Warmwell Quarry, West Knighton, Dorset: A Preliminary Archaeological Evaluation

by
Lynne Bevan and Lucie Dingwall
with Nicola Trafford

Birmingham University Field Archaeology Unit 1990

Warmwell Quarry, West Knighton, Dorset:
A Preliminary Archaeological Evaluation

by
Lynne Bevan and Lucie Dingwall
with Nicola Trafford

Contents

Figures

Warmwell Quarry, West Knighton, Dorset: A Preliminary Archaeological Evaluation

by
Lynne Bevan and Lucie Dingwall
with Nicola Trafford

1. Introduction

An archaeological assessment of a field scheduled for gravel extraction at Warmwell Quarry, West Knighton, Dorset (Fig. 1; centred on NGR SY742 888) was undertaken between the 5th and 16th November 1990 by Birmingham University Field Archaeology Unit. The assessment was carried out on behalf of ECC Quarries Ltd., as requested by Dorset County Council, and took the form of fieldwalking and the excavation of a series of test pits, undertaken to assess the archaeological potential of the proposed quarry area. The field covered an area of *c.*7.90 ha., of which approximately one third was ploughed before fieldwalking commenced, the remainder being under stubble. This may have differentially affected the level of finds recovery, as the visibility of flint varied somewhat between the two types of exposed ground surface.

The following report outlines the archaeological and geological information relating to the land adjacent to the study area, and discusses the results from the fieldwalking and test pits. Recommendations for further work are presented at the end of the report.

2. Archaeology of the area

The principal source consulted for information on the archaeology of the area was the Dorset County Sites and Monuments Record (Dorset County Council), which does not record any information relating directly to the site under consideration here, but does demonstrate the presence of sites and earthworks, some no longer visible, of prehistoric and later origin in the surrounding area of former heathland.

Huck Barrow, a Bronze Age round barrow, lies to the south-east of the site in Knighton Heath Wood. A mound to the east of the village of West Knighton is the possible site of another barrow, and north-west of the field is the site of a tumulus virtually destroyed in 1890 (Fig. 1B; RCHM 1970, 445).

Evidence of possible medieval cultivation may survive in the form of strip fields south of Lewell Lodge and lynchets north of the village (Fig. 1B).

3. Recent land use, soils and geology

The field under consideration lies on the edge of heathland, north-east of the village of West Knighton, having been in use as arable land for many years – possibly as far back as medieval times – although the field shape suggests a more recent enclosure of former heathland. At the time of this assessment, the land had most recently been used for the cultivation of corn and potatoes in rotation. At the base of several of the test pits, plough marks on a number of alignments revealed that ploughing had at times reached a depth of 0.4m. The field itself is the subject of an application for gravel extraction, and fields immediately adjacent are either currently being used as quarries or have been quarried in the past and subsequently reclaimed for arable use.

The local geological formations are ferruginous gravels and sandy clays of the Tertiary Reading Beds. The test pits revealed the nature of the subsoil horizon to vary from an orange silty clay to an orange/brown gravel containing a large proportion of redeposited natural flint nodules and fragments. Between 0.30 and 0.40m of dark brown, humic sandy ploughsoil, containing substantial quantities of broken flint, overlies the subsoil.

4. Evaluation strategy

4.1 Fieldwalking

Fieldwalking as a method of archaeological evaluation is based on the principle that artefacts in the topsoil are likely to represent disturbed and redeposited material from archaeological strata beneath or from dumping and manuring of agricultural land. Only a small proportion of material present in the topsoil will be visible on the surface at any one time, and may not form a representative sample. While biases inherent in the method should be noted, fieldwalking remains an effective method of archaeological assessment (*cf.* Fasham et al 1980, Darvill 1984).

At Warmwell Quarry the work was carried out with the support of a Sokkisha Set 3 'Total Station' EDM. Individual find spots were recorded as an alternative to collecting the material in 25m or 50m squares, as has been the case in previous comparable assessments made in this area (Ellis 1987; Woodward 1989).

The entire field was examined by four people, walking adjacent two metre-wide strips, moving at an even pace in north–south transects down the field, collecting each find as seen and leaving a pre-numbered marker in its place. In tandem with this, one person operated the EDM from a fixed position, whilst another followed the four fieldwalkers, plotting the exact co-ordinates of each marker. Once the operation was over, a computer plot of the co-ordinates was produced, which provides an accurate distribution plan of all finds (Figs. 2 and 3A). The collection policy aimed at recovery of all surface-observed struck flint, flint artefacts, ceramic material, etc.

4.2 Test pits

The field was gridded into 50m squares based on the Ordnance Survey National Grid, for the purpose of spacing the 28 test pits at 50m intervals (Fig. 4). A small pit, 1m square in area, was dug by hand in the north-west corner of each square to the top of the subsoil, a depth of approximately 0.3m–0.4m. Finds recovered from the test pits were retained and the bottom of each pit cleaned and examined to locate any possible archaeological features.

5. Results

5.1 Fieldwalking

The finds from fieldwalking included a substantial assemblage of prehistoric flint artefacts, a chert hammerstone, a quantity of burnt, unworked flint and a few ceramic items of later date (Fig. 2). No prehistoric pottery was found. The results from this survey contrast somewhat with earlier fieldwalking in the West Knighton area in that higher percentages of worked flint were recorded here in relation to debitage (waste), and also a higher incidence of scrapers and cores. The totals of all artefact types recovered during fieldwalking and from the test pits are set out in the following table.

Struck Flint	Retouched Flakes	Arrow-heads	Knives/ Blades	Cores	Scrapers	Total
Fieldwalking						
179	35	2	2	12	21	251
Test Pits						
33	1	0	1	0	1	36
Totals:						
212	36	2	3	12	22	287

5.2 Test pits

Of the 28 test pits (Fig. 4) ten were devoid of finds, 16 produced flint flakes or unworked flint, while recognisable artefacts were recovered from only two pits: a knife rough-out from Test Pit 15, and a Group 3 scraper together with a possible rough-out of a Group 2 scraper from Test Pit 18 (see below).

Quantities of burnt flint and small flakes were recovered from several pits. Test Pit 24 revealed traces of a possible archaeological feature – a shallow depression within the subsoil at the base of the pit. The fill of this depression (Feature 1) contained a collection of unworked, burnt flint, some small flakes and a concentration of charcoal. In some of the test pits dark lines observed in the natural subsoil were interpreted as modern plough marks.

5.3 Prehistoric flint

A total of 287 struck flints, including 39 implements and cores, was recovered (see table above). The worked flint, predominantly dark grey in colour, was easily distinguished from the naturally-occurring flint nodules present in the soil. A local source has been proposed for the distinctive raw material – chalk deposits located a few kilometres from the survey area (Woodward 1989).

Artefact types included two arrowheads, one blade and one knife as well as a large collection of scrapers. One of the arrowheads is burnt and damaged but appears to be a barbed-and-tanged arrowhead of Beaker/Early Bronze Age type (Fig. 3B; No.289), the other is a discarded rough-out without definite surviving diagnostic features although the general shape would suggest a Bronze Age date. The broken blade is equally difficult to date but the bifacially-worked knife is late Neolithic in character (Fig. 3B; No.150) and a second knife, an unfinished version of the same type, was recovered from Test Pit 15.

It is the scrapers, however, which have provided the most productive area of research. Twenty-two scrapers were collected during the survey, 7.6% of the total of struck flint, the majority of which were concentrated in an artefact cluster to the north-east of the field (Fig. 3A). This cluster also included the flint knife, discussed above, and a chert hammerstone showing clear signs of surface wear.

Stylistically, the scrapers can be assigned to three groups of roughly equal number. Group 1 comprises small discoidal scrapers, marginally retouched and worked with a distinctive shallow-flaking technique around the entire circumference. Of this group of seven artefacts, all but one have retained traces of cortex at the apex of their crested backs. Without exception Group 1 scrapers are worked from the high-quality dark grey flint available locally.

Group 2 scrapers can be described as larger, elongated versions of the first group, with which they share a similar shallow-flaking technique and cortical traces on their steep dorsal sides. Scrapers from this group are manufactured from light grey as well as dark grey flint. Group 3 scrapers can be distinguished from the previous groups by their smaller size and thickness, total absence of cortex on the flattened dorsal side, and by the flaking technique used. Unlike the previous groups, which have been retouched to a steep shoulder, the working edges of Group 3 scrapers are formed into a gentle curve. Of this group only one of six artefacts is manufactured from dark grey flint, the remainder being beige or light grey in colour.

Chronologically, only the distinctive Group 1 scrapers can be assigned to the Beaker/Early Bronze Age period with any degree of certainty. However, the high concentration of scrapers and the relatively close association of this mixed assemblage, unknown elsewhere in the survey area, suggests contemporaneity between the three groups of scrapers. Stylistic differences would appear in this instance to be indicative of tool adaptation to specific purposes, rather than of chronological factors. The presence of unfinished tools in the artefact cluster would further support the existence of a varied and prolific scraper industry of long duration concentrated in the north-eastern quarter of the survey area.

Further lithic concentrations can be observed in the south-western quarter of the survey area in the form of burnt flint and flint flakes, some cores and two Group 1 scrapers (Fig.2). Flint scatters of this type are not closely datable and are difficult to interpret but the debitage and the distinctive scrapers would again suggest an Early Bronze Age date. Also, the high incidence of burnt, unworked flint may indicate the presence of a flint-working or habitation site, perhaps contemporaneous with the artefact concentration discussed previously.

6. Conclusions

The concentrations of prehistoric flint artefacts, working waste and burnt flint suggest a potential for the presence of buried contemporary remains in the survey area. The character of the artefact material favours an Early Bronze Age date, and thus the possibility here of some surviving settlement archaeology relating to a period when the light sandy soils of what were to become the Dorset heathlands were

first being intensively exploited by man, some 4,000 years ago. Today, only a scatter of round burial mounds over the adjacent heathlands testifies visibly to this period of exploitation, possibly a quite short-lived episode resulting in permanent impoverishment of the soils. Comparable artefact assemblages recorded in similar circumstances on other sites in the neighbourhood, and referred to previously (Ellis 1987 and 1988; Woodward 1989), enhance somewhat the value of this assemblage.

Test pit excavations suggest that prolonged cultivation may have severely truncated any surviving remains; plough penetration of the subsoil horizon was evidently frequent. The coincidence of one test pit (No. 24) with the remains of a suspected archaeological feature, associated with burnt flint, waste flakes and charcoal, suggests the possibility of other surviving evidence.

No great significance can be attached to a single sherd of Roman pottery, a sherd of post Medieval pottery and a fragment of tile recovered during the survey, and no other evidence for use of the area prior to recent agriculture was encountered.

7. Recommendations

7.1 The results of this evaluation suggest the possibility of prehistoric remains surviving in this area and thus a need for some further investigation.

7.2 The fieldwalking results are probably the most reliable clue to any surviving archaeology and attention is drawn to two lithic concentrations, one to the north-east (Fig. 3A) and another to the south-west (Fig. 2). Subject to the programme for mineral extraction, some preliminary topsoil stripping under archaeological supervision should take place in these areas.

7.3 Controlled topsoil stripping of sample areas, say two 50x50m squares to the north-east and one to the south-west, should be followed up by manual cleaning of the subsoil horizon, plotting of artefacts, and sample excavation and recording of any archaeological features encountered.

7.4 Subject to any archaeological results from this investigation it may be desirable to monitor the removal of topsoil from the remainder of the field with a view to further rapid sample excavation and recording.

7.5 No further phase of site evaluation is proposed at this stage. The employment of such techniques as geophysical surveying or soil phosphate analysis may not produce very conclusive results in these conditions unless specific archaeological remains are already suspected; see results from Hangar Field, Woodsford Heath (Bartlett & Turton 1988 & Ellis 1988).

8. Acknowledgements

The evaluation was commissioned by English China Clays Construction Materials Ltd., and we are grateful to Mr. Ian Lanyon, Estates Manager, for liaison in setting up the project. The fieldwork was supervised by Jon Sterenberg with the assistance of Dick Broomhead, Lucie Dingwall, Nancy and Charles Hollinrake, Nicola Trafford and Humphrey Woods. We are grateful to Dr. Lawrence Barfield and Jon Sterenberg for advice. The report was edited by Peter Leach, proof-read by Simon Buteux and Iain Ferris, and produced by Ann Humphries and Liz Hooper. The flint illustrations were prepared by Nicola Trafford and the other figures by Lucie Dingwall. Thanks are due to Dr. David Ingram, Department of Geography, University of Birmingham, for the computer finds plot programme and for his assistance.

9. References

Bartlett, A. & Turton, B., 1988 *Woodsford Heath, Dorset. Report on Geophysical Investigation of Hangar Field, 1987* for B.U.F.A.U.

Darvill, T., 1984 *Birdlip Bypass Project – First Report* Western Archaeological Trust, Bristol.

Ellis, P., 1987 *Woodsford Heath, Dorset. A preliminary archaeological evaluation of Hangar Field* B.U.F.A.U.

Ellis, P., *1988 Woodsford Heath, Dorset. A further archaeological evaluation of Hangar Field* B.U.F.A.U.

Fasham, P.J. et all 1980 *Fieldwalking for Archaeologists* Hampshire Field Club.

Woodward, A.B., 1989 *Lewell Farm, West Knighton, Dorset. A preliminary archaeological evaluation* B.U.F.A.U.

B.U.F.A.U.
November 1990

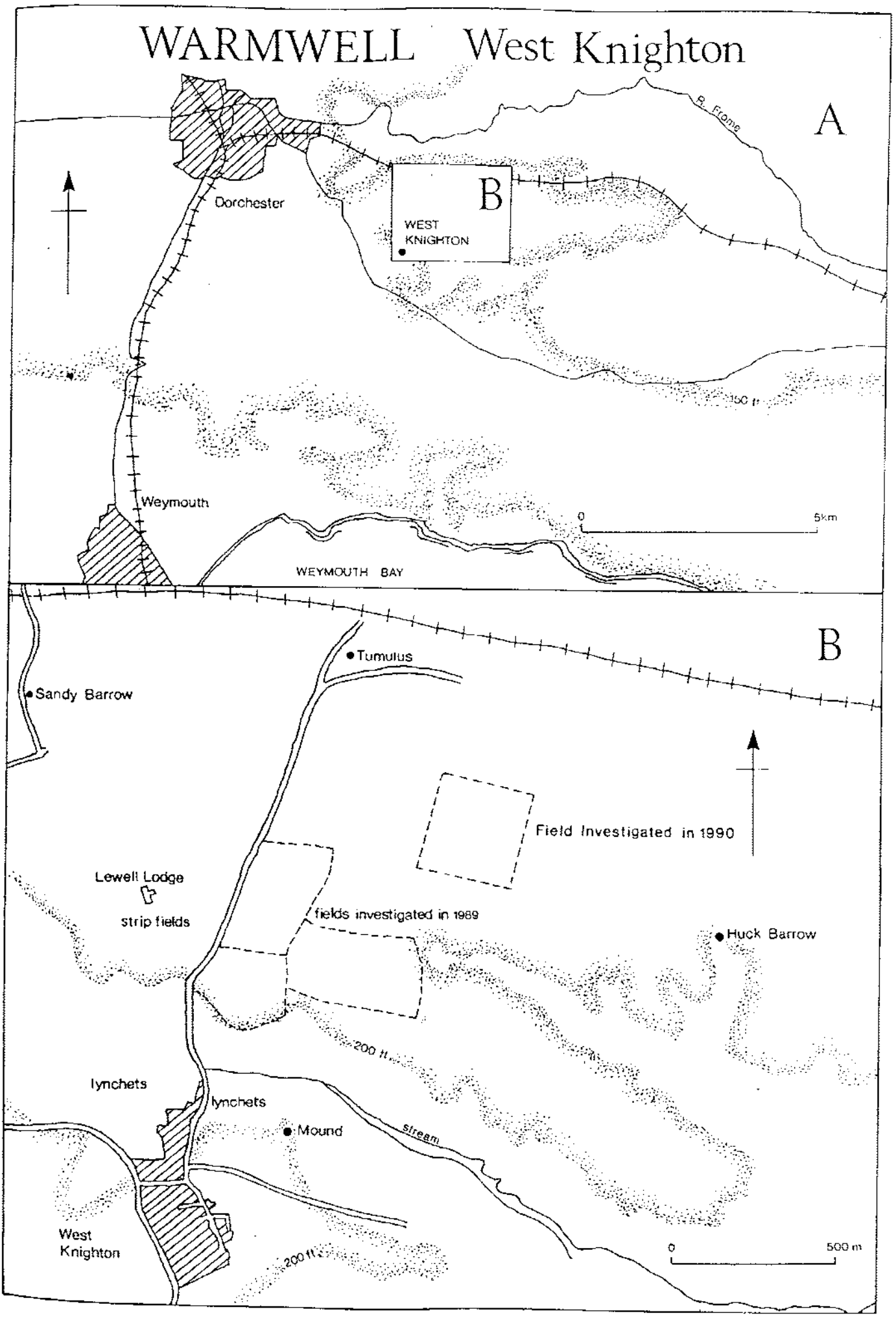
WARMWELL West Knighton
A
B
R. Frome
Dorchester
WEST KNIGHTON
150 ft
Weymouth
0
5km
WEYMOUTH BAY
B
Tumulus
Sandy Barrow
Field Investigated in 1990
Lewell Lodge
strip fields
fields investigated in 1989
Huck Barrow
200 ft
lynchets
lynchets
Mound
stream
West Knighton
200 ft
0
500 m

Fig 1

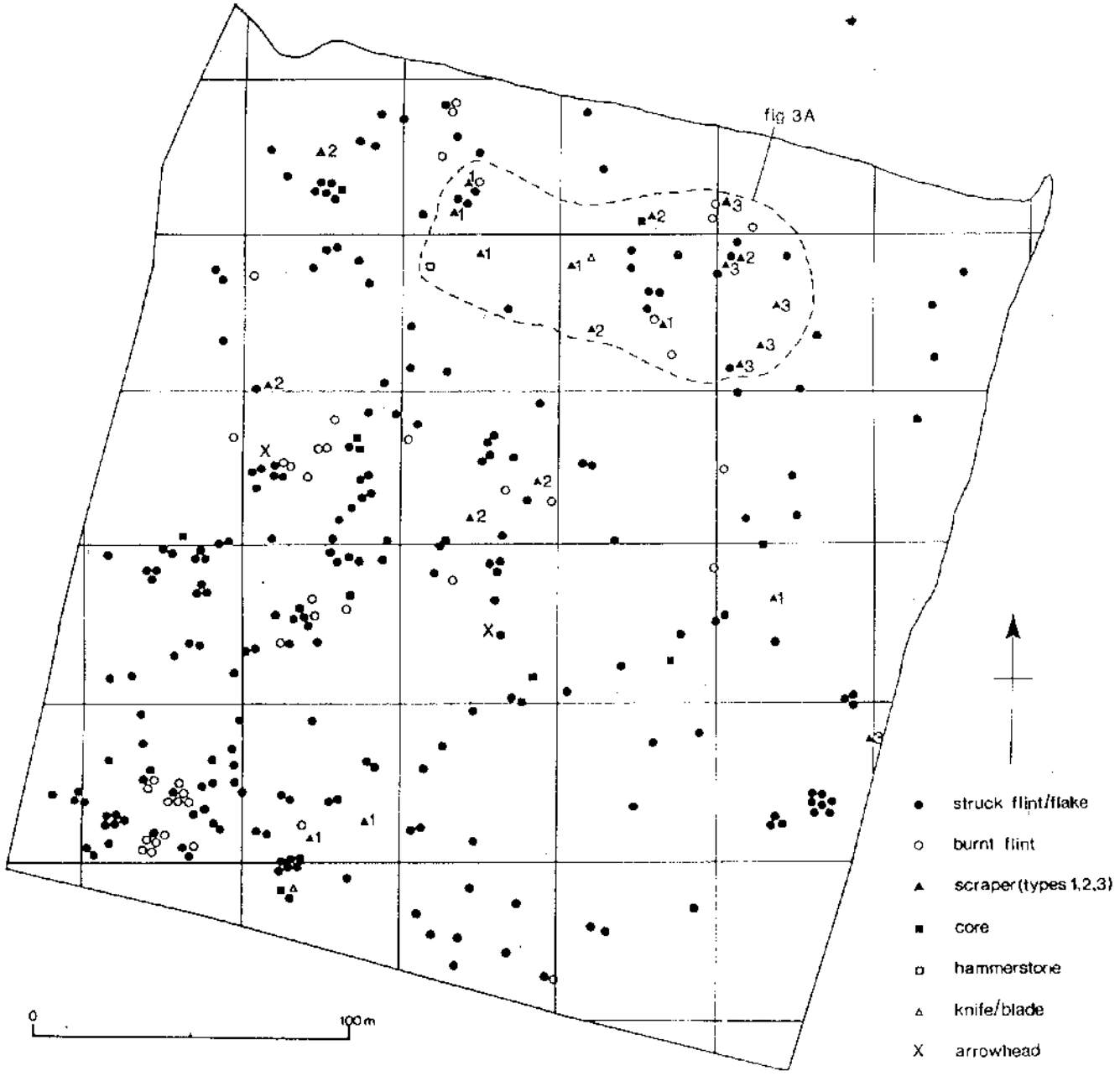
fig 3A
X
X
0
100m
struck flint/flake
burnt flint
scraper (types 1,2,3)
core
hammerstone
knife/blade
X arrowhead

Fig 2

ARTEFACT CLUSTER

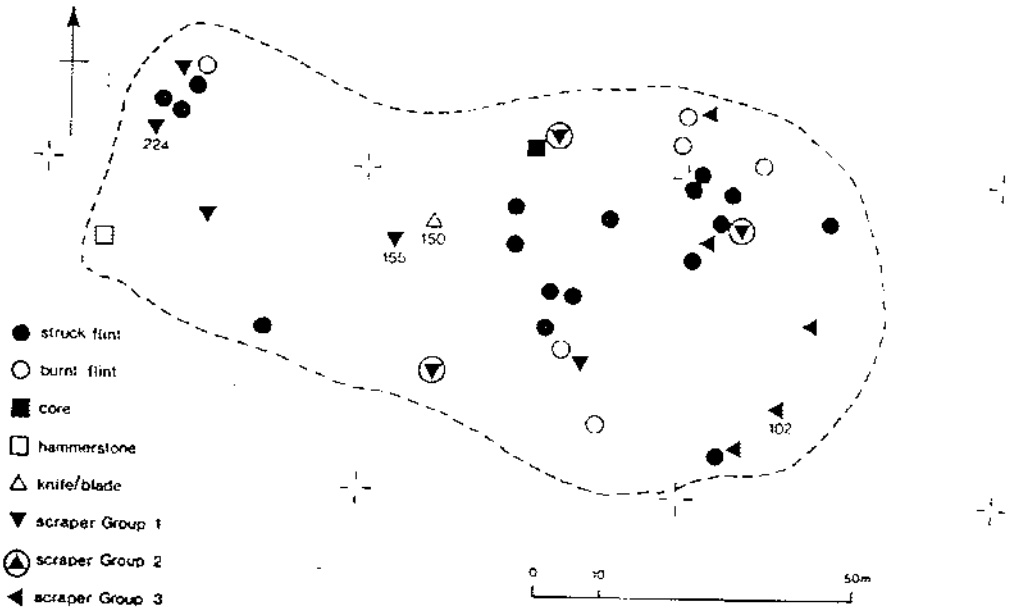

Fig 3A

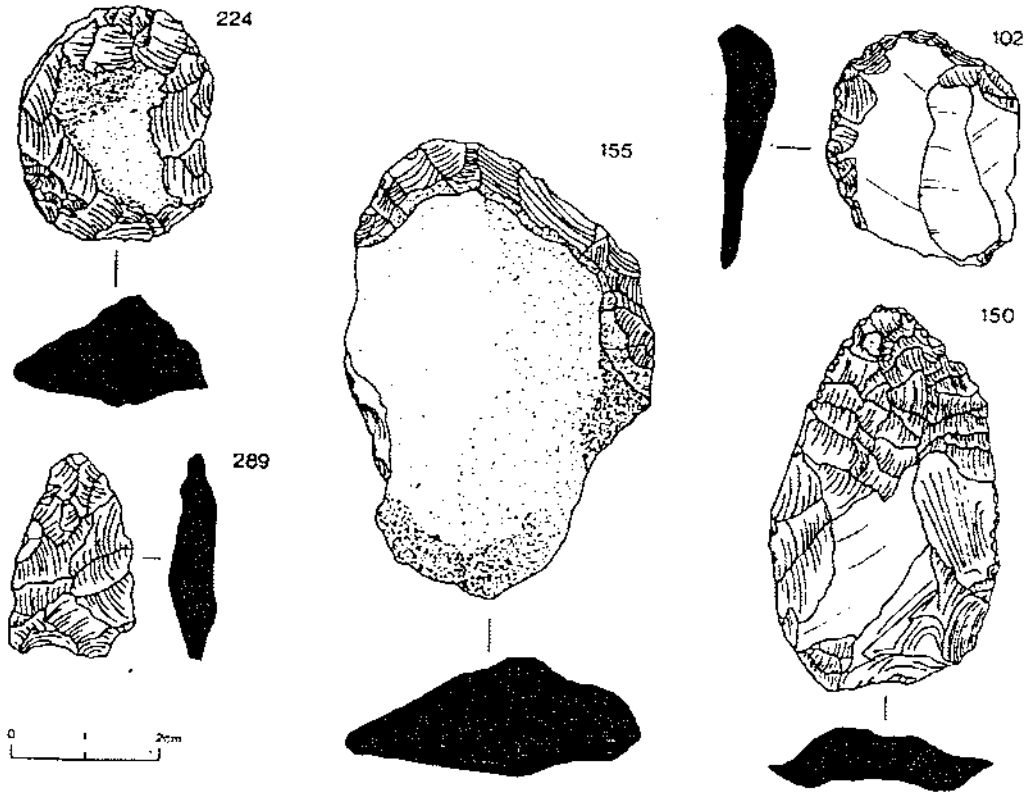

Fig 3B

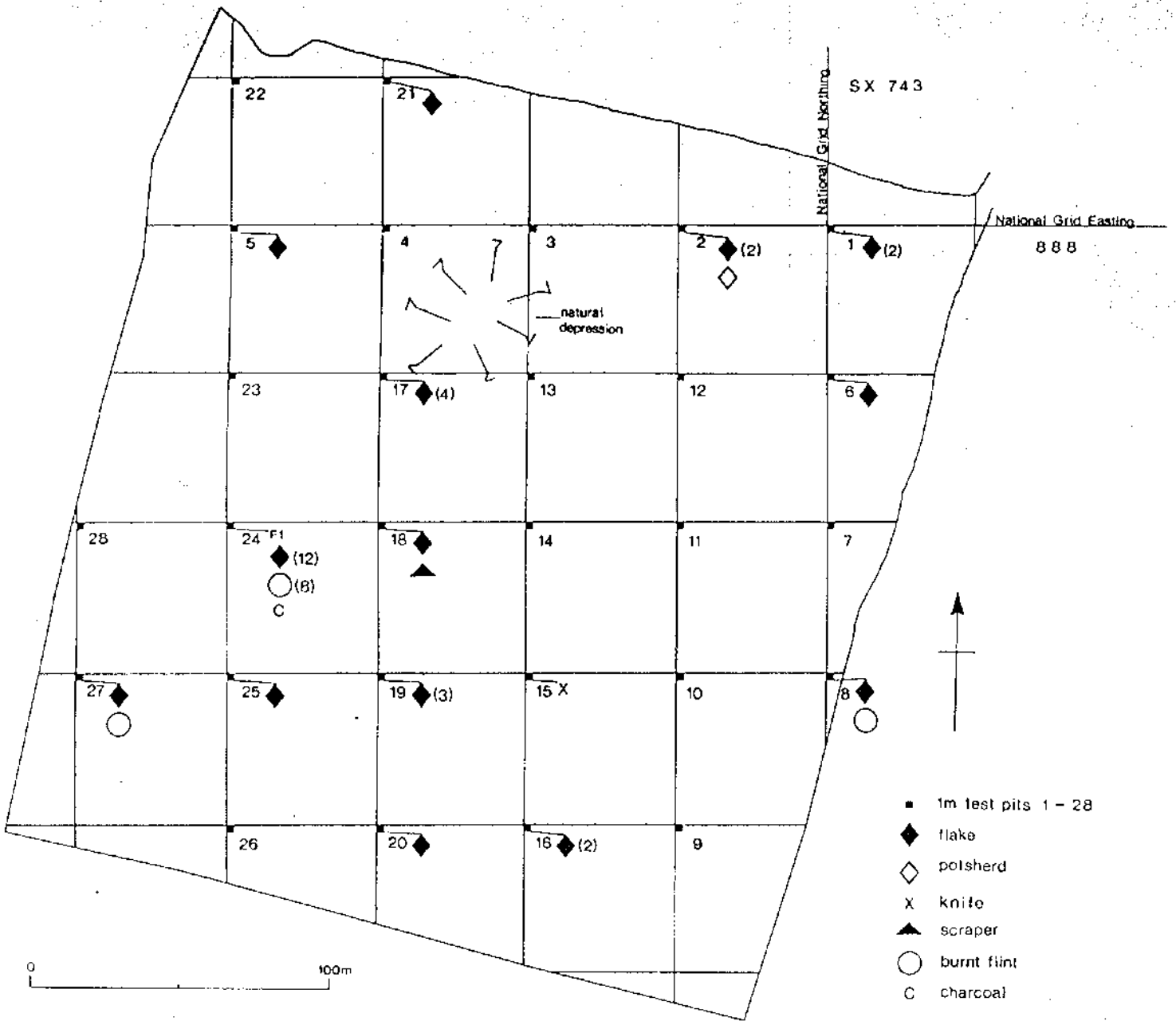
SX 743
National Grid Northing
National Grid Easting
888
natural depression
22
21
5
4
3
2 (2)
1 (2)
23
17 (4)
13
12
6
28
24 F1
(12)
(8)
C
18
14
11
7
27
25
19 (3)
15 X
10
8
26
20
16 (2)
9
0
100m
1m test pits 1 - 28
flake
potsherd
X knife
scraper
burnt flint
C charcoal

Fig 4