

**Field work****3.1. Introduction**

It is clear from the typological range of stone tools found on Bloubos that the environmental setting on the farm facilitated occupation over many millennia. In particular on the northern part of the farm Early Stone Age (ESA) and Middle Stone Age (MSA) stone tools lie exposed on the surface (see Photographs 3.1 and 3.2). The ESA finds include Acheulian hand axes and cleavers and Victoria West I and II cores. MSA artefacts include cores with prepared striking platforms, large blades and points. Along with the ESA and MSA finds, clusters of Later Stone Age (LSA) artefacts occur at various places on the farm.

The majority of LSA sites on Bloubos are surface scatters on the slopes of dunes close to pans as well as in the areas between the dunes, although some LSA sites are located within the granite outcrops on the farm. One site of each type was chosen for closer inspection. The main site, Bloubos 5 (BB5), is a surface scatter comprising an unusually large archaeological sample. Bloubos 7 (BB7), a stone circle situated on a granite outcrop some kilometres from BB5, was chosen as an example of the second type of site. Bloubos 6 (BB6), Hakdooren Vlei 1 (HD1) and Hakdooren Vlei 2 (HD2), are surface scatters which were also recorded during the field work. The positions of the various sites are shown on the map (Figure 3.1).

**3.2. Bloubos 5**

The site BB5 ( $28^{\circ} 08.83' S$ ;  $20^{\circ} 48.60' E$ ), is a surface scatter lying on the lower slope of a linear dune adjacent to a sizeable pan (see Photograph 3.3). To investigate the site further, an extensive collection of the material remains from BB5 was undertaken. A grid of 80m x 30m was laid out (Figure 3.2) along the base of the dune and divided into 5m x 5m squares. Wooden poles were used to demarcate the four corners of each square. A rather extensive, random sample was collected from BB5. All the material, including manuports and waste



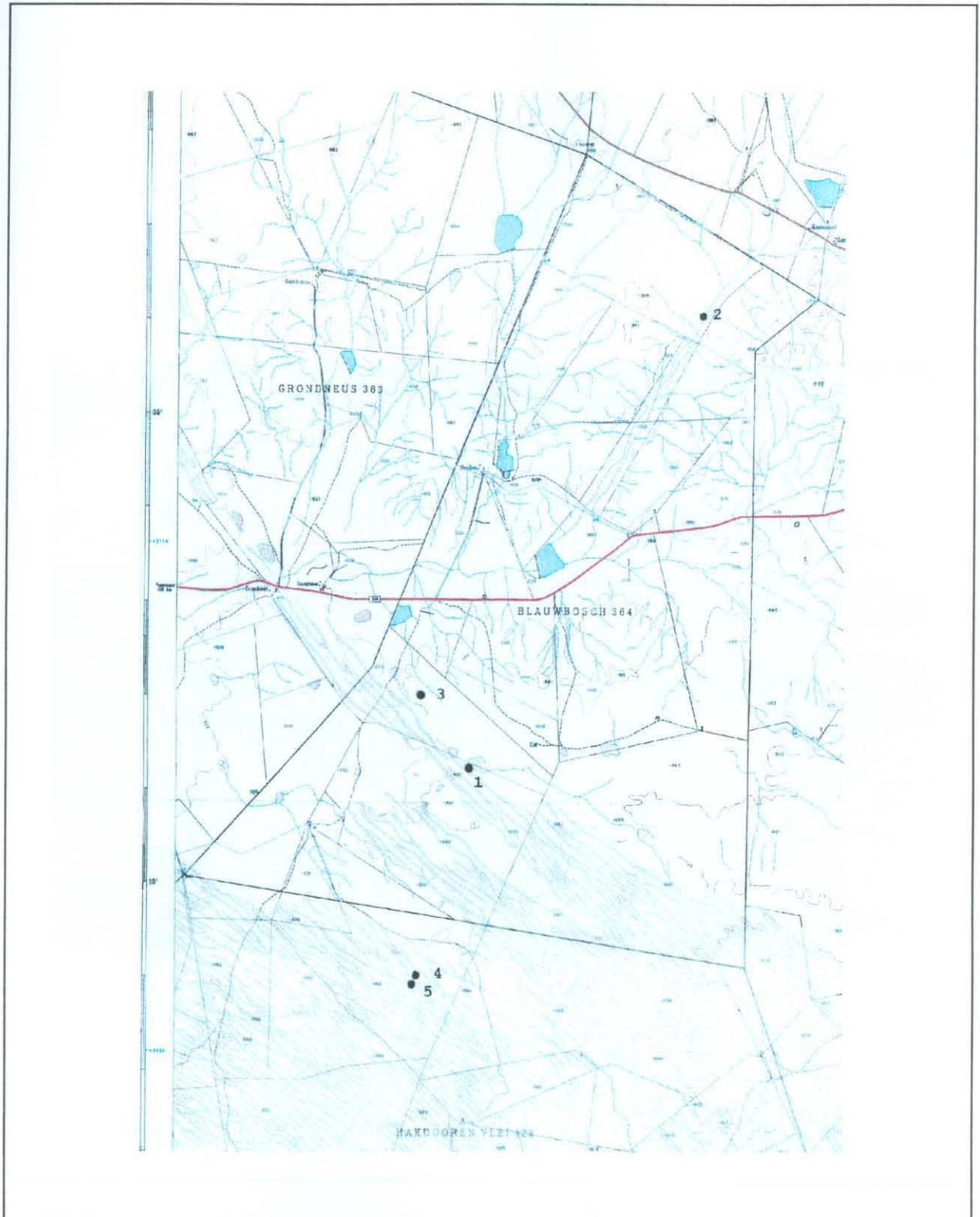
Photograph 3.1: ESA stone tools from Bloubos.

ESA cores and hand axes are a familiar sight on the farm.



Photograph 3.2: MSA stone tools from Bloubos.

MSA points and blades indicate a continuous occupation of the farm from the ESA to the LSA.



**Figure 3.1:** Map of the farm Bloubos.

The 1:50 000 topographical map indicates the position of the sites considered in this project. BB5: 1; BB7: 2; BB6: 3; HD1: 4; HD2: 5.



**Photograph 3.3: Site BB5.**

The LSA surface scatter lies on a sand-dune next to a prominent pan. The margin of the latter is clearly visible on the photograph.





material, was collected from 18 randomly chosen squares and kept separate. The first aim of using the grid system was to possibly determine site type and identify activity areas based on patterns of lithic and other remains. Unfortunately, the 18 squares clustered together towards the middle of the grid and no such patterns could be identified. The uneven surface scatter did become sparser towards the sides of the grid. The second aim was to ensure that every member of the prehistoric society had an equal opportunity of being represented within the artefact sample. In total, 10878 stone artefacts were collected. This sample consists of utilised stone tools, formal stone tools, cores, waste material, manuports and anvil, hammer and grinding stones. Therefore, BB5 is quite possibly an example of a factory/manufacturing LSA site. Ostrich eggshell and some fragments of ceramic ware were also retrieved. That the LSA on Bloubos was fairly untouched by the encroaching colonial Cape border, is evident from the lack of any European artefacts - for example porcelain fragments, glass or metal objects. The date obtained from ostrich eggshell fragments (OES) for BB5 is:

Analysis no		Radiocarbon date (yrs BP)
Pta-7381	BB5, surface	1810± 45

### 3.3. Bloubos 7

BB7 (28° 04.15' S; 20° 51.56' E) is situated on the northern portion of Bloubos in quite a different environmental setting from BB5 and some 10 kilometres from the latter. The earth is rocky without a sand-dune or pan nearby. The site, situated amongst huge granite boulders, comprises a definite stone circle enclosing a sandy accumulation. A prominent granite knoll blocks the view directly to the south of the site. The site is shown in Photograph 3.4. BB7 was excavated primarily to determine to what extent its artefacts differ from those found at BB5 by means of typological and metric comparison. Since the intention was not the large-scale accumulation of material remains, only a 50cm x 50cm test block was excavated in a randomly chosen position within the circle. It was excavated in 5cm spits down to 35cm and in 10cm spits



Photograph 3.4: Site BB7. (Scale = 40cm).

Site BB7 is a 5m x 4m stone circle containing LSA deposits.



down to sterile soil at 75cm depth. Utilised stone tools, formal stone tools, cores, waste material, decorated and undecorated OES fragments, OES beads, bone fragments, some potsherds and charcoal fragments were found while there were no manuports, anvil or upper grinding stones. BB7 most probably represents a living site. The particulars of the BB7 test pit are summarized in Table 3.1 and the survey plan shown in Figure 3.3.

No European artefacts were recovered from BB7. The radiocarbon dates for the site, obtained from OES fragments are the following:

Analysis no		Radiocarbon date (yrs BP)
Pta-7730	BB7, spit 2	340± 50
Pta-7755	BB7, spit 6	2370± 45

An earlier surface sample, presumably from this site was also dated and gave the following result:

Analysis no		Radiocarbon date (yrs BP)
Pta-7367	BB7, surface	440± 50

### 3.4. Bloubos 6

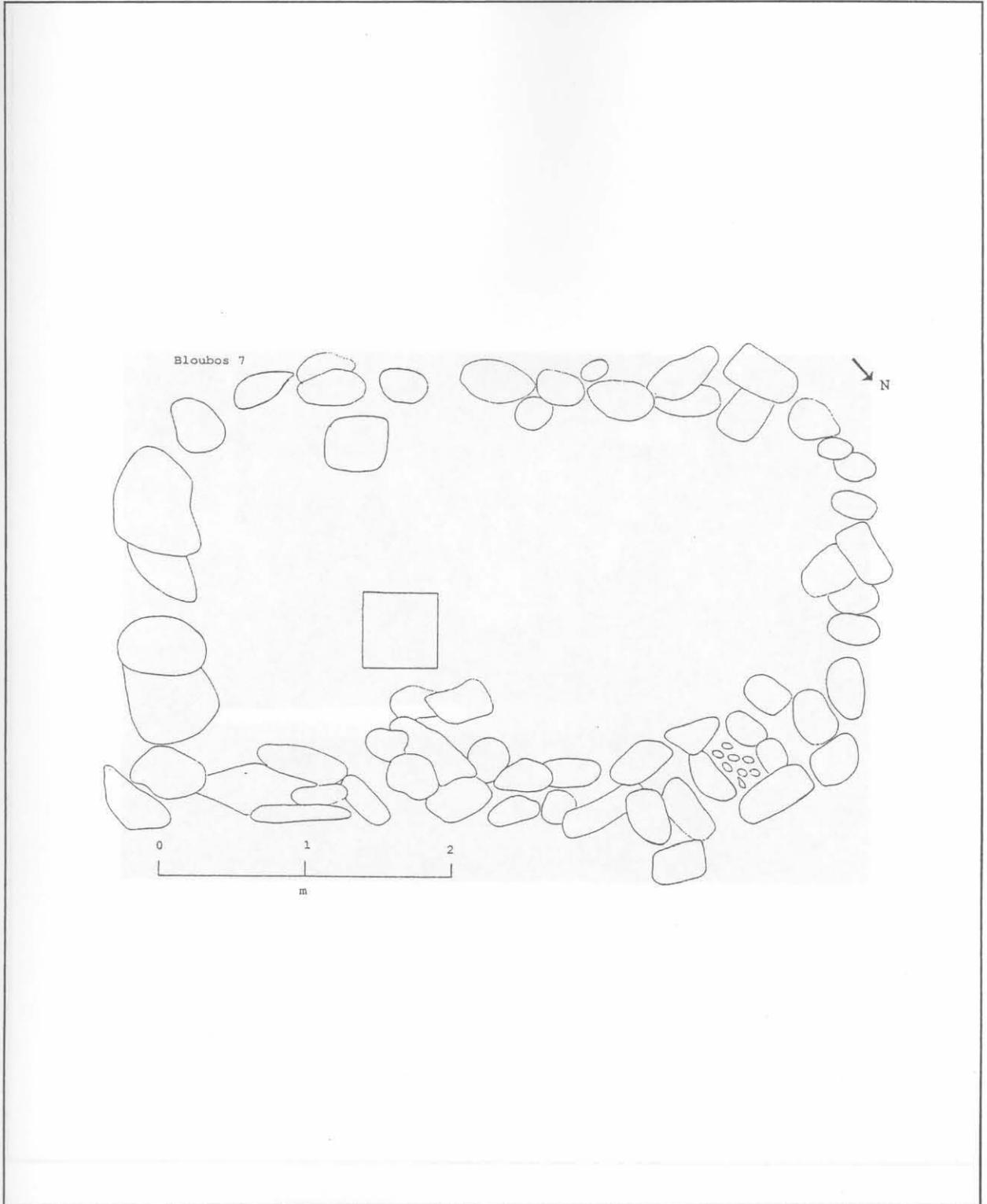
BB6 (28° 07.93' S; 20° 47.58' E) is a sparser surface scatter 1,8 kilometres from BB5, in the depression between dunes and close to a dry watercourse. The site contained utilised stone tools, cores and waste material as well as several anvil stones (see Photographs 3.5 and 3.6), suggesting that it too was a factory/manufacturing site. No lithic artefacts were collected from BB6 but OES fragments from the site were used to determine a date:

Analysis no		Radiocarbon date (yrs BP)
Pta-7819	BB6, surface	840± 80

Again no European artefacts were recovered from the site.


**Table 3.1: Summary of the BB7 excavation.**

Spit	Depth	Colour	Compaction	Texture	Nature
Surface	0cm	Grey/red	Very loose	Sandy	Slightly ashy
Spit 1	0-5cm	Grey/red	Medium	Sandy/fine	Ashy
Spit 2	5-10cm	Grey	Medium	Very fine	Ashy
Spit 3	10-15cm	Grey	Medium	Sandy/fine	Ashy/sandy
Spit 4	15-20cm	Grey	Medium	Sandy/fine	Ashy/sandy
Spit 5	20-25cm	Grey	Medium/loose	Very fine	Ashy/sandy
Spit 6	25-30cm	Grey	Loose	Sandy/fine	Ashy/sandy
Spit 7	30-35cm	Grey	Very loose	Sandy	Sandy/soil
Spit 8	35-45cm	Grey	Loose	Sandy/fine	Sandy
Spit 9	45-55cm	Grey	Medium	Fine	Sandy
Spit 10	55-65cm	Grey/red	Medium/loose	Sandy/fine	Sandy/rocky
Spit 11	65-75cm	Reddish	Very loose	Sandy/fine	Sandy/rocky



**Figure 3.3:** Survey plan of BB7. (Free-hand sketch).

The position of the test pit which was excavated at BB7 is indicated.



**Photograph 3.5:** Stone artefacts on BB6. (Scale = 40cm).

Cores and flakes that form part of the surface scatter are visible.



Photograph 3.6: Anvil stone on BB6.



### 3.5. Hakdooren Vlei 1

Amongst the dunes some 4,2 kilometres south of BB5, just within the borders of Hakdooren Vlei, two further sites were observed. The first, HD1 (28° 10.83' S; 20° 48.17' E), lies on the slope of a sand-dune. The site is a rather dense surface scatter, similar to BB5 and BB6 in typological character with utilised stone tools, waste material and anvil stones present on the surface. No European artefacts were identified.

A cache of empty but intact ostrich eggshells found buried in the shade of a kameeldoring on HD1 was pointed out to me by the owner. This cluster of probable prehistoric water containers, is a good example of one survival tactic of nomadic LSA hunters (Rudner 1953:82). Fragments of one shell which eventually broke after it was previously removed from the cache, were used for dating purposes with the following result:

Analysis no		Radiocarbon date (yrs BP)
Pta-7764	HD1, surface	1480± 50

### 3.6. Hakdooren Vlei 2

Hakdooren 2 (HD2) (28° 10.80' S; 20° 48.05' E) lies in a narrow depression on the northern side of the same line of dunes as HD1, and some 250 metres away (see Photograph 3.7). This surface scatter is smaller than that on HD1 but just as dense. Once more stone tools, waste material, upper grinding stones, ostrich eggshell fragments and anvil stones are ample. No European artefacts were present.

### 3.7. Bloubos LSA radiocarbon dates

In 1978 it was reported that OES tended to produce radiocarbon dates that were too 'old' (Horowitz, Sampson, Scott & Vogel 1987:145). A recent evaluation of the radiocarbon age determinations using ostrich eggshell has revealed that the reason for this is twofold (Vogel, Visser & Fuls in press). Firstly, ostrich eggshell tends to survive for long



**Photograph 3.7:** Site HD2.

This particularly dense surface scatter also lies on a dune next to a pan. The latter is visible in the top half of the photograph.



periods in the environment and can easily be incorporated into later deposits in the same way as pebbles are. Shell from an excavated level or from a surface scatter can thus be a mixture of fragments of different ages. The result is that a date is obtained that is older than the actual age of the stone age assemblage that is to be dated.

Secondly, it was found that ostriches incorporate 'dead' carbonate into the shell, causing the radiocarbon age to be, on average, 180 years too old. Dates produced with this material must therefore be adjusted by the subtraction of 180 years. The uncertainty coupled with this effect also increases the error of the dating.

The material used for the dating of the finds at Bloubos was, in all cases, OES fragments. The results must therefore be corrected for the 180 year offset. In addition to this, they need to be calibrated to the historical time-scale. This is done using the Pretoria Calibration Program (Talma & Vogel 1993). The data used in the present version of the program is the recently revised results for the northern hemisphere as published by Stuiver et al. (1998), but adjusted to account for the southern hemisphere offset and to best match the Pretoria equipment (Vogel in press). The results for Bloubos and HD1 are listed in Table 3.2.


**Table 3.2:** Dates calibrated to historical time-scale.

Site	Analysis no	Apparent age	Calibrated date
BB5	Pta-7381	1810± 45 BP	AD 416(438)536
BB6	Pta-7819	840± 80 BP	AD 1288(1312-1385)1412
BB7 surface	Pta-7367	440± 40 BP	AD 1775-1799
BB7 7 spit 2	Pta-7730	340± 50 BP	AD 1676(1692-1726)
BB7 spit 6	Pta-7755	2370± 45 BP	345-313, 210(186)146 BC
HD1	Pta-7764	1480± 50 BP	AD 685(766)793