

SALVAGE RECORDING V AT
WELLINGTON QUARRY,
MARDEN LANE,
WELLINGTON

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August 1993

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Report 184

HWCM 5522

Contents

1	Summary	1	
2	Introduction	1	
3	Aims	2	
4	Method	2	
5	Analysis	3	
	Phase 1	Natural deposits	4
	Phase 2	Prehistoric deposits	4
	Phase 3	Roman deposits	6
	Phase 4	Post-Roman deposits	8
		Undated deposits	8
6	Discussion	9	
7	Future research priorities	13	
8	Conclusions	15	
9	Acknowledgements	15	
10	Personnel	15	
12	Abbreviations	16	
13	Bibliography	16	

Tables

1	Quantification of finds	18
2	Catalogue of flint	19
3	Plant remains recovered from samples	20
4	Habitats of plant remains from samples	21
5	Potential for charred plant remains	22

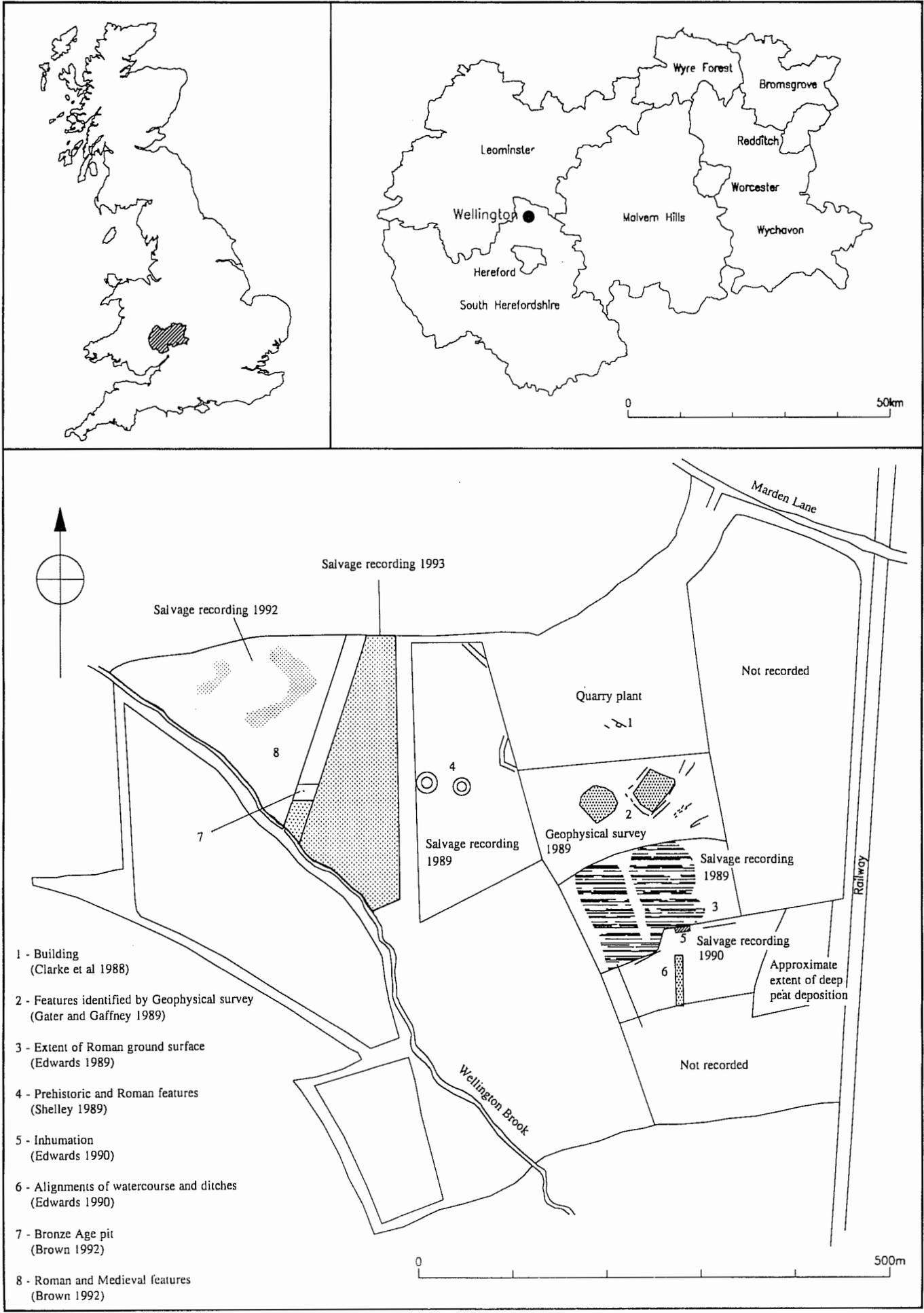
Appendices

1	The archive	23
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Figures

1	Location of Wellington quarry and fieldwork to date
2	Location of features identified in 1993
3	Soil profiles across the site
4	North-west facing section through pit 3853
5	Lithic artefacts
6	Prehistoric pottery
7	Possible burnishing stone

Location of Wellington Quarry and fieldwork to date



Salvage recording V at Wellington Quarry, Marden Lane, Wellington, HWCM 5522

Luke Fagan

1 Summary

A fifth season of salvage recording was undertaken at Wellington gravel quarry during removal of topsoil and alluvium in advance of gravel extraction. A range of archaeological deposits were recorded, notably of prehistoric and Roman date.

Prehistoric deposits included a group of pits containing a large and significant assemblage of pottery and flint of Neolithic or Bronze Age date. There was some evidence that this pit group was associated with both flint tool and pottery manufacture. A significant assemblage of charred plant remains was recovered from prehistoric deposits. Consisting of cereals and hazelnut fragments, this assemblage probably represents food waste. Other prehistoric deposits included a possible ring-ditch and boundary ditches.

Roman deposits included a series of boundary ditches, small pits and the remains of two human cremation burials. The relative paucity of Roman features and artefacts compared to other parts of the quarry suggests that this area lay on the periphery of the Roman settlement, probably representing the agricultural hinterland of the estate.

No features were definitively identified as medieval in date, although elements of post-Roman field systems were excavated.

2 Introduction

Wellington Quarry is situated at SO 508479 between the villages of Wellington and Marden, 7km north of Hereford (Fig 1). The salvage recording was carried out on behalf

of Redland Aggregates Limited during removal of topsoil and overburden above gravel deposits, in advance of the extension of the extraction area.

As this was the fifth period of salvage recording to be undertaken the background information relating to the site is not repeated here. A full introduction to archaeological investigation at Wellington can be found in the accounts of the work carried out in 1987 (Clarke *et al* 1988), 1989 (Gater and Gaffney 1989; Edwards 1989; Shelley 1989), 1989-90 (Dinn forthcoming; Roseff 1990); 1990 (Edwards 1990) and 1992 (Brown 1992). In 1988 a Romano-British building, probably a farmstead or small villa was identified, now beneath the quarry plant (Fig 1:1). Geophysical survey in an adjacent area in 1989 indicated the presence of a number of other features (Fig 1:2), while salvage recording identified a Roman ground surface (Fig 1:3) and several features of Roman date, as well as two Bronze Age ring-ditches (Fig 1:4). Further salvage recording in 1990 indicated the presence of two burials and a number of Roman and later features (Fig 1:5-6), while the Herefordshire Valleys Survey explored the alluvial and peat deposits derived from the River Lugg and Wellington Brook. No archaeological recording took place in 1991. The most recent work, the salvage recording in 1992, identified three medieval ovens, associated with other broadly contemporary features, a single Roman pit, and a prehistoric pit containing a unique assemblage of burnt bone, pottery and flint.

3 Aims

The purpose of the salvage recording was to record in as much detail as possible any archaeological deposits present, in order to obtain a broad view of the functions fulfilled at different periods by the various parts of the site.

The assessment of the artefactual and environmental remains was undertaken using *Management of archaeological projects* (English Heritage 1991) as a guide. This document defines the purpose of the assessment stage as being "...to evaluate the potential of the data collection to contribute to archaeological knowledge and to identify the further study necessary" (English Heritage 1991, 15).

The aims of the environmental assessment were to determine the quality and quantity of archaeobotanical remains, to assess the archaeobotanical potential of the site as a whole, and to make recommendations regarding the storage and curation of the archaeobotanical material.

These aims were further refined to address specific areas of interest, including the identification of charred cereal grains and non-cereal food plants, plants used as fuel for cremation pyres and ecofactual indicators of the local habitat in antiquity.

4 Method

Fieldwork methodology

The way in which any salvage recording can be carried out is governed by the methods being employed by the client and contractor. In this case, a box-grader removed the topsoil, leaving an overburden of alluvial subsoils above gravels, which was then removed using a 360° excavator and the spoil carried away in dumper trucks.

In common with the previous salvage recording (Brown 1992) most archaeological features were revealed in plan by the action of the box-grader. The temporary vertical

sections left by the excavator were quite small, and did not produce any evidence for additional features which had not already been revealed at least partially in plan.

Features, once identified, were recorded according to standard Archaeology Section practice (Archaeology Section 1988 Recording System, as amended) in as much detail as time would allow in each individual case.

Finds assessment methodology

The finds discussed here are those that were hand retrieved during salvage recording, although much more material can be expected from bulk environmental samples once they are sieved. The current assessment is, therefore, a provisional statement, subject to revision following sieving.

Preliminary identification, quantification, and spot dating of the finds was undertaken. The finds were numerically quantified (Tables 1 and 2). The pottery was identified to period for purposes of quantification, whereas other finds were quantified by material type only. The dating of deposits comprised a *terminus post quem*, where this was available. Account was taken of soil pH as a factor potentially affecting the condition of both artefactual and environmental material.

Pottery fabrics are referenced to a fabric reference series maintained by the County Archaeological Service (Hurst and Rees 1992, 200-9).

The hand-retrieved lithics were sorted into broad artefact categories (Table 2). No metrical or detailed typological analysis was carried out.

Environmental assessment methodology

Environmental bulk samples were taken from the majority of identified features, continuing the systematic environmental sampling programme initiated in 1992. The fills of the prehistoric pits were sampled in their entirety as far as was possible to enable maximum

recovery of artefactual and environmental remains. Samples were also collected from Roman features including ditches and cremations and a number of undated features. In total, 865 litres of soil, representing 37 contexts, were collected. Project programming constraints restricted the assessment to four samples. These comprised 40 litres of soil, representing 4.6% of the total volume of samples collected from the salvage recording. The findings of this assessment are therefore limited since the three prehistoric pits examined may not be representative of the whole assemblage of twelve pits. Similarly a single sub-sample of 5 litres from a Roman cremation may not accurately reflect the quality and quantity of plant remains from the remaining soil samples. The remaining 33 samples (comprising 825 litres of soil) will be sieved at a later date.

The selected assessment samples were sieved, floated and sorted by the author. The mesh size used was 500 μ m for the flots. The flots were completely sorted to recover all seeds and other plant remains, both charred and uncharred. The sorted plant remains were then examined under a low power EMT-1 light microscope to enable identification.

The seeds were identified as far as possible using the Archaeology Section comparative collection, a seed identification manual (Berggren 1981) and an illustrated site report (Griffin 1988). Comparative descriptions of charred cereal seeds and chaff were obtained from Jacomet (1987). Habitats and common names of the plants were obtained from Clapham *et al* (1989).

5 Analysis

Structural evidence

Most archaeological deposits recorded took the form of cut features and their fills (Fig 2). Because of the methodological constraints of salvage recording and the diffusion and isolation of many of the archaeological features, only a limited structural sequence can be built up. Thus, the grouping and

phasing of many features relies upon structural typology, feature orientation, position relative to alluvial deposits, and pottery and flint dating. A number of deposits could not be phased.

The deposits identified during the course of the salvage recording can be grouped into four phases.

Phase 1	Natural deposits
Phase 2	Prehistoric deposits
Phase 3	Roman deposits
Phase 4	Post-Roman deposits

Artefactual evidence (for quantification see Tables 1 and 2)

In excess of 1644 sherds of pottery have been recovered during salvage recording since 1987, and the 1993 season accounted for 51% (by sherd count) of the all the pottery to date (with the omission of finds from the 1988 season). A high proportion of the 1993 finds, both pottery and flint, was from a single pit group.

Measurement of the pH produced a range from 6.96 - 7.50, that is, slightly alkaline. The condition of ceramics was variable, the Roman ceramics being in less good condition than the early prehistoric pottery.

A total of 244 flint artefacts were recovered (Table 2), together with a single flake of unidentified stone and 23 fragments of burnt flint. A total of seven classifiable tools were identified, together with six unclassifiable tools. Waste material totalled 231 artefacts and included blades, flakes, cores, flaked lumps and miscellaneous debitage.

There were in addition a number of unstratified finds, that is, artefacts that could not be provenanced to specific contexts.

Environmental evidence

A total of four samples were examined from three prehistoric pits and one of the two Roman cremations. Time constraints meant that assessment of further samples was not

possible. Table 3 lists the numbers of plant remains recovered from the samples. Table 4 contains the habitats of the plants recovered from the samples.

The authorities for the species names are given in the tables, but are not repeated in the text for reasons of brevity.

Phase 1 Natural deposits

Earlier archaeological salvage recording had located three main types of 'natural' deposit: gravels, alluvial clays and peat. In this area only gravel (3879) and alluvial clays (3821, 3858, 3875, 3876, 3877, 3880 and 3881) were present.

The depth of the alluvium varied across the site, from 0.70m towards the north to 1.34m at the south. The alluvial clays varied in both colour and texture, and occasionally contained flecks of manganese panning and small pebbles. A series of soil profiles were recorded (Fig 2, Fig 3).

No artefactual or ecofactual evidence was recovered from deposits of this phase.

Phase 2 Prehistoric deposits

Prehistoric deposits were limited to the southern half of the site, and comprised two parallel ditches, twelve pits and a feature tentatively identified as part of a ring-ditch.

Structural evidence

A linear cut (3873) aligned approximately south-east to north-west was recorded at three points across the site. It was shallow (0.36m), U-shaped in profile and filled with a grey brown silty clay fill (3872). Three small flint flakes were recovered from this fill, and are broadly datable to the Neolithic period. A second linear cut (3883) lay on a parallel alignment approximately 0.70m to the north. This was also U-shaped in profile, and slightly wider (*c* 2m) and shallower (0.60m). Its fill (3882) was a grey brown silty clay similar to that of the southern linear feature of this date (3872). No artefactual evidence was recovered from this feature.

Although their relative chronologies are unclear, these features are considered to be broadly contemporary on the basis of their common form and alignment.

A cluster of twelve features located towards the south-west of the site were excavated and are considered to be Neolithic/Bronze Age in date. All features within this group were pits, circular or subcircular in form and varying in diameter from 0.60m to 1.24m. The depth of these features also varied between 0.13m and 0.50m. However, it was unclear whether this represents their full original depth. Some features had clearly been truncated during machine stripping of the subsoils, whilst others appeared to have undergone some truncation in antiquity.

These features were all cut into either a compact silty yellow alluvium (3821) or a compact clayey gravel beneath it (3878). A few of the deeper features were bell-shaped in profile; that is, their sides splayed out towards the base of the feature, undercutting their top edges (Fig 4). This distinctive shape may have arisen through the erosion and collapse of the looser clayey gravel (3878) which lay below the more compact alluvium (3821) into which these features had been cut. All of these features were filled with very dark silty clay fills, and often contained frequent charcoal flecks. A single pit (3866) additionally had a compact layer of stones lying in its base, some of which had traces of burning upon them. This burning had no consistent pattern to it, suggesting that it had not occurred within the confines of the cut (3866). In 1992, a single pit was excavated and tentatively dated to the Bronze Age (Brown 1992). Taking into account its position, form and the nature of its fills and artefactual assemblage, it now seems more likely that this pit is associated with the Neolithic features recorded during this period of salvage recording (Fig 1.7).

To the north-east of the site lay a curvilinear feature (3820). It was U-shaped in profile, and survived for a length of 7m and to a depth of 0.30m. The upper edges of the feature had been truncated by machine stripping of the subsoil, so that only its

deepest portion remained to be recorded. It's fill, a mid grey brown silty clay (3819), contained two sherds of prehistoric pottery, one of which was a decorated rim sherd (see below). The form and decoration of this sherd were of a distinctive type dated to the late Neolithic. This feature has thus been tentatively identified as the remains of a prehistoric ring-ditch.

Pottery

Much of the pottery (675 sherds) retrieved from prehistoric deposits in 1993 was of early prehistoric date, and was especially associated with a single pit group.

In total 93 % of the prehistoric pottery recovered during salvage recording since 1987 (99.85% of the 1993 prehistoric phase assemblage) was retrieved from a pit group in the south-west corner of the salvage area. This group of pits extended into the 1992 salvage area, and pottery of similarly early prehistoric date was reported from here by Buteux (1992, 11).

The pottery was coarse tempered, and handmade in at least three fabrics, and had been produced by open firing on a bonfire (Fig 5). Vessels were generally reduced on the inside, and more likely to be at least partly oxidized on the outside. The fabrics were quite friable, but some large conjoining sherds were identified. There were few decorated sherds. Decoration consisted of the application of ?cordons/lugs, and burnished ridging on top of the rim. Careful finishing of the pots was evident in some cases, with external burnish being pronounced. This technique has the effect of rendering a pot more watertight as well as presenting a more attractive polished surface. A minimum of twenty vessels was identified.

The style and fabrics were compatible with pottery of Neolithic to Bronze Age date. More precise dating was difficult because of the shortage of well-dated assemblages of comparable material from other sites in this region. Pottery from Bromfield (Stanford 1982), 30km (18.6 miles) to the north, exhibited some similar features. Here there was a range of pottery from the Neolithic to

Bronze Age, though the latter was most common.

On general stylistic grounds the lack of base angles and low level of decoration suggested that Neolithic pottery of the 4th to 3rd millennium BC was represented. Stanford (1982, 283) referred to a crushed quartz temper in the Bromfield Neolithic pottery. This temper (subject to confirmation by more detailed analysis) was also used in the Wellington pottery. At Bromfield this temper was mainly replaced in the Bronze Age by igneous rock from the Clee Hills (Stanford 1982, 309).

Stone pebbles that resembled the crushed quartz tempering in the pottery were found in association (see below).

A single sherd of pottery from the fill of the possible ring-ditch (3819) was highly decorated both on the rim and on the outside surface. The latter decoration was executed by combing, and the general effect resembled grooved ware of the late Neolithic. This has a fine fabric without large inclusions.

Other ceramic

There was a small amount of fired clay (2 fragments) from the fill of one pit (3854).

Stone (excluding lithics)

There were three stone implements, possibly for smoothing or sharpening (3854; Fig 7). Specific use could have been for burnishing of pottery in the leather hard stage before firing. A stone of similar form was a stray find at Cefn Hill (see below), a Neolithic site near Craswell, where it was referred to as a burnishing stone (Robinson 1946, plate facing P34, upper photograph, no 3).

Other stone comprised broken quartz pebbles (3852, 3854), coarse sandstone (3867), and clear rock crystal (3852). The former closely resembled the temper used in the majority of the early prehistoric pottery. Some of it was in a friable condition and may have been burnt to allow easy crushing. The presence of the quartz pebbles suggested that pottery making may have been taking place in the immediate vicinity.

Lithics

Lithics were recovered from deposits within ten of the twelve pits in the pit group (excluding the bulk samples). Lithics were also recovered from the yellow alluvium (3821) that the pits were cut into, but there were no diagnostic artefacts in this deposit. The material from these features can be considered as a contemporary assemblage. The assemblage contained a range of tools and debitage. Core fragments, small chips and other miscellaneous debitage was recovered which indicated that lithic production was carried out adjacent to the pit group.

The classifiable tools included a broken leaf-shaped arrowhead (context 3852; Fig 5), a serrated-edge flake (context 3859; Fig 5) and three scrapers (contexts 3821, 3838 and 3854). There were a further six unclassified tools. Leaf-shaped arrowheads have been recovered from contexts dated to the 4th and 3rd millennium BC, but are also known from early Bronze Age associations (Green and Wainwright 1991). Serrated-edge flakes have been dated to the 4th millennium BC, as at the Neolithic enclosure at Maiden Castle, Dorset (Edmonds and Bellamy 1991, 220). The scrapers were not readily datable but were not inconsistent with a Neolithic date.

The preliminary characterisation of the waste material (Table 2) indicated that the assemblage could be characterised as a flake industry rather than a blade industry (blades forming 7% of the debitage). This proportion of blades is not inconsistent with a Neolithic date (Pitts 1978), however little reliance should be placed on this data prior to analysis of the total assemblage. The single flake of other stone (context 3852) had a small area of polish on the dorsal surface, and it is likely that this artefact is a flake from a polished stone axe.

A preliminary assessment of the date of the Phase 2 lithic assemblage indicates a Neolithic date is probable (4th to 3rd millennium BC).

Environmental evidence

Three samples taken from prehistoric pits were chosen for assessment, and produced similar assemblages of plant remains. The largest assemblage was recovered from a 15 litre sample from the fill of one pit (3853) (Fig 2) which contained over 200 charred fragments of *Corylus avellana* (hazel) nuts and 20 charred indeterminate cereal seeds. There were also a large number of charcoal fragments, but their small size precluded any identification to species.

A similar, smaller assemblage was recovered from the fill of second pit (3855). A sub-sample equivalent to 3.3 litres was examined from this feature, yielding nine indeterminate charred cereal seeds, together with 79 charred *C avellana* fragments. The quantity of charcoal fragments noted in this sample was less than that from the first sample (3852), and once again the species of origin could not be identified.

The third sampled prehistoric context sampled (3861) was slightly contaminated with modern roots and weed seeds including *Trifolium* spp (clovers) and *Chenopodium album* (fat hen). A few charred remains recovered from this sample (2.5 litres), represented nine cereal seeds, six *C avellana* fragments and a single unidentified weed seed. There were few charcoal fragments in this sample and no species identification could be made.

Phase 3 Roman deposits

Roman deposits consisted of five lengths of ditch, two pits, and the remains of two cremations (3835 and 3843; Fig 2).

Structural evidence

Towards the north-eastern limit of the site lay a group of intercut features. The earliest of these features was an irregular subrectangular cut (3812), filled with a grey brown silty clay (3811). Although this feature contained no artefactual evidence, it is considered to be Roman because of its association with features of known Roman date.

Cutting the western edge of this feature was a north-west to south-east aligned linear feature (3806). It was c 0.85m in width, with a steep sided U-shaped profile. Its homogeneous silty clay fill (3805) contained five sherds of Roman pottery and two fragments of cattle bone. This feature was traced for 10m of its length and is interpreted as a ditch.

This ditch was in turn cut by the northern limit of another U-profiled linear cut (3810), filled with a light reddish brown silty clay (3809). This feature survived to a depth of only 0.25m, and contained no artefactual evidence. It may represent the butt-end of a ditch, possibly replacing that to the west (3806).

Cutting the north-eastern edge of this feature was a roughly circular feature (3808) filled with a light grey brown silty clay (3807). It contained no artefactual evidence, and may represent a post hole.

To the south of these intercutting features was a substantial linear cut (3818), aligned north-west to south-east and interpreted as a ditch. It was up to 2m wide, survived to a depth of 0.40m, and was traced for some 15m. Its dark grey brown silty clay fill (3817) contained occasional small pebbles, charcoal flecks and Roman pottery and roof tile.

A second group of intercutting features were recorded some 55m further south. The earliest of these features was a narrow (0.75m) ditch (3841) filled with a slightly pebbly grey brown silty clay (3840). This ditch also lay on a north-west to south-east alignment.

Cutting into the fill of this ditch, approximately 8m from the southern limit of its recorded length, was a subcircular pit (3835), filled with a very dark grey brown silty clay (3832). It contained frequent charcoal flecks, small fragments of burnt human bone, twelve sherds of pottery from a single vessel. This feature is interpreted as a cremation burial.

Immediately to the south lay a sub-oval pit (3843) filled with a grey brown silty clay (3842). This fill also contained fragments of burnt human bone, spread diffusely through the eastern part of the pit where it had been cut into the fill of ditch (3841). This distribution suggests that the bone fragments are not in their primary context, and that they arose from a second cremation, destroyed by the construction of the sub-oval pit (3843).

The most southerly Roman feature excavated lay some 15m to the south of this second group of intercutting features. A linear cut (3837), up to 1.50m in width and surviving to a depth of 0.60m, it was traced for 6m of its length. Its fill, a light grey brown silty clay (3836), contained occasional flecks of charcoal and small fragments of animal bone. A single sherd of Roman pottery was also recovered. This feature is interpreted as a ditch. Unlike the other Roman ditches excavated however, it does not lie on a north-west to south-east alignment. Instead, it runs approximately east to west.

Pottery

The quantity of Roman pottery (86 sherds, or 16% of the overall 1993 pottery assemblage) was modest. This amounted to 19% of the total Roman pottery recovered during salvage recording since 1987. Typically it consisted largely of Severn Valley ware (fabric 12), and included a large number of sherds from a single tankard (3840) which had probably been used as a cremation urn. The use of this vessel form for this purpose would be most unusual. The tankard dated to the mid 1st to 2nd century.

None of the pottery was specifically datable to the later Roman period. However, the assemblage was not large enough for the absence of identifiable later Roman pottery to be of certain significance.

Other ceramic

There was a small quantity of *imbrex* tile (2 fragments), possibly of Roman date. Some of this exhibited a distinctive micaceous fabric.

Environmental evidence

A single sample taken from a Roman context

was chosen for assessment. This 5 litre sample was taken from context 3832, the fill of a Roman cremation. The environmental remains consisted predominantly of charcoal. However some charred seeds were also noted, including 14 cereal grains of indeterminate species, and weed seeds of Gramineae (grasses), *Trifolium repens* (white clover), and *Vicia/Lathyrus* spp (vetches/beans). Two grass stem fragments were also recovered. Some 250 fragments of burnt human bone were also recovered from this sample.

Phase 4 Post-Roman deposits

The only features of post-Roman date were four ditches, all of similar form (Fig 2).

Structural evidence

The northernmost of these ditches was in the form of a north-west to south-east aligned cut (3804), approximately 2m wide and traced for 25m to the eastern edge of the site. It was filled with a reddish brown silty clay (3803) containing very occasional fragments of charcoal and snail shell.

Slightly to the south lay a very similar cut (3802), again approximately 2m wide, and traced for 10m to the eastern edge of the site. Its fill was also a reddish brown silty clay, with very occasional charcoal flecks, although it did contain considerably more snail shell than the ditch (3803) to the north. This ditch was aligned south-west to north-east and ran towards and almost perpendicular to the northern ditch 3802).

The other two post-Roman features were twin parallel cuts (3823 and 3825), aligned south-west to north-east and lying c. 4m apart. Once again, their fills (3822 and 3824) were distinctive reddish brown silty clays with very occasional charcoal flecks and snail shell fragments.

Pottery

No pottery was associated with deposits in this phase. The majority of finds were residual flints, and other finds were probably residual.

Lithics

Three flint artefacts were recovered from Phase 4 deposits (3801 and 3822). This material is of prehistoric date and can be considered to be redeposited Phase 2 material.

Environmental evidence

No whole earth samples from contexts of this phase were chosen for assessment.

Undated deposits

Eight features could not be phased due to an absence of artefactual evidence and the lack of clear parallels or associations with datable features (Fig 2). In addition, these features were only observed cut into the clayey gravel (3878) below alluvial deposits, and so their date cannot be inferred from their position in the alluvial sequence.

Structural evidence

The most northerly of these features was a small oval cut (3816) filled with a dark grey brown silty clay (3815) containing occasional burnt animal bone. Roughly in the centre of the pit there was in addition a concentration of charcoal flecks, representing a post-pipe. This feature is interpreted as a post hole.

Towards the south-east lay a very irregular and poorly defined sub-rectangular pit (3845). It contained a very pale grey brown clay silt fill (3844), with a few flecks of charcoal.

Almost directly east, and c 25m away, lay a slightly smaller pit (3847). This pit was also irregularly subrectangular in shape, and poorly defined. Its fill, a pale yellow brown clay silt (3846), did not contain any artefactual evidence or charcoal flecks, and may possibly be natural in origin.

Further to the south lay an irregular sub-rectangular cut (3814), filled with a dark grey brown silty clay (3813) containing a few flecks of charcoal. The function of this feature could not be determined.

Two features assigned to this phase lay between the parallel post-Roman ditches (3823 and 3825). To the west lay a circular

cut (3831; 0.34m in diameter) filled with a mid grey brown silty clay with occasional charcoal flecks (3830). This fill contained nothing that suggested a function for the pit, although its shape suggests that it may represent a post-hole. Lying approximately 3m to the east was a sub-circular cut (3834), filled with a dark grey silty clay (3833). This fill contained frequent charcoal flecks, fragments of stone and flecks of ash. Despite this concentration of burnt material in the fill, there was no evidence to suggest that this burning had occurred *in situ*.

A similar charcoal flecked dark silty clay (3826) filled a poorly defined, irregular subcircular pit (3827) to the north-west. Again, there was no evidence that there had been any burning *in situ*.

A sub-oval pit (3829) filled with a grey brown silty clay (3828) was also assigned to this phase.

Artefactual evidence

The only finds were a small quantity of fired clay (2 fragments) from the fill of a subcircular pit (3826).

Environmental evidence

No whole earth samples from contexts of this phase were chosen for assessment.

Unstratified finds

Ceramics

Medieval pottery was rare (0.4% of the 1993 ceramic assemblage). None was datable to earlier than the 13th century.

Post-medieval pottery was also rare (3% of the 1993 ceramic assemblage). It included 17th to 18th century wares such as gravel tempered North Devon (fabric 77) and post-medieval red (fabric 78) wares.

There was a small quantity (2 fragments) of clay pipe, and roofing tile of medieval to early post-medieval date.

Metalwork

A small piece of copper alloy was likely to be a fragment from a Roman brooch (*fibula*).

Lithics

A total of 70 flint artefacts were recovered from the ground surface following mechanical stripping. All the material is of prehistoric date and should be regarded as contemporary with material from Phase 2 deposits. The only tool in this assemblage was a barbed and tanged arrowhead, usually regarded as late Bronze Age in date (Fig 5). Such tools frequently represent stray losses.

6 Discussion

Natural deposits

Natural deposits were of two types. The first of these (3879) represents hydrologically deposited gravels.

The second comprises alluvial clays (3821, 3858, 3875, 3876, 3877, 3880 and 3881), arising from the flooding of the River Lugg and Wellington Brook in antiquity. A decrease in the depth of the alluviation towards the north-west of the site is apparent from the recorded profiles, (Fig 3) confirming the pattern noted by Brown (1992, 4).

Some elements of the alluvial sequence recorded here correspond with those discussed by Edwards (1990, 9), notably the red-brown alluvium (3875), "clayey gravel" (3878) and the chalk or limestone-rich layers (3881).

Towards the south of the site was a distinctive band of dark grey brown alluvium (3880) that was markedly less silty than the other alluvial layers. This deposit was between 80 and 100m wide and up to 0.78m in depth, and there was no evidence to suggest that it was not naturally formed. Wellington Brook lies in a misfit valley, probably glacially formed (Brandon 1989, 40). That is, the brook flows in a valley that is too large for it, allowing it to meander. This deposit may represent the fill of a palaeochannel, or meander that was cut off in antiquity. The majority of palaeochannels are formed in this way (Brown 1982, 93). This

deposit is cut by two ditches (3873 and 3883) that are considered to be prehistoric/Neolithic in date, and so must predate them. It's position at the base of the alluvial sequence substantiates this interpretation.

Phase 2 Prehistoric deposits

Prehistoric deposits dated to the Neolithic/Bronze Age were identified and excavated. These features were of two types; ditches to the south and north of the site, and a group of twelve pits towards the south-west. The ditches contained relatively little artefactual evidence, whilst the pit group produced a wide range of artefactual and ecofactual evidence. A single prehistoric pit, excavated during the 1992 season of salvage recording, and tentatively dated to the Bronze Age, is now also considered to be part of this pit group.

Several of these features, cut into a yellow alluvium (3858), were sealed by an indistinguishable alluvium (3821). No prehistoric ground surfaces were observed between these phases of alluviation, suggesting that the area had undergone some truncation, almost certainly as a result of hydrological action. A very thin dark layer observed to the south-east (Edwards 1989, 6), conditionally identified as a buried soil surface, was sandwiched between analogous alluvial deposits, and thus may be considered to be broadly contemporary. The significance of such deposits has been highlighted by the Prehistoric Society (1988, 7) who identify as a "particularly important" priority for fieldwork "buried land surfaces beneath and within colluvium and alluvium".

Unstratified flints dated to the Neolithic Period, and features dated to the Bronze Age and Iron Age have been recorded in other areas of the Quarry at Wellington, but no features or deposits of Neolithic date have been recorded to date.

The artefactual assemblage associated with this pit group is of great significance as finds of the Neolithic to Bronze Age periods are generally rare in the western midlands. The possibility that the group is of Neolithic date

increases its significance. In Herefordshire few sites of Neolithic to Bronze Age date are known. Examples include Cefn Hill (Robinson 1946), and Dorstone (Stanford 1965, 156). However, neither brief excavations at Dorstone, nor extended fieldwalking at Cefn Hill, produced any pottery.

The survival of the pottery was good, as there were joining sherds, and nearly complete profiles of at least one vessel could be reconstructed. The condition of the pottery was also good. The association of fragments of quartz of the same type as used in manufacture of the pottery suggested that some pottery was being made locally. The presence of potential pottery temper in a raw state, as well as the absence of food residues and sooting on the vessels may suggest that pottery manufacture was taking place in the vicinity. Stone tools were also associated that could have been used for burnishing. There was, therefore, a combination of evidence suggestive of local pottery making.

The pit clamp firing of pottery could have been used for the production of this type of pottery at this period, and so there was a possibility that some of the pits were used for this purpose.

A few fragments of fired clay were recovered from contexts of this phase. They are of little significance, as no structural characteristics could be determined.

All the lithics recovered were of prehistoric date and it is appropriate to consider all the material as datable to Phase 2 (including stratified, redeposited and unstratified material). The classification and identifications presented here are preliminary ones, considered appropriate for meeting the stated aims of the assessment.

Previous seasons of salvage recording at Wellington have consistently recovered lithics in small quantities. Most of the material was in surface collections although some stratified lithics have been recorded. Seventeen waste flakes were recovered from a pit recorded in 1992 (context 3644: Dalwood 1992). This pit

lay immediately to the west of the group currently under consideration and is almost certainly contemporary. Seven flakes were recovered from the Bronze Age ring-ditches recorded in 1989 (Shelley 1989, 5-6).

There is an absolute rarity of stratified flint assemblages in the region, of any date. As well as being rare, lithic assemblages tend to be small in quantity. A total of eight stratified flint artefacts were recovered from the Neolithic pits at Bromfield, Shropshire (Holgate 1982), and 40 from Neolithic/early Bronze Age pits at The Breiddin (Green and Wainwright 1991). In the region only small lithic assemblages are recovered from ceremonial sites, such as the very small stratified lithic assemblage from the Barford North ritual complex (Loveday 1989, 80-1). Therefore the stratified assemblage from prehistoric deposits at Wellington (171 artefacts) is relatively large in regional terms.

Surface collections of lithics in the region include the material from Cefn Hill, Dorstone (Robinson 1946). This collection included Neolithic and Bronze Age lithics but it has not been quantified or studied in detail and so provides a poor basis for comparison with the current assemblage.

In national terms the size of the assemblage is not exceptional. At King Barrow Ridge (Wiltshire) a total of 1,880 waste flakes were recovered from five Neolithic pits, and a further 7,128 lithics were recovered from the ploughsoil (Harding 1990). However stratified Neolithic lithic assemblages are relatively rare nationally, particularly from non-ceremonial sites. The significance of the lithic assemblage is greatly enhanced by its association with other artefactual and environmental material.

Several stone implements recovered from this pit group strongly resembled whetstones in form (Fig 7). Objects of this kind are rare in the region, but their ultimate significance remained uncertain as their function was not proven. A possible use for this implement type was for burnishing. Piggott (1970, 145) stated that whetstones had been found in a possible Neolithic context in the West only on few occasions.

The range of ecofactual material recovered from whole earth samples from this pit group included the remains of various possible food plants. Over 200 charred fragments of *C avellana* (hazel nuts) were recovered from the sample from 3852 alone. *C avellana* nuts appear to have been an important collected food source which supplemented cereal cultivation, and together with the remains of edible tubers make up a larger proportion of Neolithic and Bronze Age assemblages than those of later date (Jones 1988, 88).

However, as most sites from the Neolithic and Bronze Age have the numbers of *C avellana* nuts recorded as fragments rather than whole nuts (Moffett *et al* 1989), the figures are rather exaggerated. Experiments with breaking up modern specimens of *C avellana* nuts showed that a single nut may break up into 25 fragments even before charring. Charring can double the numbers of fragments of nut case from a single nut. The 200 fragments may therefore potentially only represent four hazelnuts.

A small number of uncharred seeds were noted in prehistoric pit fill 3861. It was thought unlikely until recently that aerobically preserved, that is, uncharred seeds would survive for more than 200–300 years in archaeological deposits. However radiocarbon dating on uncharred seeds from deeply stratified Saxon pits at Deansway, Worcester has shown the seeds to be contemporary with the deposits (Moffett forthcoming.)

However, the uncharred seeds from the deposits encountered at Wellington are highly likely to be a result of more recent contamination. There were modern roots penetrating to considerable depth in some of the features which could have contributed to the downward passage of uncharred seeds into the lower deposits. The seeds of plant species recovered were those commonly found growing in disturbed and cultivated ground, including *C album* and *T repens*. Similar assemblages of uncharred seeds were noted by Colledge (1982) during examination of the samples from Neolithic pits at

Bromfield, and these were thought to be modern seeds.

The material from the three prehistoric pits examined for the assessment appears to represent food waste, indicating that these pits were used for rubbish disposal. It remains unclear whether this activity represents the primary function of these pits or a secondary activity.

Phase 3 Roman deposits

Nine features were excavated and assigned to this phase. The relative chronology of these features remains obscure, although there was no firm evidence for later Roman features.

Five of these features were ditches, and these are interpreted as land divisions, probably field boundaries. All but one of these ditches are aligned approximately north-west to south-east, or broadly parallel to Wellington Brook.

A small assemblage of Roman pottery was recovered, and this represents a useful addition to the site assemblage accumulated from previous fieldwork. The cremation vessel, a tankard, was an exception as a substantial portion of this survived. The use of this vessel form for this purpose was unusual.

The Roman *imbrex* tile is of significance since it probably originates from a substantial Roman building, and can probably be related to the Roman structure revealed in 1988 (Clarke *et al* 1988).

A small assemblage of Roman metalwork was recovered. It comprised a possible fragment of copper alloy *fibula* and some iron nails recovered from the cremation fill (3832). This assemblage is of little significance.

The relative paucity of Roman features and artefacts suggests that this area lies on the periphery of the Roman settlement, probably representing part of the agricultural hinterland of the estate.

The remains of two cremations represent the first evidence of Roman funerary practise recorded at Wellington to date. Their position at the periphery of the settlement and association with a boundary ditch are consistent with burial practises observed elsewhere in the country, and it has been suggested that farmsteads probably had their own discrete cemeteries close to the boundaries of the farmyard (Leech 1982, 31).

The charred remains from the Roman cremation (3832) included grass seeds and stems which may have been material collected for tinder. Weed seeds were also recovered, including *T repens* and *Vicia/Lathyrus* spp which would also have been growing locally.

A similar assemblage of charred plant material was recovered from a Bronze Age barrow at Trelystan, Powys. The plant remains included weed seeds such as *Rumex* sp, *Festuca rubra/ovina* (red fescue/sheep fescue), *Trifolium* spp (clovers) and two species of *Potentilla*, which are all species represented in the local environment. There were also many Gramineae culm and rhizome fragments which were thought to derive either from grass growing beneath the pyre, or from material collected as tinder (Hillman 1982).

Phase 4 Post-Roman deposits

These ditches are interpreted as land divisions, probably field boundaries. The similarities between their fills indicates that they fell out of use at the same time, perhaps suggesting that they were contemporary elements that together formed a series of field systems.

A similar series of ditches, also filled with a reddish brown silty clay, were recorded to the south-east, where, in some cases, they were observed to coincide with extant field boundaries that were aligned either parallel or perpendicular to Wellington Brook (Edwards 1990, 11). The ditches recorded during the recent fieldwork were on comparable alignments, although no correspondence with modern field boundaries was noted.

No features were definitively identified as being medieval in date, and a mere three sherds of unstratified medieval pottery were recovered from the site. It has been suggested that the quarry area lies just beyond the limits of the medieval settlement (Brown 1992, 6), and these results tend to confirm this.

The medieval and post-medieval ceramics also represent a useful addition to the site assemblage accumulated from previous fieldwork, although none of this material was stratified. A small assemblage of post-Roman tile and clay pipe were also recovered. These were of little significance.

Undated deposits

Eight features remain unphased due to an absence of artefactual evidence and the lack of clear parallels or associations with dateable features. These eight features were limited to the northern half of the site, and included two post-holes (3816 and 3831), although the function of most of these features could not be determined. At least one feature (3847) may have been naturally formed. There is little else that can be said of these unphased contexts.

7 Future research priorities

This season of fieldwork at Wellington has produced some remarkable results, notably those relating to the prehistoric period. However, even though little evidence dating to the Roman and medieval periods was recorded this year, this evidence nevertheless adds considerably to our knowledge of the quarry area as a whole. The results of this year's fieldwork should thus be considered in their wider context, especially in terms of their research potential.

Structural evidence

In spite of the limited structural evidence and its relatively low complexity, the range and diversity of these deposits, allied with the high quality artefactual and ecofactual evidence, warrant further work. In conjunction with previous results and the

results of future fieldwork, deposits of all periods have a high research potential. The Prehistoric Society identify alluvium covered sites as "particularly important" (1988, 7). In addition, they state that those "sites likely to yield economic evidence from assemblages of animal bones and well preserved botanical remains" should have a "high priority for support" (1988, 8). The Roman deposits recorded to date include a small villa complex originating in the Iron Age along with its associated field systems. This is a site type recognised by the Society for the Promotion of Roman Studies as an area of high absolute priority (1985, 12). Although lying at the periphery of the medieval settlement, medieval deposits recorded at Wellington will provide information regarding the "physical organisation of the medieval landscape", an area regarded by the Society for Medieval Archaeology to have received "insufficient attention" (1987, 2). Moreover, the opportunity to study the development and change of the site through time, and to examine the transitions between historical periods increases the importance of these deposits. The structural evidence recorded at Wellington will thus require further analysis, leading to the production of a synthetic report with fully integrated specialist and scientific reports.

Artefactual evidence

Pottery

Future research should test whether local alluvial clays have been used for the manufacture of pottery. One approach may be to undertake particle size analysis of the clay and silt fractions. It would also be useful to determine petrologically whether the tempering used in the majority of the early prehistoric pottery was the same as the quartz pebbles in composition.

The paucity of comparable material of early prehistoric date and of well-dated examples makes the Wellington early prehistoric pottery of considerable academic importance. This importance is enhanced by association with material that can be used to provide radiocarbon dates. The opportunity to combine dating of well-preserved artefactual

and structural remains with the results of independent scientific dating is unusual, and of considerable regional significance. Should further research indicate that Neolithic pottery manufacture was indeed carried out in the locale, these deposits would be of national significance.

Lithics

Stratified Neolithic flint assemblages are rare even in the national context, and are thus considered to be significant. The significance of this assemblage is greatly enhanced by its association with other artefactual and environmental material. A full report on the lithic assemblage is therefore appropriate. This report should include classification of the tool and waste flake assemblage and metrical analysis of the waste flake assemblage. The report should also include petrological identification of the source of the flake of unidentified stone (probably from a polished stone axe). The raw material used appeared to include quarried flint as well as pebble flint, although this requires further consideration. The assemblage appeared to be relatively unabraded: quantification of abrasion may produce information relating to site formation processes.

It would also be appropriate for a full report to consider the small quantities of lithics (some stratified) recovered during salvage excavation in previous years at Wellington (eg Dalwood 1992, Shelley 1989). The relatively small size of the total assemblage will necessarily restrict the level of analysis, but this work is essential for defining the character and date of the lithic assemblage, establishing the origin of individual deposits and understanding the site as whole.

Environmental evidence

The probable Neolithic activity at Wellington represents one of less than thirty sites in the country to produce charred plant remains of this date. The nearest is at Bromfield, where two pits produced cereal remains and weed seeds (Colledge 1982). Seven of the remaining sites are ritual in function, with a number of the other "sites" represented by isolated features. Six of the sites are from the gravel terraces of the Oxfordshire Thames.

There are no full results from flotation for sites in England and Wales from the 4th millennium bc (Moffett *et al* 1989, 247).

In association with the other artefactual remains, the environmental material at Wellington therefore represents a unique opportunity to examine material recovered by flotation from not just one, but a number of earlier prehistoric pits.

Neolithic and Bronze Age sites are generally sparse in this region since the prehistoric ground surfaces have often been removed by later ploughing and other activities. Although no prehistoric ground surfaces were present at Wellington, the sealing of the pit group by alluvium has preserved the features and their contents extremely well. Sampling from early prehistoric features is a high priority for the region (Moffett and Greig 1991) to enable identification of the early agriculture from the cereals and related weed seeds. The Prehistoric Society also recommends that national priorities for research are:

...colluvium and alluvium covered sites, where stratified materials, good organic preservation and new types of sites can be identified; and ...sites where evidence of economic practices can be recovered.

The earlier prehistoric features at Wellington are therefore of national significance because of their good preservation of environmental and artefactual material. It is vital that the remainder of the samples from the pits are sieved and analysed to enable maximum recovery of artefactual and environmental material, particularly charred plant remains. The potential for the numbers of charred plant remains is suggested in Table 3, where the percentage of the samples sieved is extrapolated to predict the approximate numbers of charred plant remains for each of the features.

The Roman cremation examined for the assessment represents a significant regional discovery. Very few cremations have been examined for charred plant remains. To find two cremations which may contain

contrasting assemblages of material when analysed is of regional rather than national importance. The samples from the two cremations should be sieved and the charred plant remains analysed to enable determination of the possible use of plants for tinder and the presence of plants of the local environment.

8 Conclusions

This year's fieldwork at Wellington has once again produced some remarkable and largely unexpected results. Roman deposits were limited, and comprised a number of ditches and the remains of two human cremations. An assessed whole earth sample from one of these cremations provided a regionally significant assemblage of charred cereal remains, possibly derived from the cremation pyre.

These deposits characterise this area as lying at the periphery of the Roman settlement, and help enable a closer definition of the organization and extent of the agricultural regime upon which the settlement depended.

A large assemblage of pottery and flint of Neolithic or Bronze Age date was recovered from a group of prehistoric pits. This assemblage includes evidence of flint tool manufacture and tentative evidence of local pottery manufacture, and as such is of considerable regional significance. Although no contemporary buried soils were present, there is some potential for their survival to the south.

The three prehistoric pits assessed for environmental remains produced considerable quantities of charred plant remains, including cereals and other food remains. The prehistoric charred remains form a nationally significant assemblage as no other such sites have been examined using a systematic sampling strategy. Analysis of the samples is vital to enable a fuller understanding of the significance of the assemblage.

No deposits were definitively identified as medieval in date, although elements of

post-Roman field systems were excavated. This corroborates previous results indicating that the quarry area lies just beyond the limits of the medieval settlement.

This season of salvage recording has thus been as successful as previous years' work in identifying and recording important archaeological deposits in advance of their destruction. This project continues to provide further information regarding the organisation, change and development of settlement in the quarry area, as well as developing an understanding of the historic landscape of the Lugg Valley.

9 Acknowledgements

Thanks are due to Redland Aggregates Limited, in particular Mr J Edwards (Estates and Planning Officer), Mr D Finch (Quarry Manager) and to the contractors carrying out the soil-stripping for their cooperation and assistance throughout.

10 Personnel

The fieldwork was carried out by Luke Fagan MA PIFA (Assistant Archaeological Field Officer) and David Wichbold (Archaeological Assistant), with assistance on site provided by Duncan Brown MA AIFA (Assistant Project Officer) and Paul Godbehere (Archaeological Assistant).

The flint objects were identified and assessed by Hal Dalwood BA MIFA and Robin Jackson BA AIFA.

All other finds were identified and assessed by Derek Hurst MA AIFA.

The environmental samples were assessed by Clare de Rouffignac MA GIBiol AIFA.

The illustrations were prepared by Carolyn Hunt MAAIS PIFA, Laura Templeton BA MAAIS AIFA and Sam Whitby DipAD.

The report was edited by Robin Jackson BA AIFA.

The project was coordinated by Simon Woodiwiss BA AIFA.

11 Abbreviations

Numbers prefixed with 'HWCM' are the primary reference numbers used by the Hereford and Worcester County Sites and Monuments Record.

HWCC - Hereford and Worcester County Council

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Table 1

Salvage recording at Wellington quarry (HWCM 5522)

Quantification of the finds (hand retrieved finds only)

Pottery (sherd count)	
Prehistoric	684
Roman	135
Medieval	3
Post-medieval	20
Clay pipe	2
Ceramic building materials	
Tile	17
Other ceramic	
Fired clay	4
Metalwork	
Iron	2
Copper alloy	1
Flint	267
Bone	55
Stone	88

Table 2

Catalogue of flint

Context	Scrapers	Other tool	Blades	S bl	Flakes	Cores	F lump	Misc deb	Burnt flint
Phase 2: prehistoric									
3821	1				10				3
3838	1								
3848					9				1
3850					5				
3852		1 Arrowhead (Leaf-shaped) 4 misc retouch	5		60	1		6	5
3854	1	2 misc retouch	1	2	28			5	4
3859		1 Serrated-edge flake			15			3	
3861					4				
3863					1				
3867					3	1			
3869					1				
Phase 4: post-Roman									
3801				1					
3822		1 Awl						1	1
Unstratified									
3800		1 Arrowhead (Barbed and tanged)		1	46		4	18	9
<hr/>									
Totals	3	10	6	4	182	2	4	33	23
<hr/>									

S bl = Snapped blade

F lump = Flaked lump

Misc deb = Miscellaneous debitage

Table 3 Plant remains recovered from samples

Context number	3832	3852	3854	3861
Cereals				
Cereal indet	14	20	9	9
Chenopodiaceae				
<i>Chenopodium album</i> L	-	-	-	(2)
Coryllaceae				
<i>Corylus avellana</i> L fragments	-	>200	79	6
Gramineae				
Gramineae	7	-	-	-
Gramineae stem fragments	2	-	-	-
Leguminosae				
<i>Vicia/Lathyrus</i> spp	9	-	-	-
<i>Trifolium repens</i> L	1	-	-	(1)
Indeterminate seeds				
	-	-	-	1

Uncharred seeds are denoted in brackets

Table 4 Habitats of plant remains recovered from samples (after Clapham *et al*)

Chenopodiaceae

Chenopodium album - fat hen - nitrophilous weed of disturbed and cultivated ground

Coryllaceae

Corylus avellana - hazel - shrub of woodland and hedges with edible nuts

Gramineae

Gramineae - grasses - various habitats

Leguminosae

Vicia/Lathyrus spp - vetches/beans - nitrophilous weeds found on agricultural and disturbed soils

Trifolium repens - white clover - weed of cereal crops and disturbed ground

Table 5 Potential for charred plant remains from samples

3852 Fill of prehistoric pit

Material	Quantity	Sample examined	% of sample	Potential quantity of material
<i>C avellana</i> frags	>200	15 litres	5.6%	3500
Cereal grains	20	15 litres	5.6%	1000

3854 Fill of pit

Material	Quantity	Sample examined	% of sample	Potential quantity of material
<i>C avellana</i> frags	79	5 litres	2.17%	3600
Cereal grains	9	5 litres	2.17%	400

3861 Fill of pit

Material	Quantity	Sample examined	% of sample	Potential quantity of material
<i>C avellana</i> frags	6	2.5 litres	8.3%	70
Cereal grains	9	2.5 litres	8.3%	100

3832 Roman cremation

Material	Quantity	Sample examined	% of sample	Potential quantity of material
Cereal seeds	14	2.5 litres	5.0%	280
Weed seeds	3	2.5 litres	5.0%	60

Appendix 1 The archive

The archive consists of:

83	Context records AS1
24	Fieldwork progress records AS2
19	Photographic records AS3
24	Context finds sheets AS8
39	Scale drawings
37	Sample Records AS17
3	Boxes of finds

All primary records and finds are kept at:

County Archaeological Service
Hereford and Worcester County Council
Tetbury Drive
Warndon
Worcester WR4 9LS

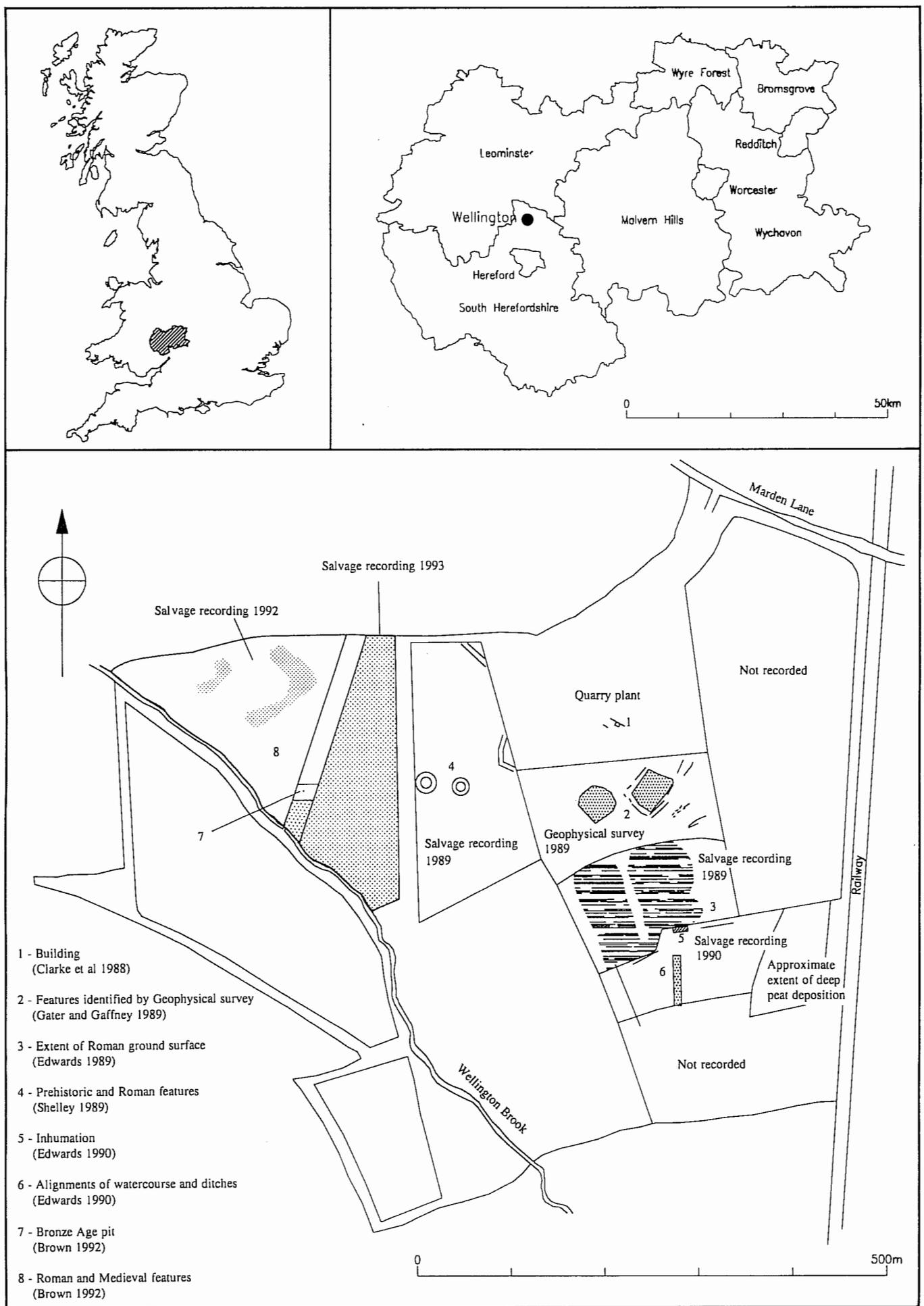
Tel Worcester (0905) 58608

A security copy of the archive has been placed at:

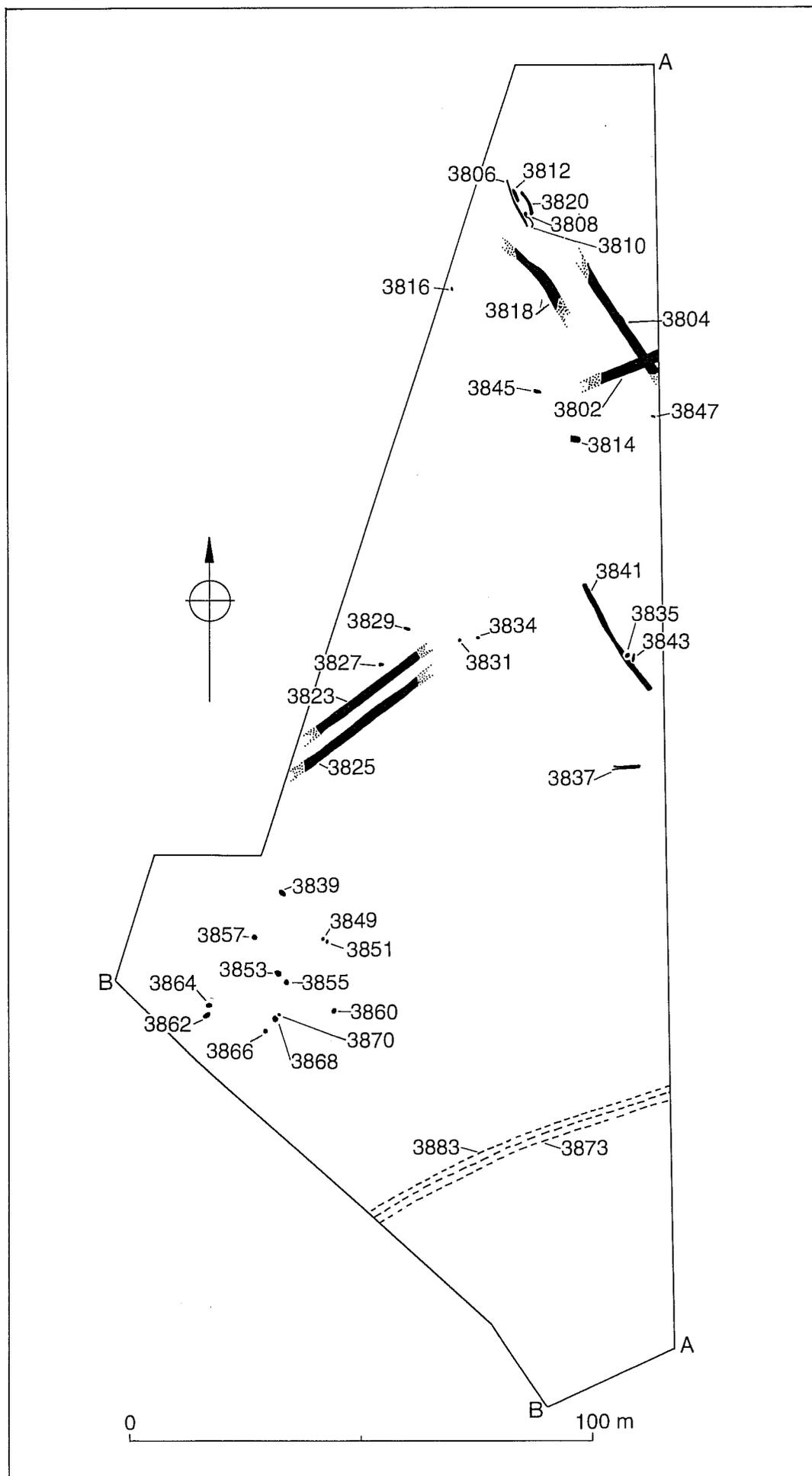
Hereford and Worcester County Museum
Hartlebury Castle
Hartlebury
Near Kidderminster
Worcestershire DY11 7XZ

Tel Hartlebury (0299) 250416

Location of Wellington Quarry and fieldwork to date



Location of identified features



Soil profiles

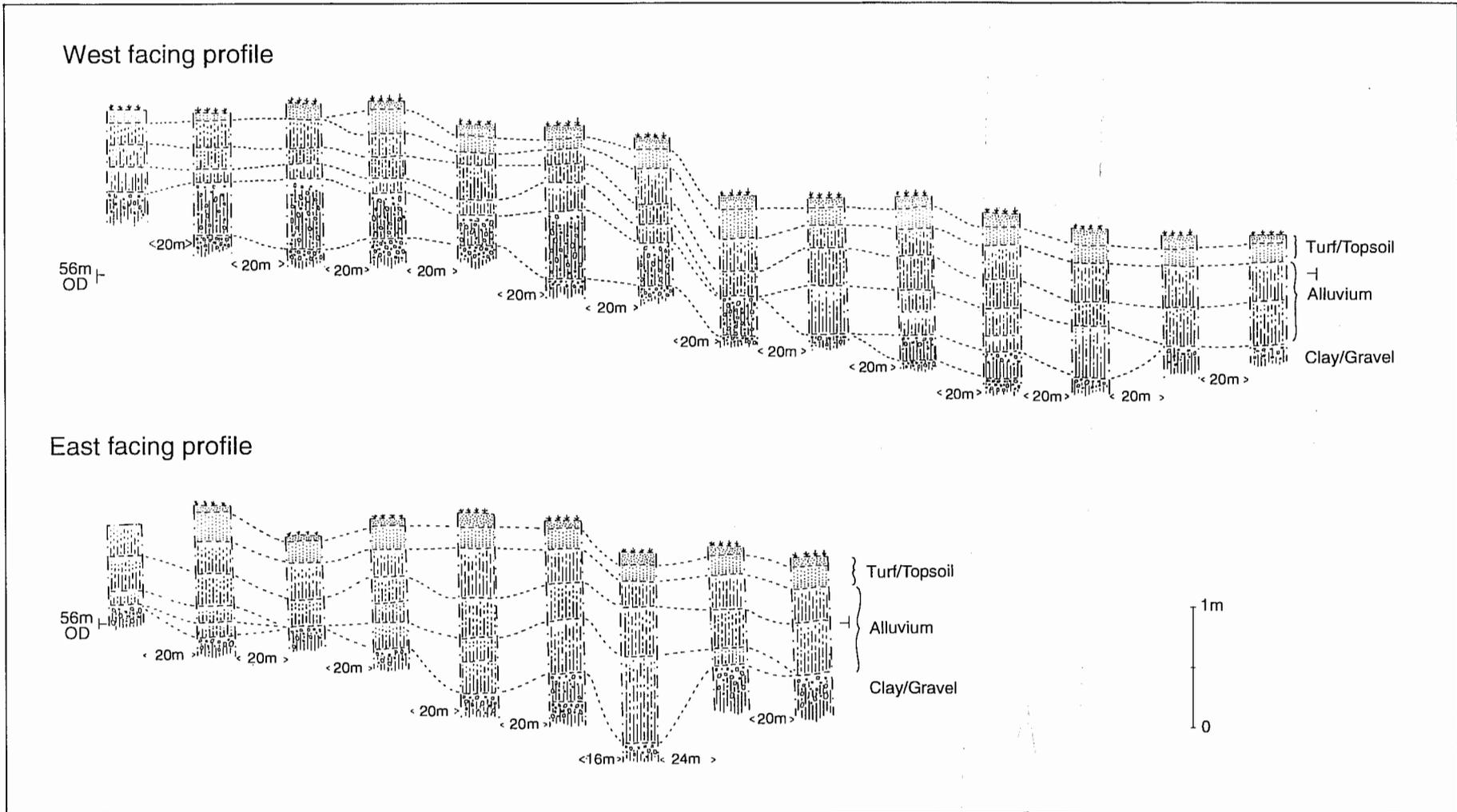
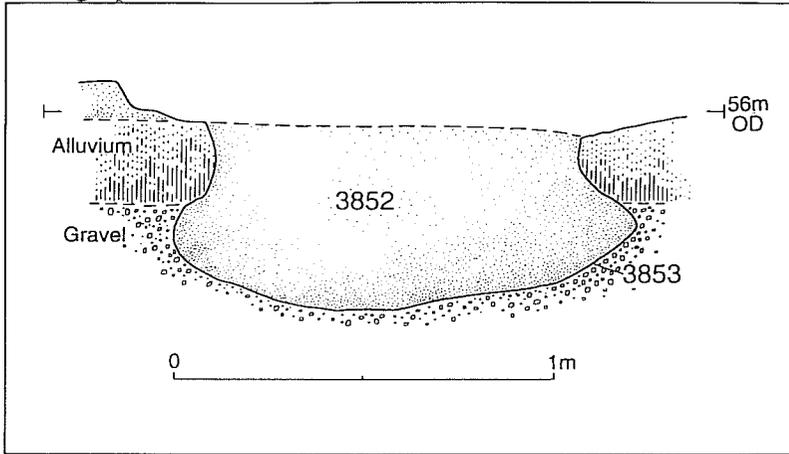
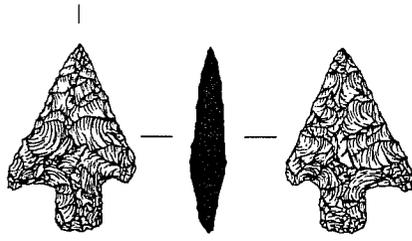


Figure 3

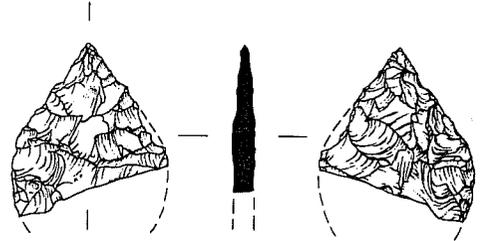
NW facing section
through pit 3853



Lithic artefacts



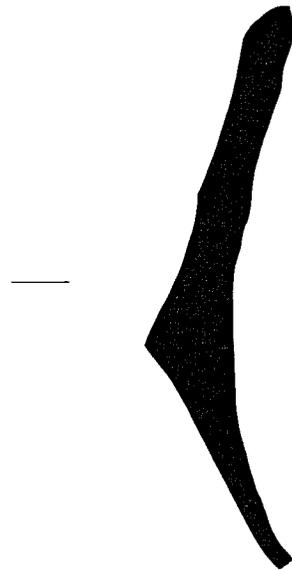
Tanged and barbed arrowhead



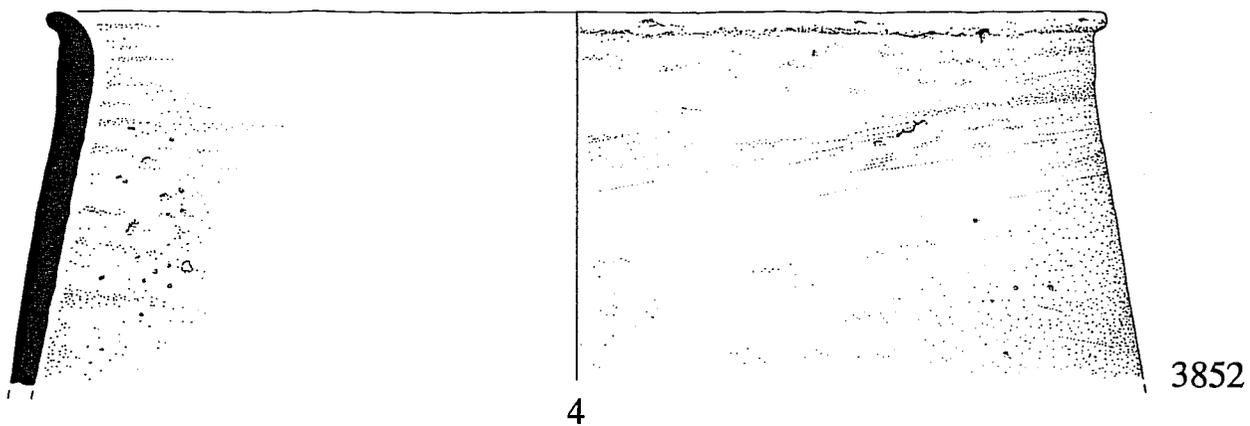
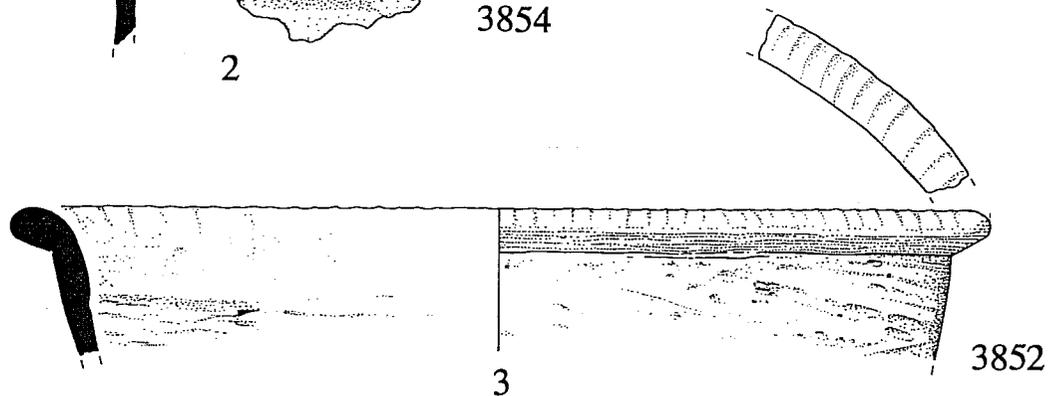
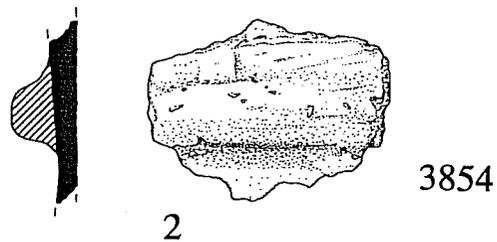
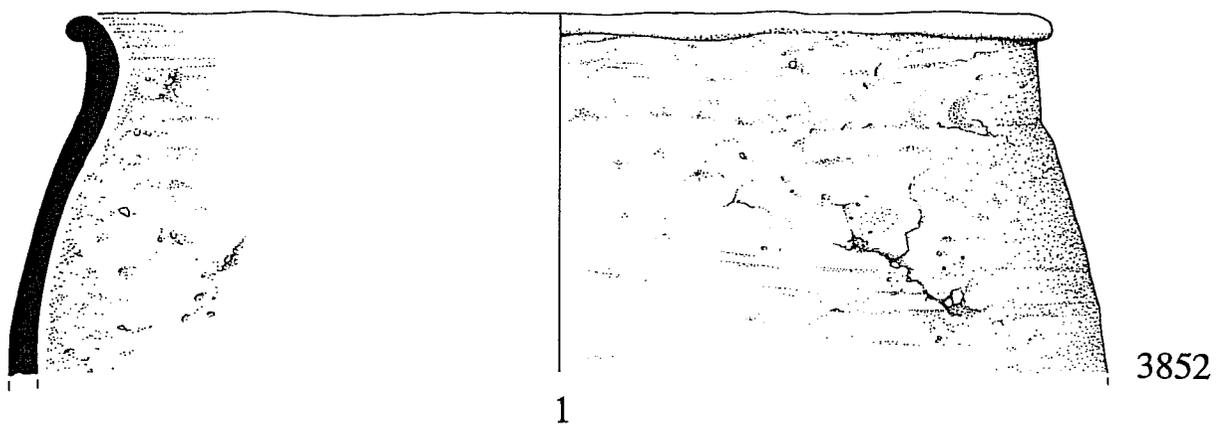
Leaf shaped arrowhead



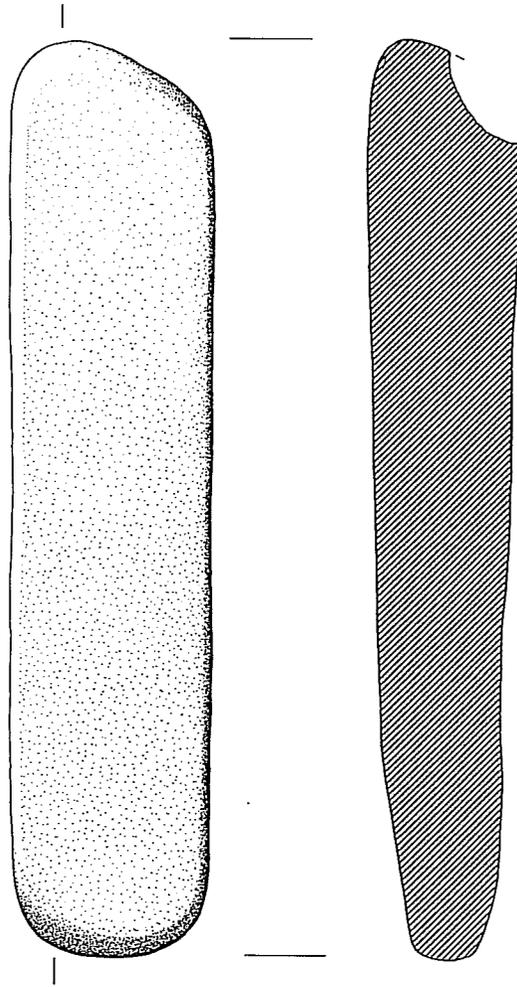
Serrated-edge flake



0 50 mm



PREHISTORIC POTTERY (scale 1:2)



POSSIBLE BURNISHING STONE (scale 1:1)