793		
42	*Ulmus sp*. (elm)	2500±40	Beta-231836	770 (13.6%) 730 700 (54.6%) 540	790 (92.2%) 490 470 (3.2%) 410

Those demarcated 'R' are re-run samples. Dates highlighted are considered inaccurate & are not used in text

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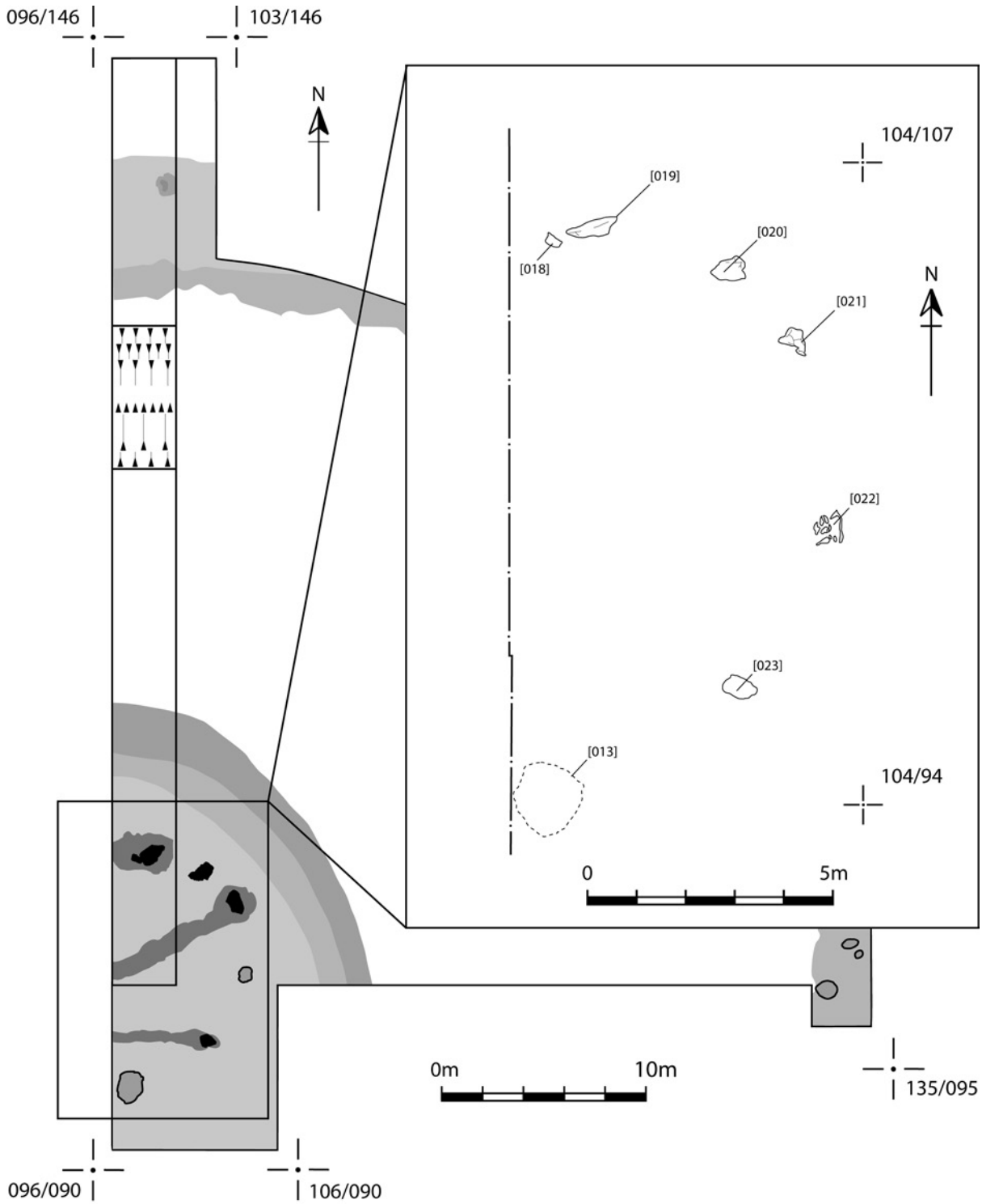

Fig. 17.
Tops of the standing stones protruding through the top of the central mound [7]

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Fig. 18.
Pre-barrow iron pan [41] running up to & over the lower portion of collapsed stone 20. Looking north. Ranging poles = 2 m (photo: Alex Gibson)

Fig. 19.
In situ stones 18 (left) & 19 set within shallow pits dug into [50]. Looking south. Ranging poles = 1 m (photo: Alex Gibson)

followed the stone circle shortly after the latter had become ruined, probably in the 3rd quarter of the 3rd millennium cal BC. The lack of a uniform turfline below the henge bank suggests that this area was also largely deturfed and that hearth [32] may have been lit on an already stripped or otherwise prepared surface.

Phase 4 – the mound

A central and apparently oval pit [53] was subsequently dug through the upper of the pre-barrow iron pans [41] and is probably associated with the construction of the mound of redeposited turf and other material [7] (Figs 11 & 12). This would have completely buried the stone circle (the tops of the stones were probably only protruding through the mound as a combined result of settling and agricultural degradation). A *TPQ* for this event is provided by the younger of the dates from [41] (Beta-223794) already discussed above. This date calibrates to *c.* 2487–2268 cal BC (95.4% probability) and is significantly later than the dates from the pre-henge hearth [32] (Fig. 22). This suggests that if construction of the mound is associated with the construction of the henge then this may be a more accurate *TPQ* for the henge than the dates from the hearth [32]. However, it may also suggest that the mound may represent a discretely later event: possibly the final monumental episode at the site.

Phase 5 – abandonment

This is a long period of time representing the gradual fill of the ditch (Fig. 22). Other than the 19th century excavation trenches, there was no further recognisable archaeological activity on the site. No traces of secondary burial in the mound material were recognized in the area excavated.

FINDS AND ENVRONMENTAL DATA

Phase 3 – the henge

Given the *TPQ* radiocarbon dates of *c.* 2574–2401 cal BC from [32], the hearth buried beneath the henge bank in the northernmost part of the trench, and the *TAQ d*ates for the stone circle discussed above, it seems logical to conclude that the henge (Fig. 13)

Peterborough Ware

In total, some eight vessels were recovered from the small pit group in the east of the site (fills of Pits [11] (fills [9] & [10]), [36] (fill [35]), and [38] (fill [37])). The majority (P1–6; Fig. 23) came from Pit [11] with one vessel each from the other two pits.

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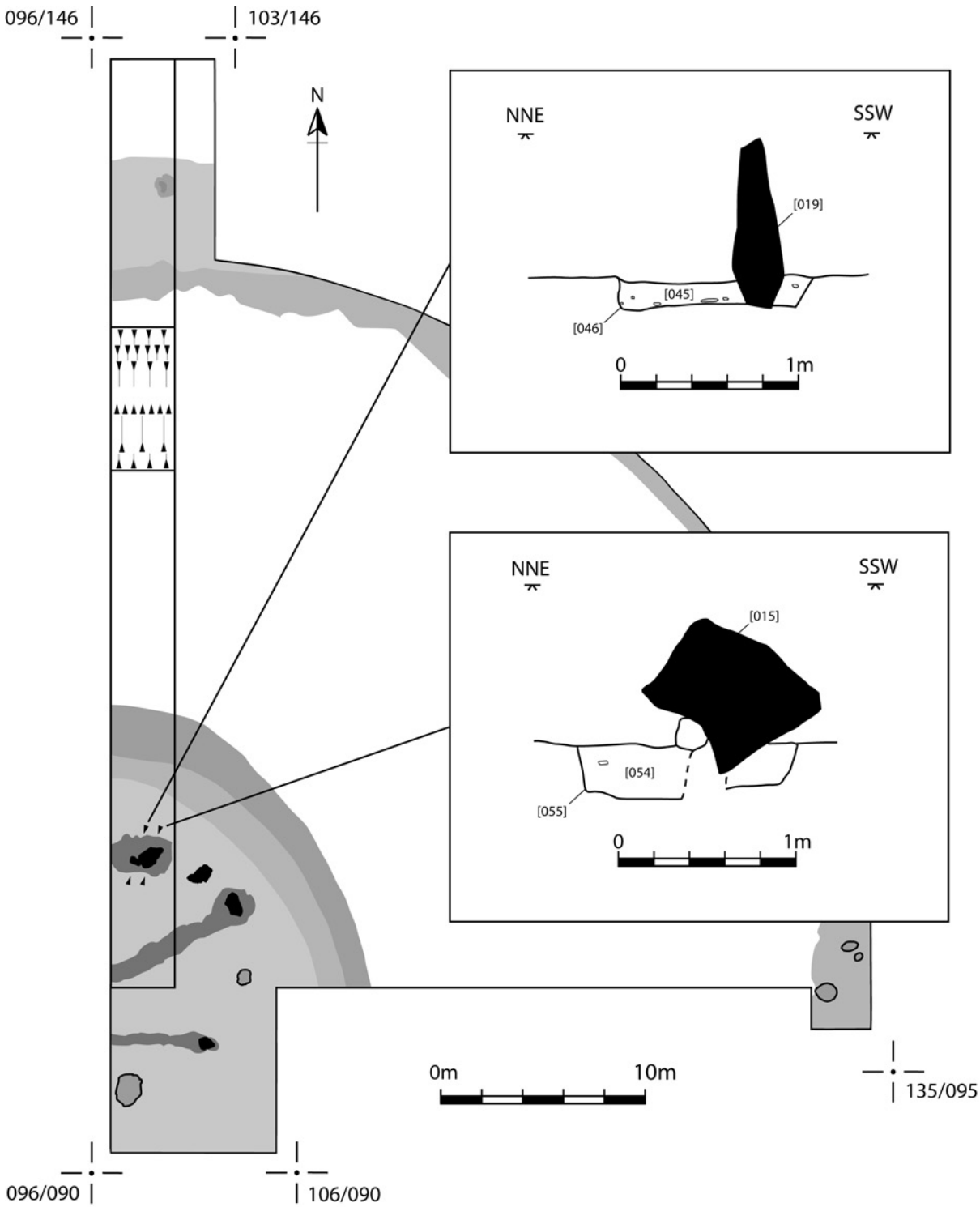

Fig. 20.
Sections through stones 18 & 19 & their stone-holes

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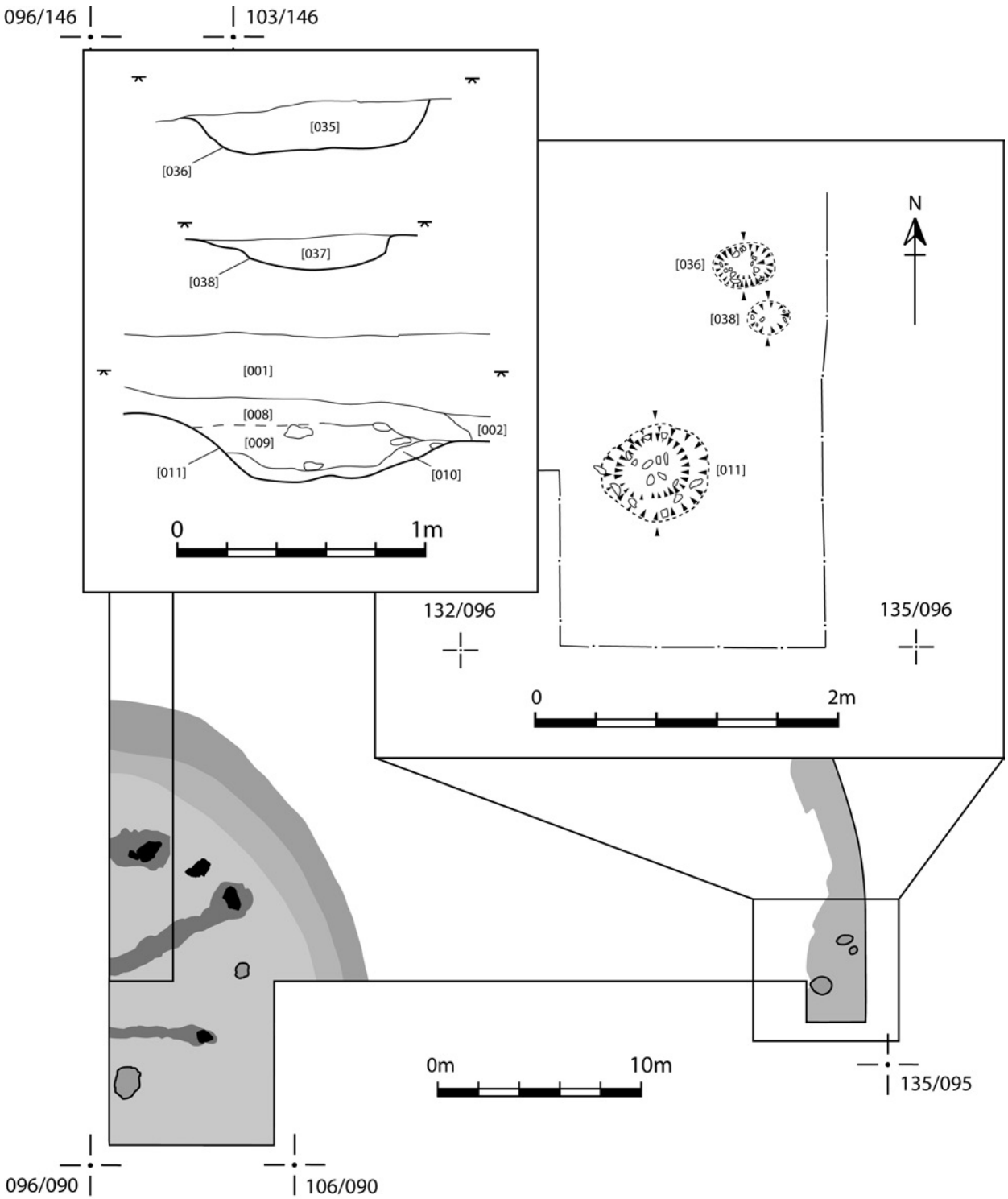

Fig. 21.
Peterborough Ware pits 11, 36, & 38 below the henge bank in the eastern extremity of the excavation

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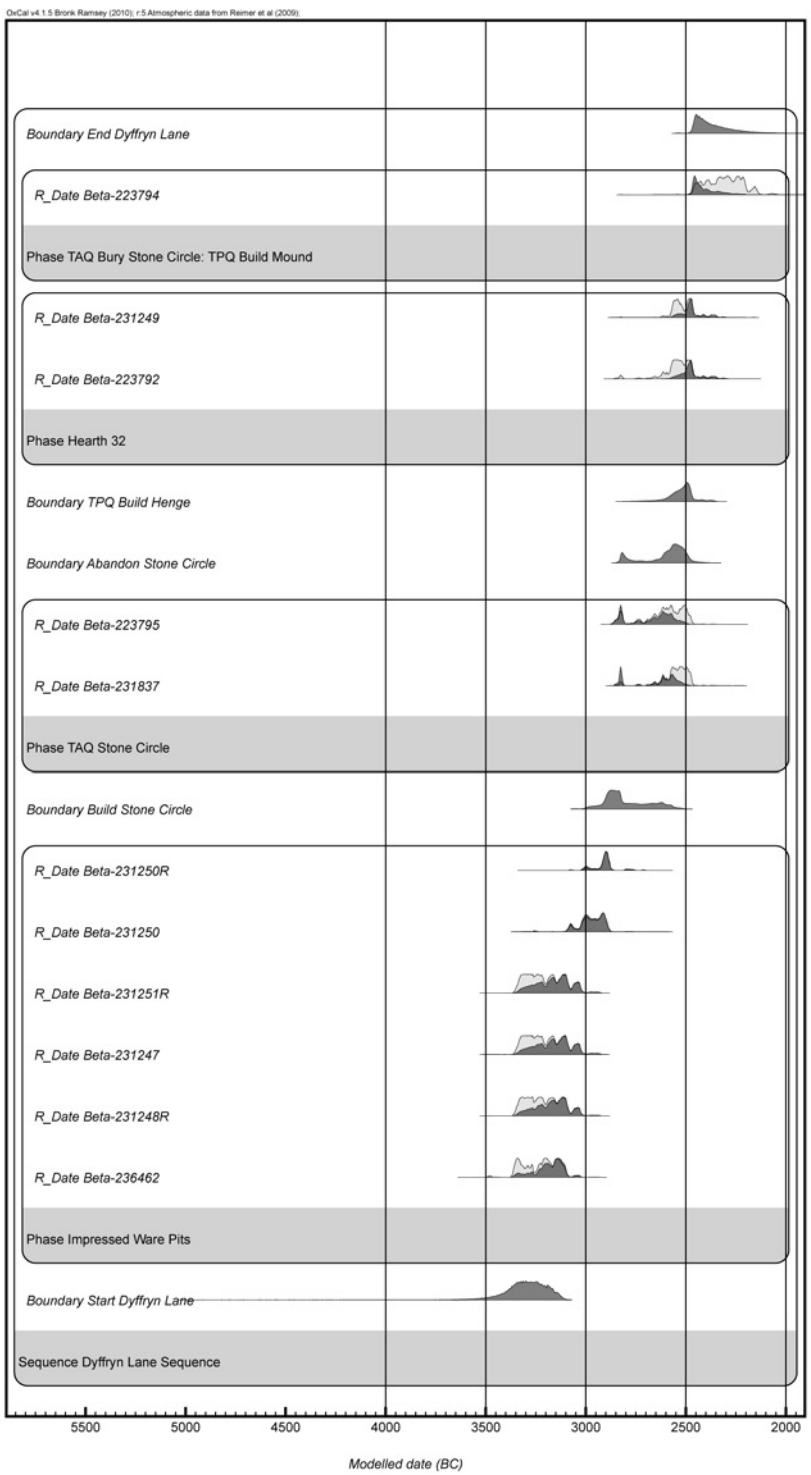

Fig. 22.
Model of the preferred radiocarbon sequence for the Dyffryn Lane henge. Dates calibrated using Oxcal 4.1 (Bronk Ramsey 2010). The model has good overall agreement ($A_{overall}$=77.5%)

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CATALOGUE

P1 [9] (11 sherds, 443 g)

These sherds represent part of the base and lower portion of a flat-based vessel of Mortlake affinity. The surfaces are generally mottled brown though one sherd is black internally, and the core of the fabric is black. The sherds vary between 10 mm and 20 mm thick reaching 25 mm in the base angle. The fabric is extremely coarse containing large angular quartz inclusions <7 mm across and which frequently break both surfaces. The flat base has an estimated diameter of 120 mm. The decoration comprises multiple horizontal (encircling?) rows of close set rectangular impressions. These are arranged almost to resemble coarse toothed comb, but the impressions do appear to have been individually executed. Each broadly sub-rectangular impression measures 5 mm long by 3 mm wide. Internal structuring in some of the better defined impressions suggests that a small animal bone may have been used.

P2 [9] (10 sherds, 132 g)

The outer surface is mottled brown, the inner surfaces are black, as is the core. The fabric averages 17 mm thick. All the sherds are wall sherds and are similar to P1 except that the inclusions seem more finely crushed (<5 mm across), are far more sparse, and quartz is not so visible. This gives the fabric a much smoother feel. A large oval depression on the inside of the largest wall sherd may result from a finger or thumb during the forming of the vessel. The decoration is similar to P1 though not quite so well-defined and, prior to conservation, it was originally felt that these sherds came from a single vessel. It is now considered that they represent two distinct but similar pots.

P3 [9] (3 sherds, 23 g)

This vessel comprises three sherds from a Peterborough Ware vessel in the Mortlake sub-style. The sherds are in a light pinkish-brown fabric with a grey core in places, are very smooth and well-fired, and the inclusions are generally well-crushed and hidden, though some quartz inclusions <8 mm across are visible. Where both surfaces survive, just below the rim, the fabric is *c.* 9 mm thick. Two body sherds have elongated incisions on the outer surface. These may well have been made using a fingernail rather than a sharp point. The rim is elaborate. Externally it gives to a concave neck. Above this there is a rounded moulding with fine, close-set oblique fingernail impressions. The top of the rim measures 25 mm wide and is slightly concave. It is decorated with four rows of fine close-set and oblique fingernail impressions arranged in herring bone motif. Internally, the rim has a flat bevel 7 mm deep decorated with a narrow zone of herringbone motif once again comprising fine close-set fingernail impressions. Internally, below the rim, is a single row of large, deep oblique fingernail impressions similar to those on the outer surface.

P4 [9] (3 sherds, 38 g)

This vessel comprises the rim and two body sherds from a Peterborough Ware vessel in the Mortlake sub-style. The outer surfaces vary from light sandy brown to black while the inner surfaces are light brown and the core is black. The fabric averages 8–10 mm thick, is hard and well-fired with a smooth texture, and contains quartz inclusions <9 mm across. The two small body sherds are decorated with paired fingernail impressions which have resulted in the raising of low clay crescents. The rim sherd has a near vertical bevel 8 mm deep decorated with a narrow zone of fine fingernail impressions arranged in herringbone motif. There is a slight undecorated hollow below this bevel. Externally, the rim carries a horizontal line of short incisions on its inner edge followed by a zone of incised herringbone. A hollow zone below the rim is decorated with spaced incised cross-hatching or lattice. Below the shoulder, the body is decorated with vertical lines of paired fingernail impressions often raising slight crescents of dislodged clay.

P5 [9] (4 sherds, 129 g)

Two base sherds and two wall sherds in a thick coarse fabric. The surfaces are light pinkish-brown and the core grey. Only one wall sherd has both surfaces preserved and this averages 15 mm thick. The fabric contains abundant quartz inclusions measuring <12 mm across. The base angle is small but seems to suggest a diameter of 120 mm and the fabric is at least 30 mm thick at this point. Externally, the pottery is decorated with long, curved fingernail incisions arranged vertically and in approximate horizontal rows. The larger of the two body sherds also carries some fingertip impressions towards the top(?) of the sherd.

P6 [9] (21 sherds (plus frags), 2370 g)

This consists of a large thick-walled vessel likely to belong to the Mortlake sub-style of Peterborough Ware. The reconstructable portion of the vessel has a flat base some 115mm in diameter and the fabric ranges from 15mm thick, thickening towards the base angle. The fabric is light brown to grey-brown externally, has a dark grey core and a dark grey-brown inner surface. It contains large angular stone inclusions (see below) measuring up to 17mm across which break the inner surface in particular. There are also traces of what appear to be organic voids on the inner surface. Externally the vessel is decorated with random fingernail and fingertip impressions These are occasionally associated with raised crescents of dislodged clay, but not in every case. Vertical, oblique and horizontal impressions are all present.

P7 [35] (1 sherd (plus crumbs) 29 g)

This vessel comprises the rim part of the body of an Peterborough Ware vessel in the Mortlake sub-style The sherd is very abraded but the surfaces are a light pink-brown while the core is more grey. The fabric averages 8–10 mm

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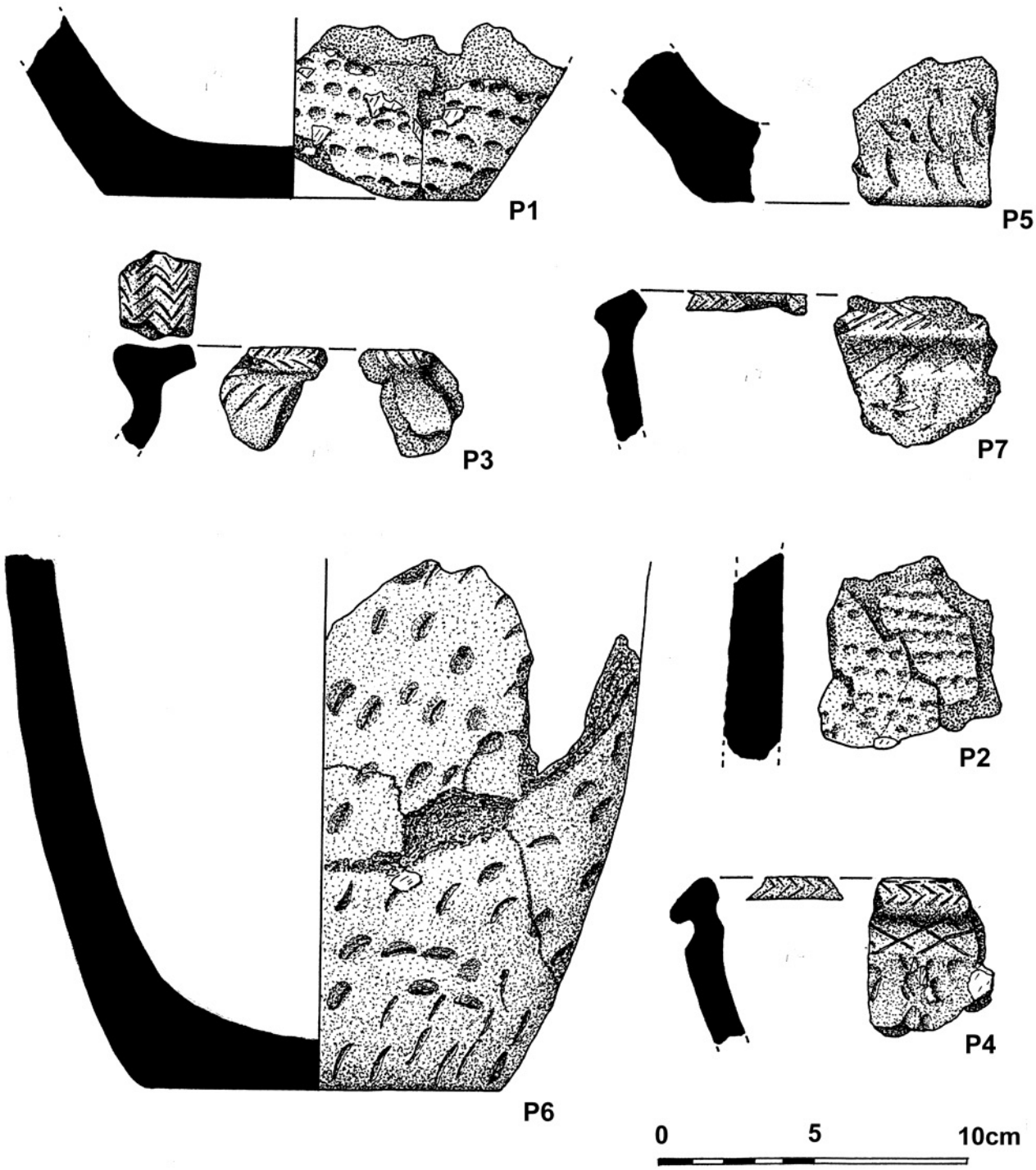

Fig. 23.
Peterborough Ware pottery from Dyffryn Lane

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thick, is hard and well-fired with a smooth texture, and contains quartz inclusions <8 mm across. The rim sherd has a near vertical bevel 8 mm deep decorated with a narrow zone of fine fingernail impressions arranged in herringbone motif. There is a slight undecorated hollow below this bevel. Externally, the rim carries a horizontal line of short incisions on its inner edge followed by a zone of incised herringbone. A hollow zone below the rim is decorated with spaced incised cross-hatching or lattice. Below the shoulder, paired fingernail impressions are faintly identifiable. It is possible that this vessel is the same as P4 above but is more abraded.

P8 [37] (3 sherds (plus crumbs) 7 g)

This sherd group comprises one possible rim and two other sherds. The rim sherd appears to be from a thickened rounded rim, possibly in the Mortlake sub-style. The fabric varies from light brown to black, no sherd (other than the rim) preserves both surfaces and the fabric contains quartz inclusions <9 mm across. The rim and one body sherd appear to have been decorated with fingernail impressions or light incisions.

In addition, there are 64 g of unassignable crumbs from [9].

The Dyffryn Lane assemblage adds a small but important, stratified and dated assemblage to a growing corpus of Welsh and Marches Peterborough Ware (Gibson 1995b). The available rims suggest that the vessels are in the Mortlake sub-style, however the flat bases of some vessels, particularly the apparently narrow and uneven base of P5, might also suggest a Fengate element. Both Fengate and Mortlake styles find local parallels from Brynderwen and Sarn-y-bryn-caled respectively which appear to be contemporary both with each other and with the present assemblage (Gibson 1994; 1995b, 34; Blockley & Taverner 2002.). Mortlake sherds have also been recovered over the English border at Meole Brace, Shrewsbury (Hughes & Woodward 1995) and Brompton near Churchstoke (Shropshire SMR). The former site has produced radiocarbon dates in the latter half of the 4th millennium in keeping with the present and more local assemblages (Gibson 2006, fig. 17). Given the fragmentary nature of the local assemblages, the presence of flat bases amongst the present material need not cause concern. It has been noted for some time that rounded bases on Mortlake vessels are often assumed yet the profiles often suggest a general flattening (as for example the deep baggy pots from Ecton, Northamptonshire; Moore & Williams 1975). The large diameter of the flat bases in the present assemblage, unlike the small narrow bases typically found on Fengate pottery, suggest that they are functional.

The close-set impressions on P1 and P2 may suggest that they are from the same pot, but slight differences in the fabric composition may equally suggest that they are from similar but different vessels. It must be remembered, however, that in hand-built pottery made from hand-mixed materials, the mixing of clay and inclusions can be uneven and the abundance and size of inclusions can vary within an individual pot. The similarity of P4 and P7 is also worthy of remark and, were the sherds to be from the same vessel, this would make an interesting cross-context join. However P7 is extremely abraded and a 'same vessel' identification cannot be given with certainty. The radiocarbon dates for Peterborough ware in the upper Severn Valley consistently fall between 3500 and 3000 cal BC (Gibson 1995b; 2006). Residue analysis of these sherds suggest that P2 and P6 both contained ruminant dairy lipids (Šoberl & Evershed 2008) suggesting possible domestic use prior to their deposition. Thin-section analysis of the pottery suggests that both the clay and deliberately added inclusions are compatible with a local manufacture (Vince 2008).

Worked flint and stone

(Philippa Bradley)

Thirty-three pieces of worked flint and a single piece of worked stone were recovered from the excavations. The flint came from nine contexts but only two produced more than ten pieces. Diagnostic forms dated the material to the Neolithic and Early Bronze Age. The flint is summarised in Tables 2 & 3, selected artefacts are described in the catalogue and illustrated (Fig. 24).

The flint is generally in very fresh condition with sharp edges, usewear was apparent on some edges and selected artefacts were chosen for microwear analysis (Evans & Donahue 2008). The flint is fairly good quality and ranges in colour from grey and black to a variety of browns. Cortex, where present, is thin and somewhat abraded. Cortication is varied.

The composition of the assemblage is summarised in Table 2. The flakes tend to be small and both hard and soft hammers were used. Only two bladelike flakes were recovered but some of the retouched and serrated pieces were also made on relatively narrow, straight-sided or slightly curved blanks. A single small

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TABLE 2: SUMMARY OF WORKED FLINT (% OF TOTAL)

Flake	*Bladelike flake*	*Chip*	*Cores, core frag.*	*Retouched form*	*Total*
15 (inc 1 core rejuvenation flake) (44.1)	2 (5.9)	1 (2.9)	2 (1 multi-platform flake core, 1 flake core frag.) (5.9)	14 (1 kite-shaped a'head, 1 barbed & tanged a'head, 6 ret. flakes/blades, 5 serr. flakes, 1 reworked pol. flake frag.) (41.2)	34

TABLE 3: SUMMARY OF FLINT BY CONTEXT

Context no./description	*Flakes*	*Bladelike flake*	*Cores, core frag.*	*Chip*	*Retouched form*
1 & U/S topsoil, unstrat.	4	–	–	–	–
2 Uppermost fill henge ditch	1 CRF*	1	–	–	–
7 Turf mound	4	1	–	–	1 kite-shaped a'head, 1 barbed & tanged a'head, 1ret. blade, 2 ret. flakes, 3 serr. flakes
25 Ditch fill	–	–	–	–	1 ret. flake
27 Backfill antiquarian trench	1	–	–	1	1 reworked pol. flake frag., 1 serr. flake
43 Ditch fill	1	–	–	–	–
44 Fossil soil	3	–	1 multi-platform flake core, 1 flake core frag.	–	2 ret. flakes, 1 serr. flake
52 Fill of pit 53	1	–	–	–	–
Total	15	2	2	1	14

* CRF = core rejuvenation flake

flake core was recovered (Fig. 24, 517) and one fragment also probably from a flake core. Some preparation of platforms and maintenance during knapping was undertaken as indicated by the core rejuvenation flake. A little platform edge preparation was also noted both on the core and some of the flakes indicating that the flint was being carefully worked.

Quite a high proportion of retouched forms was recovered with few very small flakes or chips. This may simply reflect activities carried out on site or may be a product of the sampling process. Simple retouched and serrated flakes and blades dominate the retouched component. Many of these artefacts are heavily worn but only a couple of instances of macroscopic gloss was noted (eg, 530 & 512). The retouched flakes are mostly minimally retouched along one or more edge. The only other retouched pieces recovered are a kite-shaped arrowhead (Fig. 24, 503), a barbed and tanged arrowhead (Fig. 24, 508) and a reworked flake from a polished stone implement (Fig. 24, 543). These artefacts came from the mound and antiquarian backfill (Table 2). The arrowhead is an unusual kite-shaped and polished example; both the form and polishing of this arrowhead are rare (Green 1980; 1984) and may suggest contacts with Ireland. The dominance of serrated and retouched flakes is of some interest given the small size of the assemblage and may be related to activities being carried out on the site.

A fairly large proportion of the flint came from the fossil soil [44] and the mound [7] (Table 2). There appears to be little difference, either technologically or typologically, between the flint from the fossil soil and the turf mound although the only core and core

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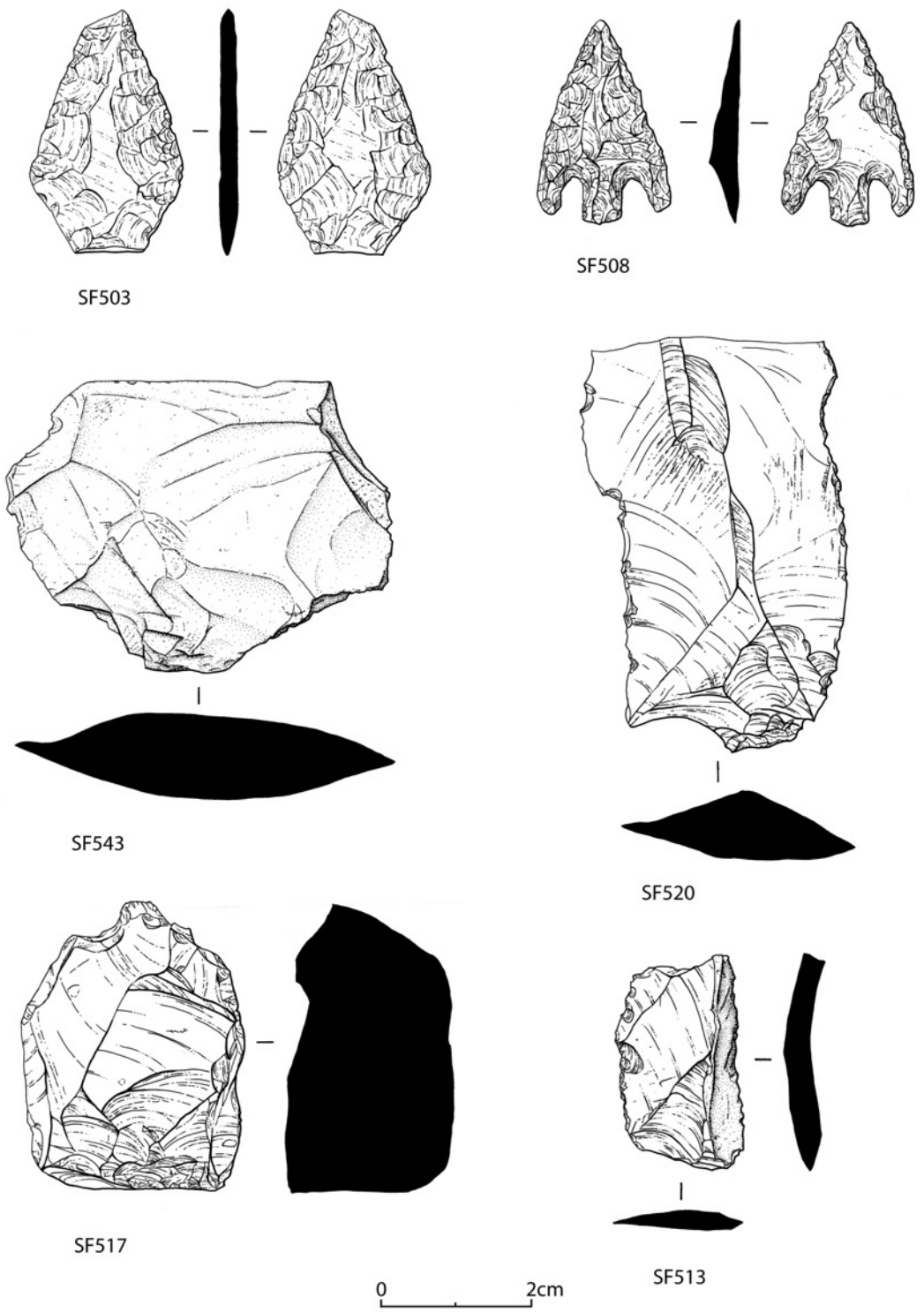

Fig. 24.
Flint & stone artefacts from Dyffryn Lane

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fragment came from [44]. Little flint came from the henge ditch itself and what was recovered is relatively undiagnostic. A single undistinguished flake was recovered from the top of the central pit [53]. The remainder of the flint came from the backfill of one of the antiquarian trenches [27] or unstratified contexts. Of note from [27] was a reworked flake from a polished implement made from a fine-grained stone (Fig. 24, 543). This has been minimally retouched to form a notch.

This small assemblage of flint provides evidence for Neolithic and early Bronze Age activity around the henge monument although its size precludes detailed discussion. Much of the assemblage is not particularly diagnostic and consists of small flakes and the occasional bladelike flake. Two finely worked arrowheads may have been deliberately deposited but equally may have been chance losses. The unusual polished kite-shaped arrowhead may indicate contact with Ireland, where arrowheads of this type are more commonly found (Green 1984, 22). The flint may have been used during the lifetime of the monument, and possibly preparation prior to the construction of the henge and subsequent activities in and around the site. Other than the arrowheads, which may have been deposited in a more formal manner, the flint is essentially of a domestic character, although surprisingly no scrapers were recovered. This small assemblage occurs in an area rich in Neolithic and Bronze Age activity (Gibson 2006, fig. 1, 164) and as such provides further evidence for contemporary lithics. A small assemblage including a kite-shaped arrowhead was recovered from Lower Luggy (Bradley 2006, 180) and other material has been recovered in the area (eg, Trelystan, Healey 1982; Bradley in prep.; Four Crosses, Green 1986; Sarn-y-bryn-caled, Green 1994).

Catalogue of illustrated flint

503 Kite-shaped arrowhead. Broken, reworking at tip, polished on dorsal and ventral surfaces. [7].
508 Barbed & tanged arrowhead, small finely worked example with impact fracture. [7].
543 Flake from a polished implement, reworked. Fine-grained stone. [27].
517 Multi-platform flake core. Small neatly worked example, [7].
520 Retouched bladelike flake. Broken, minimal retouch, Used for hide and plant cutting (Evans & Donahue 2008). [44].
513 Flake, broken, with cortical backing. Slightly curved profile. Used for dry hide scraping (Evans & Donahue 2008). [7].

Charred plant remains and charcoal

(E. Caseldine & Catherine J. Griffiths)

Hazelnut fragments and small quantities of wood charcoal were recovered. Most of the hazelnuts came from three pits [11, 36, 38] containing Peterborough Ware, along with small but varying amounts of charcoal of hazel (*Corylus avellana*), birch (*Betula* spp.), oak (*Quercus* spp.), blackthorn (*Prunus spinosa*), alder (*Alnus glutinosa*), and a Maloideae type (*cf.* hawthorn, crab apple, or rowan). These indicate the exploitation of secondary scrub as well as oak woodland. Given the proximity of the site to the River Severn it is interesting that alder, a tree commonly found on floodplains and close to rivers, is poorly represented. Alder is well represented in the pollen diagram from the Breiddin (Smith 1991) and, although much of the alder pollen probably represents local woodland, it seems likely that the inhabitants of Dyffryn Lane favoured the exploitation of drier woodland habitats rather than wet alder carr. A similar assemblage was also recorded from the nearby Neolithic enclosure at Lower Luggy (Francis in Gibson 2006).

Evidence from the buried soil [44] and iron pan [41] suggests similar woodland in the area, with the addition of some evidence for ash and cherry type. In contrast the assemblage from the hearth [32] suggests the exploitation of a stand of oak woodland with hazel understorey or deliberate selection of these species in preference to a wider range of species.

Charred plant remains from the buried soil [44] comprised rhizome fragments, including onion couch grass (*Arrhenatherum elatius* var. *bulbosum*) rhizome, a creeping buttercup (*Ranunculus repens*) type seed, and a probable vetch (*Vicia* sp.) seed. These suggest grassland although onion couch grass is frequently associated with cereal cultivation, where the swollen internodes are an effective means of propagation. However, there is no other evidence to indicate arable activity.

The continuation of scrub woodland or possibly the presence of hedges in the area is indicated by the assemblages from one of the later ditch fills [42] and turf line [31] in the henge ditch: the latter dated to the

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Early Iron Age. The absence of oak may indicate a reduction in oak woodland in the area but there is evidence for elm woodland during this period.

DISCUSSION

The excavations at Dyffryn Lane were successful in achieving the majority of the project aims. The condition of the monument has been accurately assessed, the palaeoenvironmental data were sparse and will serve to guide any future excavation, but nevertheless the site appears to have been situated in more or less permanent grassland (Brettell 2007; Allen 2008) with secondary scrub consisting of hazel, blackthorn, hawthorn, and birch with oak woodland nearby (Caseldine & Griffiths 2008). Direct dating evidence for each of the various elements of the monument was not recovered however sufficient samples provide chronological brackets for the site's development. The unexpected discovery of the Peterborough Ware pits has added another well dated and well stratified assemblage to the growing evidence for middle Neolithic activity in the upper Severn Valley.

The collection of monuments at the Rhiw-Severn confluence has in the past generally been known as the Dyffryn Lane henge complex after the most striking and visible monument in the group. This has tacitly implied that the henge is the focal monument around which the other monuments in the complex cluster and, in turn, suggests that the henge is primary. Results from the present excavations, combined with the earlier excavations at the Lower Luggy long barrow and enclosure (Gibson 2000; 2006) clearly demonstrate that sepulchro-ritual activity was already well-established at Dyffryn Lane for over a millennium before the henge was constructed.

Radiocarbon dates from the Lower Luggy long barrow suggest that the delimiting palisade trench around the barrow was constructed between *c.* 3650–3350 cal BC. This is exactly contemporary with the dates from the floor of the ditch of the Lower Luggy enclosure (Gibson 2006) and it appears likely therefore that these two monuments were broadly contemporary in the earlier part of the Neolithic (Gibson 2006). These sites represent the earliest activity discovered so far in the Dyffryn Lane area.

Present evidence then suggests a period of pit deposition involving the burial of Peterborough Ware and burnt material by people practising dairying. How extensive this was remains unknown. Aerial photographs certainly show the presence of other pits in the area, but, of course, alluvial gravels are naturally pitted so by no means all will represent human activity at this or any other period. The Peterborough Ware pits at Dyffryn Lane can be divided into two distinct episodes with the earlier phase, containing the majority of the pottery, dating to the 34th–31st centuries cal BC. The later phase, represented by pit [36] contains very abraded pottery, which may be residual, and its deposition dates to *c.* 3020–2870 cal BC. This latter episode is exactly contemporary with the female cremation deposit within the Lower Luggy enclosure and it is worth considering that this burial, rather than a cremation burial in the normal (modern) sense, may actually represent a structured deposit of burnt material broadly comparable to the burnt stone and plant remains in pit [11]. The Dyffryn Lane pit deposits and the Lower Luggy cremation all represent deposits of material transformed to a greater or lesser degree by fire. Whatever the similarities, real or perceived, it would therefore appear that middle Neolithic ritual and pyro-ritual activity was taking place at both ends of the known complex at roughly the same time. The location itself, perhaps an island in a braided river and tributary system, may have been the focus for this ritual rather than any primary monument.

The construction of both the stone circle and the henge are difficult to separate on radiocarbon dates alone given the overlap in the dates from soil [44] and hearth [32] but acting as they do as *TAQ* and *TPQ* for the stone circle and henge respectively we can be confident that the stone circle pre-dates the henge perhaps by as much as 300 years. This extends the ritual activity on the site to the mid-3rd millennium cal BC. It is now clear that this can no longer be called the Dyffryn Lane henge complex, as the henge is by no means primary to the locale but instead it augmented an already ritually important area. It seems then that a mound was finally added to the interior of the site, thus 'closing' at least one period of its use, sometime after 2487–2268 cal BC. It may be to this period and to the earlier 2nd millennium that we can attribute at least some of the other ring ditches and barrows known in the complex.

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While the ring ditches and barrows are admittedly only dated by analogy, this nevertheless points to fairly unbroken use of the Luggy-Dyffryn area for over two millennia. What gave it such long-lasting importance? It has been mentioned already that the site lies close to two major confluences and river confluences are known to have had religious significance certainly in the northern English Iron Age if not before as evidenced by inscriptions to *Mars Condatis* (Mars of the Watersmeet) in the Tyne-Tees area (Ross 1992, 237–7). It may have been an island or part island in a braided or series of braided river systems setting the area apart and giving it a sense of real or perceived liminality. Cursus monuments may be a way of formalising or monumentalising this liminality. They frequently occur in river valleys (Barclay & Harding 1999) and it has been suggested that they may give structural symbolism to routeways or borders (Loveday 2004; 2006). Classic henges occur in comparable locations, often in close connection with, though later than, cursus monuments and may continue the idea of monumentalising the edge of territories or land parcels and the connection between class II henges and routeways is a convincing one (Loveday 1998). If this is correct, then it is notable that, certainly since the Roman period, the Dyffryn Lane area has been an important part of the upper Severn. The Roman fort of Forden Gaer, within a complex of presumed Iron Age and later cropmarks, lies on the eastern bank of the river controlling an important crossing point. It is unlikely that this crossing point was established by the Romans and more likely that they were exploiting traditional routes and accesses guarded by the Iron Age hillfort of Ffridd Faldwyn to the south. A little under a kilometre to the south of Forden Gaer the former fording point of Rhydwhyman, the traditional meeting point for the English Kings and Welsh Princes: another suitably liminal location, a no-man's land like the more famous Runnymead in the Thames. Above Rhydwhyman is the motte and bailey castle of Hen Domen guarding the river's crossing points, later to be replaced by medieval Montgomery. In short, the area has been important as a river crossing and border crossing for the last two millennia and we can assume that it already had established importance prior to that.

Specifically, the Dyffryn Lane henge sequence can be paralleled elsewhere. At Sarn-y-bryn-caled various circular monuments including a timber circle and the penannular monuments of Sarn-y-bryn-caled Site 2 and Coed-y-Dinas were added to the northern end of the cursus (Gibson 1994). At Llandegai, a similarly narrow cursus seems to have attracted two henge monuments and other, later circular monuments (Lynch & Musson 2004). At Dyffryn Lane, the henge too was added to an already existing Neolithic landscape. To date no cursus has been identified at Dyffryn Lane though this role may have been performed by the Lower Luggy long barrow and enclosure at the northern limit of the known complex[1]. Further afield, the Big Rings henge and other circular monuments were added to the Dorchester on Thames cursus, both within and outside the main monument (Atkinson *et al.* 1951; Bradley & Chambers, 1988; Loveday 1999). A similar augmentation of a cursus complex also seems to have occurred at Thornborough, in Yorkshire (Harding 2003) and Maxey, Cambridgeshire (Loveday 2006).

The dating of henges (Harding with Lee, 1987: Harding 2003, 14), stone circles (Burl 2000, 376–7), and timber circles (Gibson 2005, 63–4) is problematical. Many sites are dated only indirectly. Timber circles may on rare occasions be dated by the carbonised remains of the timber uprights, as for example at Sarn-y-bryn-caled (Gibson 1994), but more frequently are dated by indirect associations such as material incorporated into the post-hole fill or by the 'primary' burials that they might enclose. Both strands of dating evidence are unreliable, the former possibly having an already significant age (already old material derived from earlier activity) and the latter rarely having a direct stratigraphic relationship to the circle itself: at Sarn-y-bryn-caled, where, unusually, a stratigraphic relationship was preserved, the burial was clearly secondary having been dug through the fills of the post-holes of the inner circle (Gibson 1994; this volume). Henges too are rarely dated directly relying, as in the case of Dyffryn Lane, on material beneath the bank, as for example the cremation burial beneath the bank at North Mains (Barclay 2005) or from material in the primary silts of the ditches as at Woodhenge (Wainwright with Evans in Wainwright 1979) much of which may again date to pre-henge activity, its stratigraphic presence being residual and the result of the initial weathering.

Stone circles are even more difficult to date directly (Burl 2000, 376–7) relying on the deliberate deposition of burnt material in the primary fill of stone-holes: deposits within stone circles can give little more than an indication of their period of currency unless there

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are preserved stratigraphic relationships such as a mound or cairn as for example at Balnuaran of Clava (Bradley 2000) or Tomnaverie (Bradley 2005).

The available radiocarbon data for these monuments show a broad currency between 3000 and slightly later than 1000 cal BC (Gibson 2005; Harding 2003; Burl 2000) showing that they were in contemporary use for over two millennia. Burl has suggested that stone circles are generally later than henges as they are upland manifestations of the lowland phenomenon (2000, 33) but this bold statement is largely unsupported. Similarly the co-existence of timber circles within henge enclosures (*inter alia* Richards 1991, fig. 80) has been inferred rather than demonstrated.

Recent excavation and research, however, combined with the diligent collection of radiocarbon data is starting to highlight a number of trends. For example, it has been suggested that at sites where timber circles and stone circles coincide, the timber circle is always the primary monument (Gibson 2004; 2005). This can be demonstrated at sites such as The Sanctuary (Pollard 1992), Machrie Moor (Haggarty 1991), and Balfarg (Mercer 1981). A recent reinterpretation of Croft Moraig and the evidence from Strichen (Bradley & Sheridan 2005: Phillips *et al*. 2006) at first appears to contradict this observation, however the timber structures at these two sites resemble later Bronze Age or Iron Age round-houses more than they do ritual Neolithic and Early Bronze Age timber circles and may therefore represent a very different (and perhaps more localised) later prehistoric practice. A later timber circle at Broomend of Crichie (inf. R. Bradley) again lies outside the henge monument so that it is not an *in situ* replacement of stone with wood *sensu stricto* but instead represents an addition to the monument complex rather than a replacement of any part of it and further demonstrates the contemporary use of stone and timber.

The primacy of the stone element over the earthen element at circle-henges is more difficult to prove given the general lack of any direct stratigraphic relationship between the henge and the circle. Burl would envisage the stone circles being added to henges because he believed that the henge represented the primary manifestation of later Neolithic and earlier Bronze Age circular ritual enclosure (Burl 2000, 33). The argument was based on general observation rather than strict archaeological stratigraphy however and has since become somewhat circular in itself. At Broomend of Crichie, Bradley has demonstrated that the stone circle was in use before the henge was constructed, the latter on a slightly different alignment. Here, for the first time we have convincing evidence for the primacy of the stone circle (inf. R. Bradley), a sequence also implied at Stennes (Ritchie 1976).

With timber circles in henges, it has generally been assumed that timber circles stood within henges rather like the classical temple within its *temenos* (*inter alia* Richards 1991, fig. 80) however this view has been challenged elsewhere (Gibson 2004; 2005). On purely practical grounds it is likely that the timber circle came first with the henge added at some later date as it would have been difficult to erect the timbers at some sites (for example Woodhenge and North Mains as well as the ditch-facing ramps for the timber uprights at Arminghall) given their proximity to the henge ditch. This represents an observational rather than a truly stratigraphic distinction however and does not preclude both elements being in contemporary, if sequential, use. Redating of the 'Neolithic' cremation beneath the bank at North Mains to 2200–1910 cal BC, however, has provided crucial information in this respect and has demonstrated that the timber element preceded the henge perhaps by several centuries (Barclay 2005, 86-8). The timber circle and henge would have been unlikely to have coexisted even though the ground plan of the timber circle would have been known to the henge builders. The dating of this cremation to 2200–1910 cal BC acts as a *TPQ* for the henge which may have been erected around a sacred space and broadly associated with an episode of Beaker/Food Vessel burial (Barclay 2005). This brings to mind the possibility of sepulchro-ritual activity within the central pit below the mound at Dyffryn Lane and raises interesting questions regarding Balfarg. Here Mercer preferred to see the henge as broadly contemporary with the timber circles and pre-dating the stone circle though he clearly admitted that the henge had 'an uncertain place within the sequence' (Mercer 1981, 114). However, and with the evidence from North Mains in support, it may well be that the Balfarg henge post-dates not just the timber circles but also the later stone circle and was instead associated with the near-central Beaker burial. A similar scenario would now appear to have been the case at Durrington Walls where the timber circles were clearly no longer standing at the time that the giant

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earthwork was raised (inf. M. Parker Pearson).

Thus at both timber circle and henge sites as well as at traditional circle-henges we have the beginnings of a pattern. At Broomend of Crichie, North Mains, Durrington Walls and perhaps Balfarg, we have proof that the henge had been added to existing monuments. These henges enclose areas that had had and continued to have a long tradition of ritual activity. The henge represents one element, and a comparatively late one at that, in a complex site narrative. This would also seem to be the case at Dyffryn Lane. Though only dated by a *TAQ* and *TPQ* respectively the stone circle was certainly in existence before the construction of the henge which in turn predated the mound, presumably associated with a central burial. As at Ringlemere in Kent (Needham *et al.* 2006), the recently excavated henge at Meusydd, Llanrhaeadr-ym-Mochnant (Jones 2008) and to a lesser extent at Cairnpapple Hill (Piggott 1950: Barclay 1999) the mound at Dyffryn Lane closes the site but the monument continues to play a role in the ritual landscape attracting as it does other, smaller, circular barrows and ring-ditches.

There is, however, one fundamental difference in the morphologies of Dyffryn Lane and the comparanda discussed above. At North Mains, Broomend of Crichie, and other less well dated complex sites such as Arbor Low and Woodhenge, the stone or timber circles are separated by only a short distance from the henge ditch. At Arbor Low (Burl 2000, fig. 34) the stones almost seem to slip into the ditch while at North Mains the post ramps of timber circle A almost encroach on the inner edge of the henge ditch. At Balfarg, however, the gap is greater with some 3–9 m separating the stone circle and 18 m timber circle A from the ditch. If Balfarg is interpreted as a multiple timber circle (Mercer 1981) then only 6 m separates the outermost circle (E) from the inner edge of the ditch. At the much larger site at Avebury, the great stone circle is set *c.* 10 m (variable) in from the inner edge of the ditch (Harding with Lee 1987, 284–6) and geophysical survey at Stanton Drew suggests that the stone circle and outer pit circle are some 20 m and 38 m respectively from the henge (David *et al.* 2004) At Cairnpapple Hill, the putative timber oval is set 3–6 m from the inside edge of the henge (Piggott 1950). These measurements from the larger sites are more in keeping with the broad berm between stone circle and ditch at Dyffryn Lane, though the berm at Dyffryn seems excessive in regard to the overall diameter of the monument.

This may hint at one explanation for the henges' external banks. The internal ditches and external banks of most henges have usually been described as non-defensive and presumably ritual phenomena and it is largely this recurring arrangement that defines the type. In relation to Irish Iron Age enclosures, Warner (2000) has suggested that the internal ditch and external bank may indeed be a defensive device, not against the enemy without but against dangerous forces within that needed to be contained. Though Warner never intended his hypothesis to be extended to British henges, it is nevertheless an attractive idea and has been well received on this side of the Irish Sea in a Neolithic context (Barclay 2005; Gibson 2005). There may, however be a purely practical reason for this seemingly impractical arrangement. If, as is becoming increasingly apparent, the earthwork element at henge sites is a secondary feature this implies that the central area was already important and the scene of ritual activity. This arena may therefore have needed to be reserved and preserved. An internal bank would have ultimately involved slippage which may have encroached upon and so compromised the sacred area unless a suitable berm had been reserved. This in turn would have necessitated the excavation of a considerably larger ditch circuit. With an internal ditch, however, the perimeter of the henge could be constructed close to the primary monument or space without compromising the integrity of that space while the bank's natural slippage would similarly not have posed the risk of compromise to the internal area. The interior of the henge would therefore be contained definitively and economically.

Whether or not stone or timber circles are present, few if any henges lack internal features of some sort (Burl 1969; Harding with Lee 1987; Harding 2003; Needham *et al.* 2006). As already mentioned above, defining these features as pre-henge or post-henge is often difficult given the lack of horizontal stratigraphy and especially now that henge construction can be seen to extend well into the Early Bronze Age. Therefore the lack of visible internal features on, for example aerial photographs, points only to archaeological invisibility. It does not preclude that the interior of the henge was 'empty', merely that what was going on there was archaeologically invisible. We know from later Romano-Celtic religion that natural places could be regarded as spiritually

significant. Sacred groves, trees, wet places, hills, springs, and confluences are all documented as sites that may gain religious importance (Webster 1995; Ross 1992). Altars to the *Genii Loci* imply local, possibly anonymous, forces (Ross 1992, 474) The burial of the inverted tree at Holme-next-the Sea (Brennand & Taylor 2003) beneath a palisade barrow and the central tree within the first phase of Barrow 6 at Irthlingborough, Northamptonshire (Healy & Harding 2007, 59) might be taken to infer that natural objects were already the focus of ritual attention by the start of the 2nd millennium BC. The practical hypothesis suggested above for the internal ditch/external bank arrangement at henges need not therefore rely on the presence of archaeologically visible phenomena within the henge interior.

At Dyffryn Lane, the stone circle is separated from the henge by a broad internal berm of 18 m. This is a considerable gap when the small size of the overall monument is taken into account. It may suggest that the original ritual arena was larger than the area enclosed by the circle corresponding more to the area later sealed by the central mound. However, no evidence for pre-mound archaeological activity within the space between the stone circle and the ditch was encountered in the, albeit small, area excavated.

The chronology of circles of stone and timber and of henges is still by no means clear and site sequences and narratives may vary from site to site: there need be no universal model. Despite this, the primacy of henges at these complexes is coming under increased scrutiny and a pattern of secondary construction is starting to emerge. This can now be demonstrated from Orkney (Stennes) to Wessex (Woodhenge and Durrington) with Broomend and North Mains in between. Dyffryn Lane can be seen to conform to this emerging pattern and must now be added to the corpus of these important sites. Remaining questions regarding the nature of the presumed primary burial, the activity (if any) between stone circle and ditch, the nature and extent of the Peterborough Ware episode and the nature of any secondary burials in the mound will only be answered by further, more large scale, excavation.

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Endnote

[1]Subsequent to the submission of this paper a cursus monument has been identified at Dyffryn Lane (inf. N. Jones).

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