INTERIM REPORT ON FIELDWORK

BUNDU FARM, MARYDALE, NORTHERN CAPE, SOUTH AFRICA.

SEPTEMBER-OCTOBER 1999

National Monuments Council Permit No. 80/98/08/006/51.

By

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CONTENTS

1.0 PROLEGOMENA

1.1 Introduction

1.1.1 The Bundu Farm site represents an archaeological site dated by ESR to the late Middle Pleistocene and containing artefacts of Early-Middle Stone Age morphology. Archaeological material has accumulated in ancient pan deposits and comprises lithic artefacts associated with well-preserved faunal material.

1.1.2 Faunal material at the site ranges from teeth, limb bone, cranial fragments and vertebrae, and it is likely that the majority of animal body parts in one form or another are present. These have come from a variety of species, including bovids, equids, rhinoceros, suids (warthogs), small and large antelope species, whilst the presence of ostrich is represented by eggshell fragments. The majority of lithic tool types are: points, polyhedral cores, flakes and heavy blades, no handaxes have been observed at the site, but have been found within 1km of the site.

1.1.3 The overall aim of excavation work at the site is to assess the range of material, its date and the level of association of the faunal and lithic artefacts. Analysis of the site forms the core of higher research supervised by the University of Southampton. This aims to assess sites in the Northern Cape during Fauresmith (late Acheulian)-Middle Stone Age times from the viewpoint of behavioural ecology. The project at Bundu therefore aims to recover sufficient data to allow for environmental reconstruction and land-use patterning.

1.1.4 An evaluation took place at the site during the end of October and beginning of November 1998. The results of this evaluation are detailed within a previous report. The evaluation was carried out under Permit No. 80/98/08/006/51, issued by the National Monuments Council.

1.1.5 Excavations during 1999 built on the work of the evaluation phase and sought to determine more fully the stratigraphic sequence at the site, as well as concentrating on expanding both the lithic and faunal samples.

2.0 SITE DETAILS

2.1 Site Location

2.1.1 The site is located at grid reference 2212E/2945S *(amendment to previous report)* at Bundu Farm, on the Fransenhof to Marydale Road, which is approximately 30km south of Marydale and 90km west of Prieska, located on National Survey Map 2922 Prieska, 1:250 000 (see figure 1). The site lies below a thin layer of Kalahari Red Sands in flat bush scrub characteristic of the Upper Karoo. Underlying bedrock is primarily limestone but there are

escarpments of igneous rock to the south-east and banded ironstone outcrops further east toward Prieska.

2.2 Dating

2.2.1 Unpublished ESR dates from tooth enamel has given a range of 150,000-300,000 years b.p. for the site. During post-excavation analysis it is the intention to obtain further ESR dates, as well as employing other dating criteria, particularly AAR, and OSL.

2.3 Site potential

2.3.1 The site has great potential in that it offers an example of an extensive, apparently, early MSA site combining good quality faunal and lithic material. Both aspects are well preserved and in such quantities to allow for statistically viable analysis to be undertaken. Questions on the function, taphonomy, age range, use and relationships at the site can be addressed. The nature of the lithic material is of interest in that it appears characteristic of the Fauresmith industry. It therefore offers the opportunity to examine a stratified and dated Fauresmith assemblage, from an excavated source. This may allow an assessment of what the Fauresmith represents and what tool morphologies can be said to exist with late Pleistocene assemblages in the Northern Cape.

2.3.2 Many questions still remain unanswered regarding Early-Middle Stone Age behaviour and these have a crucial bearing on the evolution of modern humans. Much debate still exists over exactly when Homo sapiens evolved as a species but more and more evidence suggests that the period 200,000-400,000 years b.p (the probable time period for Bundu) was a key period in this evolution and that Homo Sapiens evolved in Africa and quite possibly within Southern Africa (Stringer CB & Mackie R 1996 African Exodus; Cape, London).

2.3.3 The faunal material allows for questions on the ecology and environment to be addressed and the exploitation of animal resources by the hominid group involved. The faunal sequence for the Middle Pleistocene in Southern Africa still has gaps, so any site of the this date which contains preserved faunal material is of great interest, in helping to broaden knowledge of this period (P. Beaumont pers. comm. 1998).

2.3.4 Given the range of preserved faunal material there is always the possibility that hominid remains may be found at the site, during future excavations.

2.3.5 In addition very little fieldwork has been undertaken in the Bushmanland area nor in this central part of the Northern Cape Province. There are few Stone Age archaeologists working in this region of South Africa on purely early-

4.0 SUMMARY OF WORK DURING 1999 SEASON

4.1 Excavation Summary

4.1.1 The 1998 season opened a series of nine keyhole pits or trenches. This was done to explore as wide an area as possible within the time allotted, to determine the extent of archaeological deposits.

4.1.2 A further six main trenches were excavated during 1999 – T11 to T16 and two additional small trenches T12b (described under T12) and T17..

4.1.3 Visits were also made to five other pans belonging to the farmer. All of these had at some time been excavated for road gravel. Sections at these pans were sketched and photographed and lithic samples obtained.

4.2 Specific Aims

4.2.1 Trenches during the 1999 season, were positioned to retrieve a larger faunal sample.

4.2.2 1998 trenches 1 and 4 were extended to obtain a large lithic sample and a more detailed stratigraphy of pan sediments.

4.3 Methodology

4.3.1 The methodology continued the surface collection of artefacts from around the gravel extraction pit. Notes were taken of areas of lithic concentrations and where artefacts could be observed eroding out of the sides of the extraction pit. Exact positions of artefacts was not always taken as it was clear that much material had been redeposited during gravel extraction. A series of photographs were taken of the extraction pit, and the exposed stratigraphy of the pan.

4.3.2 Faunal material was also collected where it was encountered during surface collection. This was only collected where it was clearly no longer in context and where its continued existence at the surface was detrimental to its preservation. Both individual loose fragments were collected along with specimens enclosed within tufa. The location of all faunal material was plotted. Again photographs were taken detailing concentrations of faunal material.

4.3.3 All trenches were lain out with pegs and string and excavated by trowel in spits and all the soil was sieved. Artefacts were recorded by spit and by context. All bone material and diagnostic lithics were 3D recorded. Photographs were taken of the trenches both prior to and post-excavation and when new soil levels or significant finds were uncovered.

4.3.4 Trenches were planned and sections drawn and all soil horizons detailed on context record forms.

middle Stone Age deposits. At present fieldwork in the Northern Cape is primarily being done by Mr Peter Beaumont of the McGregor Museum.

2.3.6 The Bundu site may be of great value in assessing more broadly the activities of ESA-MSA hominids in South Africa. Geographically it is a bridge between coastal sites such as Klasies River Mouth, and other inland sites such as Wonderwerk Cave and Florisbad.

3.0 PROGRAMME AND OBJECTIVES OF RESEARCH

3.1 Overall Summary

3.1.1 The expected programme of research is to undertake a series of field seasons at the Bundu Site, excavating and recording material spreads, followed by post-excavation analysis. The first and second seasons took place in 1998 and 1999, with further seasons scheduled for 2000. Analysis, survey and sampling work at Bundu and other pans is scheduled for 2000-2001.

3.1.2 In addition to the Bundu excavation, fieldwork will involve the exploration and surveying of the area around the Bundu site and the plotting and brief analysis of other potentially contemporary sites. A visit to museums in South Africa, Namibia, and Botswana is also planned to assess material from other sites of comparable age (Fauresmith Sangoan) and from same broad geographic area (palaeo-Kalahari in the case of Namibia and Botswana). Work has already begun of assessing material held at the British Museum, Fitzwilliam Museum, Cambridge and Pitt Rivers Museum, Oxford.

3.2 Research Aims

3.2.1 The fieldwork and analysis is intended to form the core of a higher research degree. The research theme being broadly the ESA-MSA transition in the Northern Cape, South Africa, with an emphasis on ecology and land-use during the Early Middle Stone Age. The Bundu site therefore offers a great opportunity to assess micro and macro-environmental dynamics in relationship to hominid life-ways and behaviour.

3.2.2 Other aims for the site include as springboard for further fieldwork in the region. There has also been an interest at local level, for the site material to be used as the basis for a small regional museum display at Prieska.

3.2.3 As work progress, the intention is to set up a Web-site so that information on the site can be readily available.

4.4 Trenches

Trench 11

4.4.1 Trench 11 was excavated at the northern edge of the 1999 trench 6. At the same time trench 6 was re-excavated to remove soil which had infilled it following the end of last seasons work. The basal levels of trench 6 were excavated at the same time as those of trench 11.

4.4.2 The stratigraphy for trench 11 has been combined with that for trench 6. This results in a section as follows:

E — Modern land surface — W

Red Brown sand silt (036)

Calc pebbles (037) artefact rich

Red sand calc mix (038)

Artefacts at base of layer

Calc pebble (039)

No artefacts in last 5cm

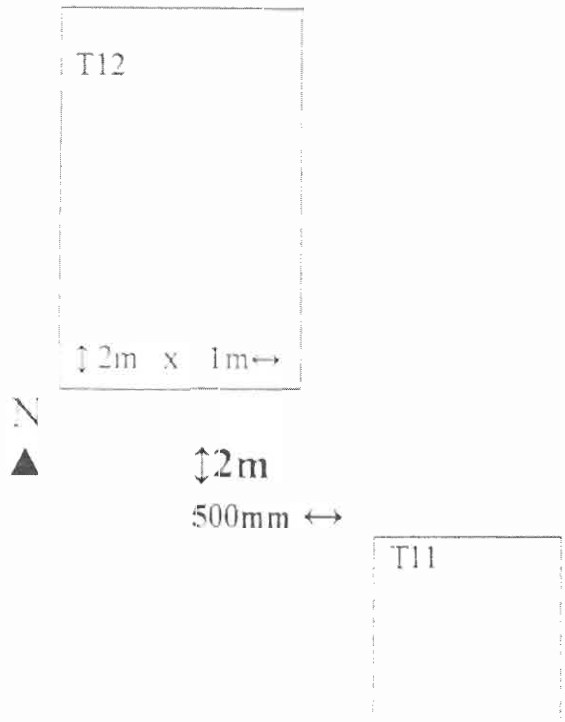
Calc (040)
no pebbles or artefacts
Bedrock *800mm below surface*

4.4.3 Despite its relatively small size and shallow depth, trench 11 produced around 250 lithic artefacts. These ranged from small flakes, to multifaceted quartz cobbles, polyhedral cores, points, and blade fragments. The richest layers were (037) which was almost exclusively composed of artefacts and (039). The upper and basal horizons of (039) were not clear and it seems likely that as a temporal stratigraphic unit this layer includes the base of (038).

Trench 12

4.4.4 Trench 12 was positioned on the upper extraction pit slope to the north of trench 11. It was located to both confirm the sediment sequence, as noted in trench6/11 and also to pick up the faunal assemblages noted on the surface. It represented the opportunity to test the depth of the bone deposit and also to retrieve a sizeable sample of fauna.

4.4.5 LOCATION RELATIVE TO TRENCH 11

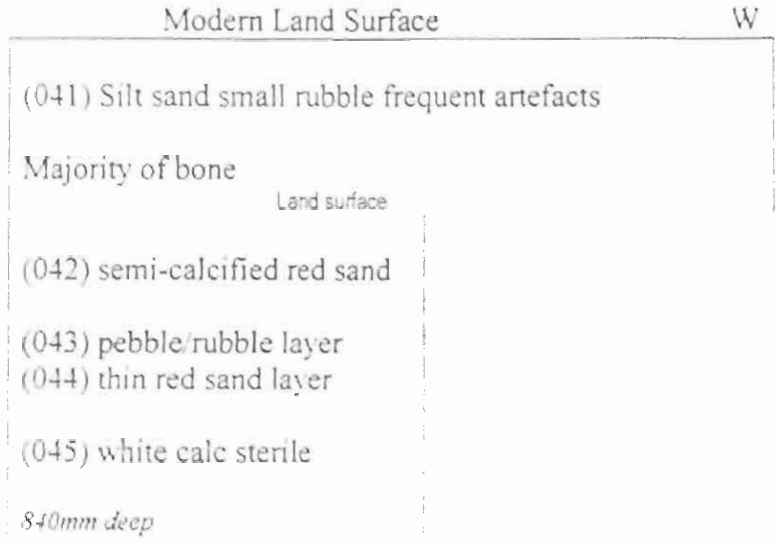


4.4.6 Trench 12 was positioned 500mm to the east of alignment with trench 11 due to the presence of an ant's nest. Prior to the excavation of T12 a surface collection of fauna and lithics was undertaken.

4.4.7 Over 6kg of animal bone was recovered from the trench 12 excavations. Including limb bones, wildebeest horn cores, teeth, vertebrae and cranial fragments.

4.4.8 Trench 12 comprised an upper layer of silt sand containing frequent artefacts and small pebbles. Beneath this was the main bone layer which was 150-200 mm deep. This lay on a distinct land surface on top of a semi-calcified red sand. This in turn lay above a concentrated pebble rubble layer comprised of large to small elements. Again this lay on a distinct land surface of calcified red sand which was sterile, this thin layer graded into a white natural calc layer.

4.4.9



4.4.10 Both contexts (041) and (043) were rich in artefacts, including a large cobble core recovered from the land surface at the base of (041) and surface of (042). At the top of this land-surface a small roughly circular arrangement of cobbles was also noted, some of which appeared to show evidence of burning.

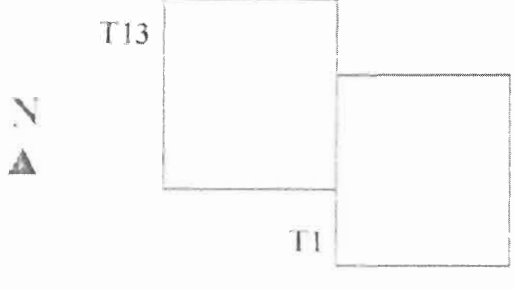
4.4.11 An analysis of the lithic material from this trench as with others will be carried out at a later date. Approximately 350 artefacts were recovered from this trench.

Trench 12b

4.4.12 An additional trench 500mm x 1m was excavated to the north and east of T12, this was designated trench 12b. It was excavated due to the existence of a visible quantity of animal bone eroding out of the surface. This material was in imminent danger of destruction due to the area being a pathway down into the extraction pit, used by farm children, workers and the resident bullock. A 2kg sample of animal bone, including wildebeest horn was excavated.

Trench 13

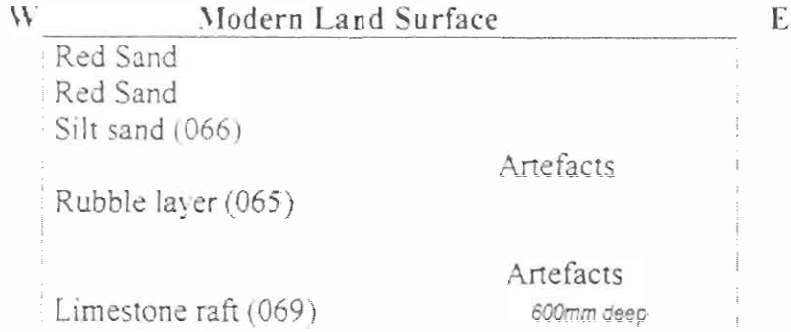
4.4.13 This trench was placed as an extension to T1 to examine the extent of the limestone raft, and confirm local stratigraphy.



4.4.14 Excavation revealed the same stratigraphy as T1 and confirmed that the limestone raft was extensive. The main rubble artefact layer lay directly on the surface of this raft.

4.4.15 It was clear from this further excavation that the limestone raft continued beyond both trenches and that it was dipping towards the west.

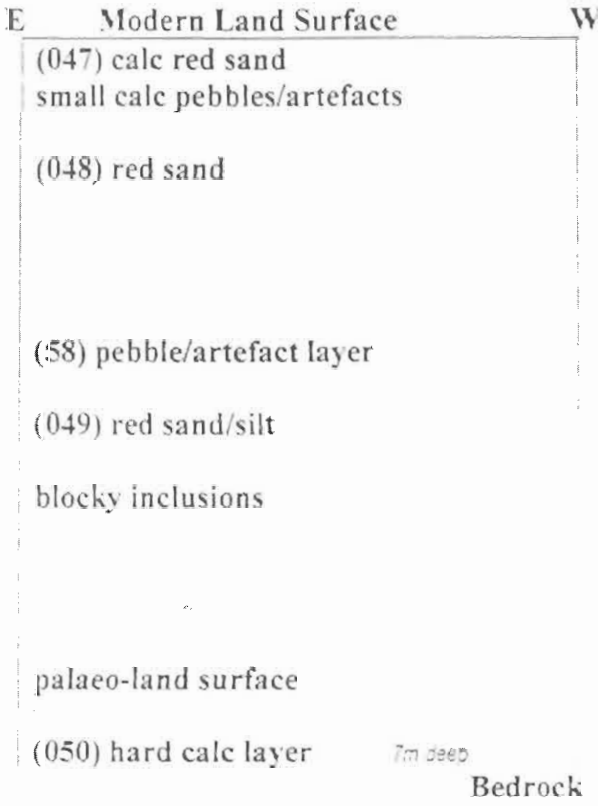
4.4.16 There were few artefacts compared to other trenches, in the rubble layer. Artefact numbers increased toward the west and approximately 50 lithics were recovered from the context. These included lithics cemented to the surface of the limestone raft.



Trench 14

4.4.17 Trench 14 was positioned in alignment with trench 15 on the slope of the extraction pit to the north of the 1998 T4. It was placed to pick up the stratigraphies of the pan deposit slower down the pan so that bedrock could be reached with minimal effort and a composite stratigraphic section established.

4.4.18 This trench was 700mm deep and comprised five distinct contexts. An upper pebbly partly calcified red sand layer containing small calc pebbles and artefacts, lay above a red sand layer with occasional inclusions. Beneath this layer was a band of blocky pebbles and artefacts in a calcified red sand. This lay on a red sand silt layer with blocky inclusions, which peeled off onto a definite palaeo-surface, the top of a hard calc layer with some blocky inclusions, beneath which was bedrock.



4.4.19 Approximately 250 artefacts were recovered from this trench.

Trench 15

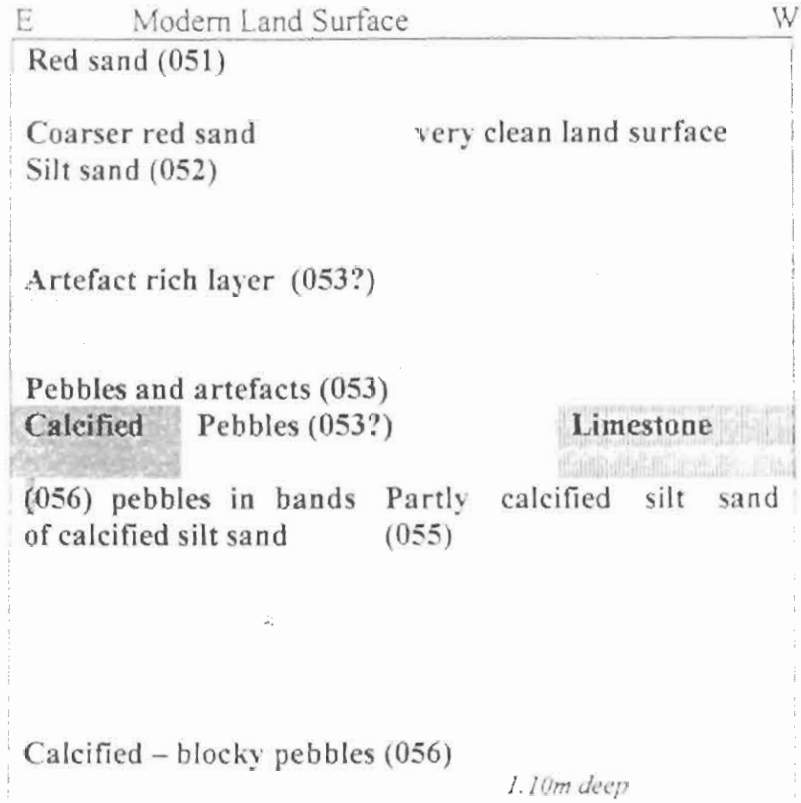
4.4.20 Trench 15 was positioned to the 1.5m to the west of trenches 1 & 13 in order to further determine the extent of the limestone raft and its influence on stratigraphy.

4.4.21 The trench was 1m² and was excavated to a depth of 1 metre, by which time the width of the base had been restricted by solid calcified layers.

4.4.22 Excavation in this trench did not encounter the limestone raft and in fact it became evident that the raft ended precisely at the eastern section of trench 15.

4.4.23 The sediments in trench 15 comprised a upper group of three sand units, a fine red sand above a coarser red sand lifting cleanly off onto a firm silt sand. The next layer was virtually entirely artefactual. At the southern side this lay to the west on a solid limestone shelf and to the east on calcified sediment. Centrally the artefacts and pebbles dipped between these two barriers and the layer also dipped substantially down to the north.

4.4.24 The artefact and pebble layer had banked up against the limestone raft at the east section whilst it was abutted by a partially calcified silt sand to the west. Beneath these layers was a white calcified layer containing pebbles, which were much more blocky than superimposing layers.



4.4.25 Approximately 300-400 artefacts were recovered from trench 15. The total weight of artefacts removed was over 12kg.

Trench 16

4.4.26 Following the excavation of trenches 13 and 15 it was clear that the limestone raft was not continuous but had an edge noted in the east section of trench 15. As such trench 16 was positioned as an adjunct to both these trenches to trace the limestone floor between the two and determine the relationship of the artefactual layers.

4.4.27 This trench revealed that the limestone raft is a single entity to the east of trench 15 where it stops or fragments. The raft continued across the entire floor of trench 16. The stratigraphy of trench 16 was consistent with that of T1 & T13 with deposits dipping down toward the west and T15.

4.4.28 A quantity of artefacts was recovered from the surface and in the immediate 100mm above the limestone raft. These included a large flat-based core cobble/anvil 190mm long x 180 mm wide and 55mm deep. In total this small trench produced just under 100 artefacts.

Trench 17

4.4.29 This was a 500 x 500mm area excavated around and centred on an eroding wildebeest horn. It was positioned 4m to the west of T12 in a second area

where animal bone was visible eroding out of the surface. Trench 17 was used to assess for further animal remains and the depth of any deposit in this area.

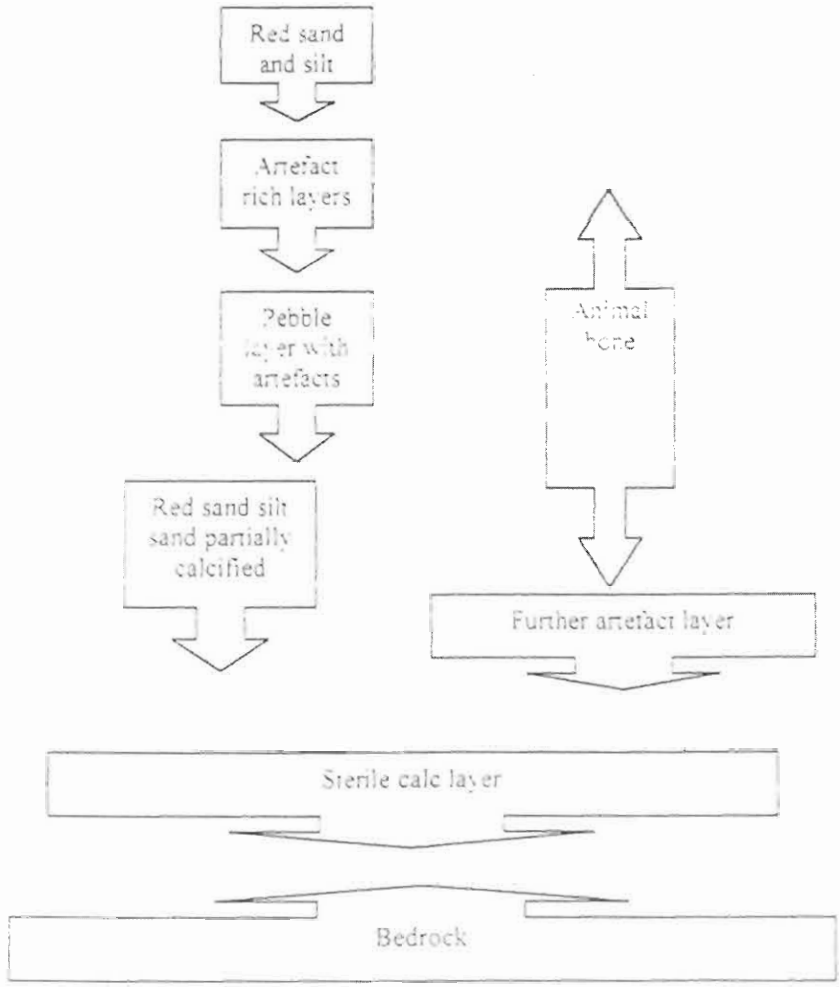
5.0 FIELDWORK RESULTS

5.1 Discussion of Results

5.1.1 The 1999 season recovered a composite section through the pan deposits. This re-affirmed the findings of 1998 that the majority of artefacts are found in a specific layer beneath red sand/silt sand deposits.

5.1.2 A schematic stratigraphy for the site can be determined as follows;

5.1.3 Upper layers of red sand and sand silt overlying a artefact rich layer; which in turn overlies a pebble rich layer with artefacts. Beneath this is a layer of red sand silt sand partially calcified, in some areas this overlies a further artefact rich layer sitting atop a sterile calc layer above natural bedrock.



5.1.4 The 1999 season also revealed that faunal remains exist in deposits away from the main bone beds determined in 1998. Where bone was encountered away

from these beds it was generally in a poor state of preservation and recovered from the lower layers of trenches in more calcified deposits.

5.1.5 The exact nature of the relationship between the bone concentrations with the artefact layers is still not fully clear and is one of the priorities during future fieldwork.

5.1.6 The 1999 season confirms the Bundu Farm pan as an important and artefactual rich site. As well as obtaining a good composite section, the desired enlarging of the faunal and lithic samples was achieved. Sediments within the deposits have been assessed and the potential for sampling for environmental and dating is being considered.

5.1.7 In total a minimum estimate of 1500 artefacts were recovered from excavated contexts during the season, and around 300 from surface collection. It is hoped to increase this sample to around 3000-4000 artefacts over future seasons prior to analysis. Numbers of faunal remains excavated are estimated at a minimum number of +-200. The total weight of artefactual material from the 1999 season was 85.5kg.

5.1.8 Away from the artefactual concentrations a palaeo-stream channel was located on the north-east side of the extraction pit. This appeared as a 10 metre wide band of small to large rounded and subrounded pebbles shallowing out to the north and south from a central thickness of 310mm. The palaeostream bed could be traced for 20 metres away from the extraction edge to the NNE. The matrix was not well sorted or graded and contained artefacts throughout its depth.

5.2 Additional pan sites

5.2.1 During the 1999 season the author was taken to five other pans on Bundu Farm all of which had previously been excavated for road gravel.

5.2.2 Sketch sections of these pans were made, and small samples of lithic material, associated with each pan, was taken for comparison with the Bundu main site. On first analysis it would appear that all the pans share a common stratigraphic sequence and exhibit similar artefact rich layers. It is the intention to use future fieldwork season to obtain more detailed stratigraphic sections and gain samples of lithic material as well as for environmental/dating purposes.

6.0 ANALYSIS

6.1 Faunal Material

6.1.1 The following fauna have been identified at the site, from a previous SAA visit and the 1998/99 seasons; *equids (inc. extinct zebras), warthog, springbok, buffalo (Pelorvis antiquus?), rhinoceros (?), giraffe (?), antelope species*

undetermined (steenbok grysbok size, bontebok size, kudu size) wildebeest and ostrich. The previously mentioned hippopotatmus fragment is now designated undetermined and may possibly be from a large warthog.

6.1.2 Body parts from fauna ranges from horns, phalanges, main limb parts, scapulae, rib fragments, vertebrae, to cranial fragments.

6.2 Lithic Material

6.2.1 A range of lithic types has been identified at the site. These include large squat heavy blade-flakes; points; flakes of various forms; discoidal, tortoise, centripedal, and prepared platform cores; possible scrapers, including notched. These have been produced on a range of stone types, although mainly milky quartz, with most being locally found.

6.2.2 The lithic material from the 1998-99 season is due to be processed in 2000-01 when a full report will be produced.

6.3 Report

6.3.1 A detailed report on the contexts, stratigraphy and sediments will be incorporated with the lithic and faunal reports following the 2000-2001 season. At this stage all contexts should be regarded as temporary as contexts are likely to be sub-grouped and grouped into larger units as part of the post-excavation analysis.

7.0 FUTURE SEASONS

7.1 2000 Field Season

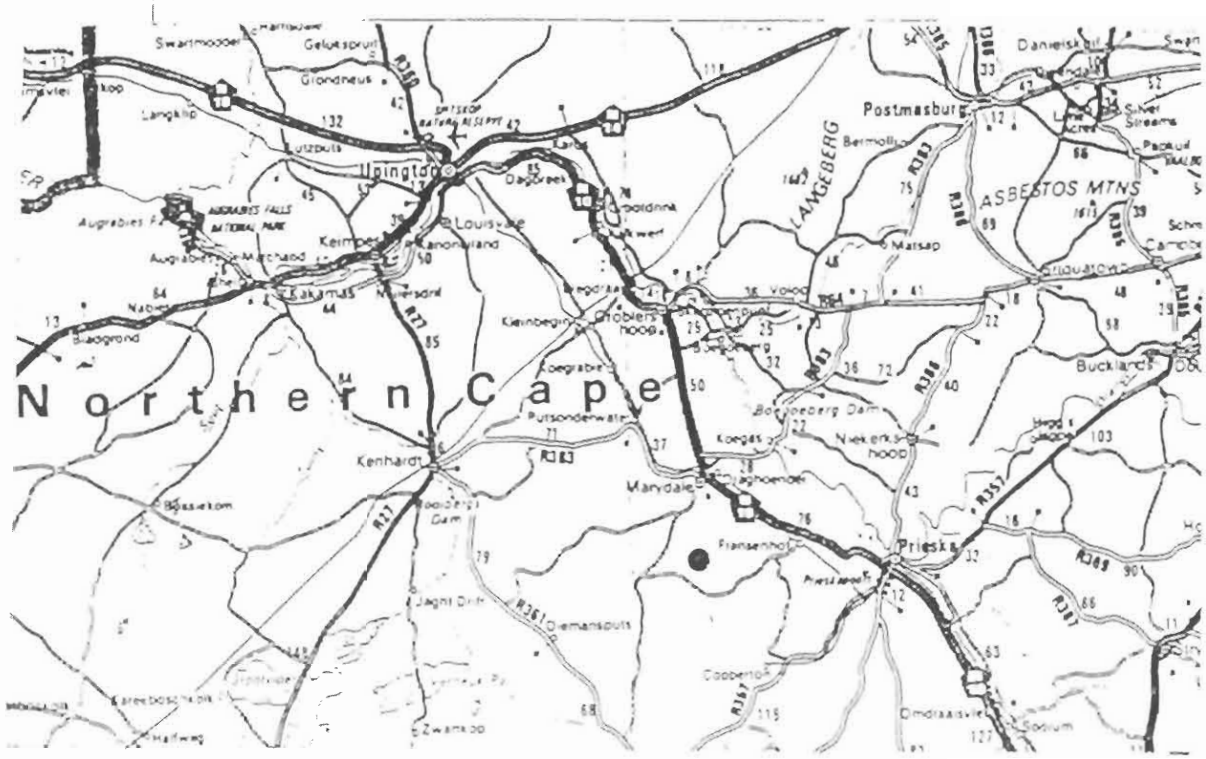
7.1.1 The 2000 season has three primary aims and two secondary ones:

i. To extend pit 15 excavate the basal pan deposits;
ii. Further determine the pan stratigraphy, east to west by extending existing trenches or positioning of a new trench between both areas;
iii. Continue excavation of trenches containing faunal material, increasing sample and concentrating on areas where faunal material is eroding out of the land surface and therefore in danger of destruction;
iv. Where time permits to collect samples for dating and environmental purposes;
v. Visit other pans on Bundu Farm which have been extracted for gravel – make detailed sections, collect sediment and lithic samples.

7.2 Time Scale and Budget

7.2.1 The 2000 season has been scheduled for October-November and the intention is to undertaken excavation, followed by preliminary analysis and writing up field notes at the McGregor Museum. The project has already attracted a contribution from the Prehistoric Society of £300-00 for the 2000 season. Grant applications have been placed with the Royal Anthropological Institute.

SITE LOCATION



● BUNDU PROJECT AREA