

# **AN ANALYSIS OF A RANDOMLY COLLECTED EARLY STONE AGE ARTEFACT ASSEMBLAGE FROM THE SANDKOP MINING AREA, KLEINSEE, NAMAQUALAND**

Prepared for

**De Beers Namaqualand.**

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## 1. INTRODUCTION

The site of the ESA finds was first brought to my attention by Mr. P. Kruger of the Environmental section at De Beers Namaqualand Mines who had found them during a routine inspection of a new mining area (Figure 1). I visited the site in March 2001 with Mr. Kruger and determined that the area had already had the topsoil removed many years ago. The artefacts were determined to be deflating from the soil vestiges onto the more resistant hardpan deposits below and were therefore no longer *in situ*. Subsequent to the inspection it was suggested that additional collecting be undertaken by Mr. Kruger from the disturbed area and interest was expressed in placing such a collection in the Kleinsee Museum. The South African Heritage Resources Agency (SAHRA) requested that a catalogue of the artefacts be prepared to accompany the collection into the museum, and at the request of De Beers, this has now been completed. This report describes the context and presents a catalogue of finds in Appendix 1.

Extracts from our 2001 report have been included below to place the finds in context.

## 2. OBSERVATIONS

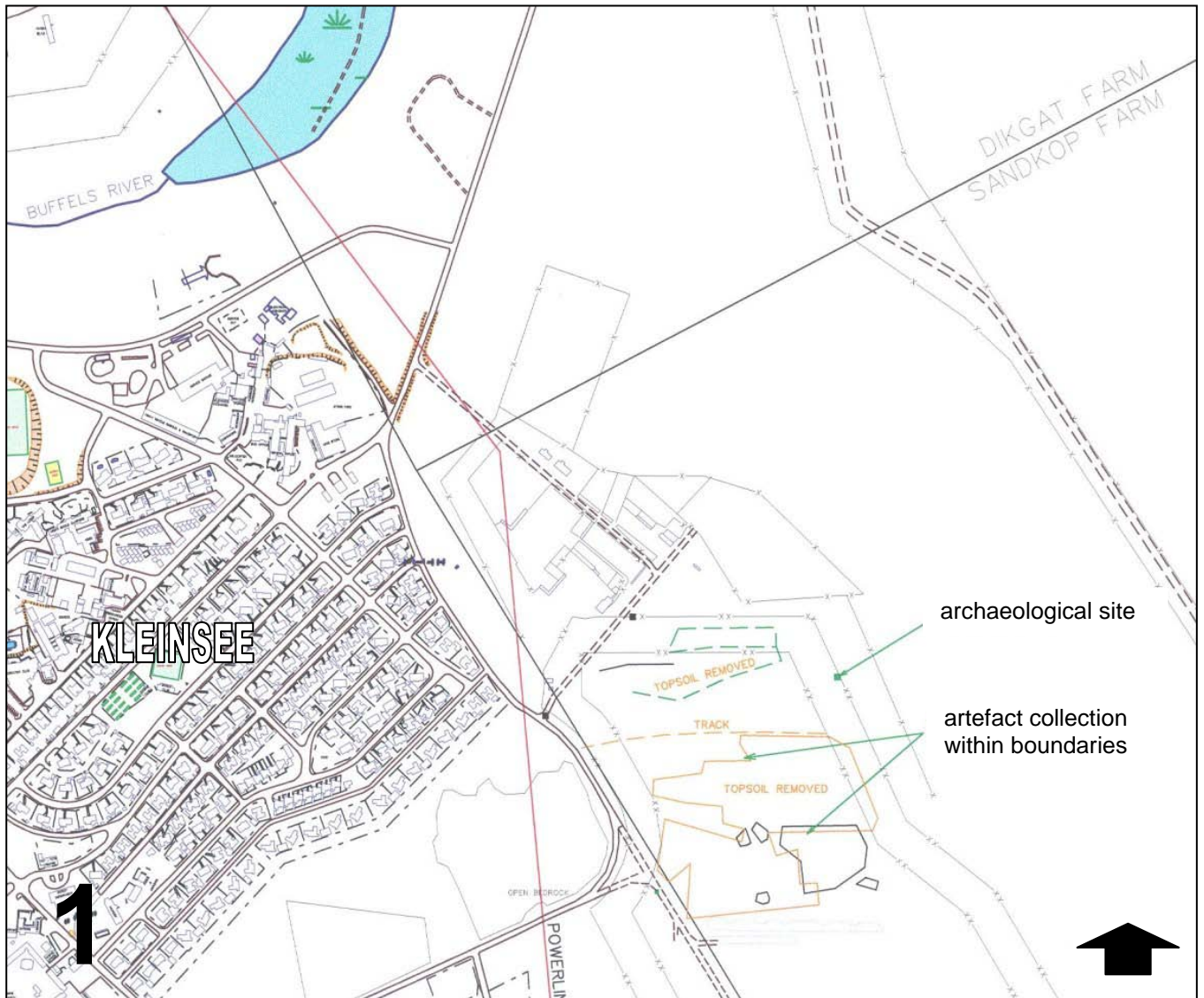
### 2.1. Context

The site is located at 29°40.749'S 17°04.824'E (WGS84) and consists of an extensive (though not dense) scatter of ESA waste/debitage and occasional bifacial pieces lying on a hard surface below approximately 1-1,5m of loose aeolian sands. The artefactual material was exposed when the topsoil was removed several years ago, but it is only recently with renewed interest in the area for mining that the archaeological material was noticed by the environmental officer undertaking a preliminary inspection of the area.

### 2.2 Artefactual content

A number of small outcroppings of silcrete are present in the cleared area. In some instances it appears as if the smaller silcrete rafts have been moved from their primary context by earthmoving operations, but in other cases these seem to be *in situ*. It is therefore no surprise that many artefacts appear to be made on silcrete, of a colour and texture consistent with the rafts. Before disturbance, the site may have closely resembled artefact scatters surrounding other silcrete outcrops in the area. Flake scars on the remaining surfaces of some of the *in situ* rafts are consistent with flakes having been removed. Quartz and quartzite has also been used for artefacts, and some chunks of chert are also noticed. These latter materials would have to have come from the coast or from the Buffels River.

As with other artefact scatters on surrounding silcrete outcrops, artefactual material consists largely of by-products of the manufacture of formal tools (hand axes). The size of the pieces, and lack of Middle Stone Age (MSA) flake characteristics, suggest that this material is of ESA age. In addition, 3 hand axes were seen to confirm this conclusion about the age. It would appear that the scatter continues beyond the exposed area and is therefore quite extensive.



### **3. ANALYSIS**

Following my 2001 inspection, a number of additional pieces were collected which clearly confirm the Early Stone Age origin of these artefacts, and that they are recognisably characteristic of the Acheulian Industry.

As the Acheulian has been studied in most detail in East Africa, this analysis has used the classification scheme proposed by Isaac (1977) for his analysis of the Olorgesailie site in Kenya. Some of the characteristic larger tools are shown in Figures 2 – 9. The scales are in centimetres.

### **4. AGE**

The presence of small hand axes with invasive retouch is a component that has allowed more accurate relative dating of the occurrence. These items (KMA/SK06-09) are found in assemblages of the Late/Upper Acheulian, and were often referred as the Fauresmith Industry in the past (Deacon & Deacon 1999:86). Similarly, classic hand axes showing great numbers of flake removals such as the examples in this collection (KMA/SK01-04), are also believed to be representative of this period (Isaac 1977:144). It is likely that this collection dates to between approximately 500 000 and 250 000 years.

### **5. REFERENCES**

- Deacon, H.J. and Deacon, J. 1999. Human beginnings in South Africa. David Philip, Cape Town.
- Halkett, D.J. 2001. An inspection and assessment of specific archaeological sites on De Beers owned properties: Namaqualand. Unpublished report prepared for De Beers Namaqualand Mines. Archaeology Contracts Office, University of Cape Town.
- Isaac, G.L. 1977. Olorgesailie: Archaeological studies of a middle Pleistocene lake basin in Kenya. University of Chicago Press.



FIGURE 2: HAND AXES - CLASSIC



FIGURE 3: HAND AXES – CLASSIC, SMALL





FIGURE 4: HAND AXES - PICK-LIKE

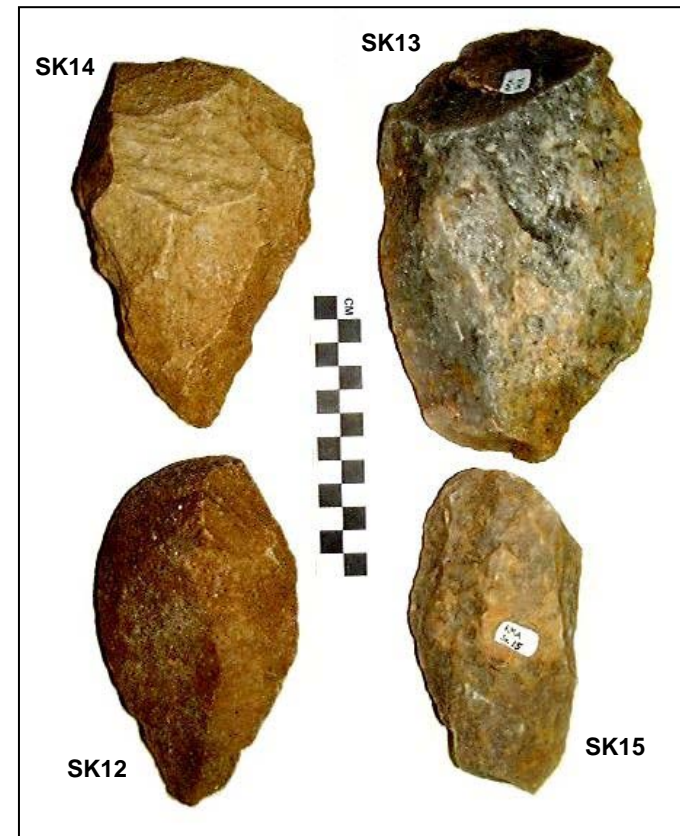


FIGURE 5: HAND AXES - SUB-CLASSIC

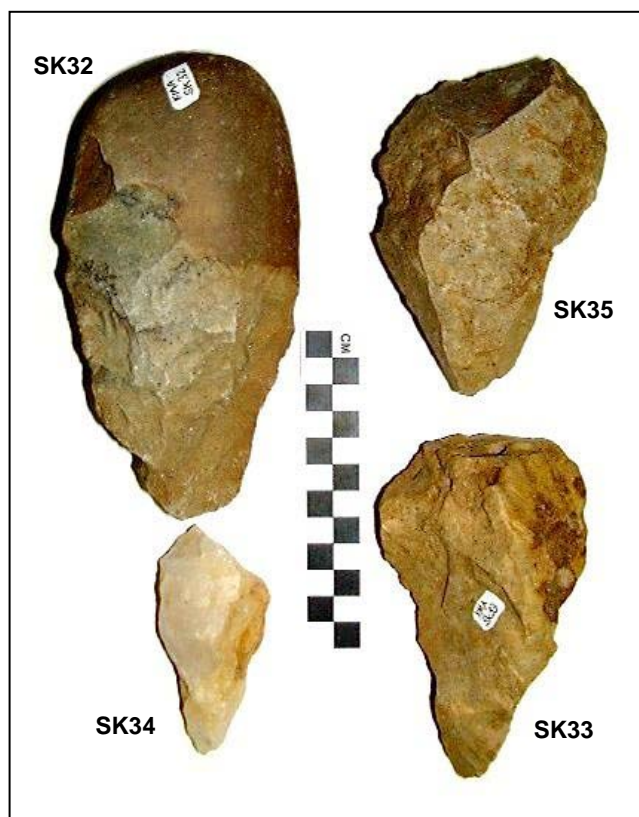


FIGURE 6: PICKS

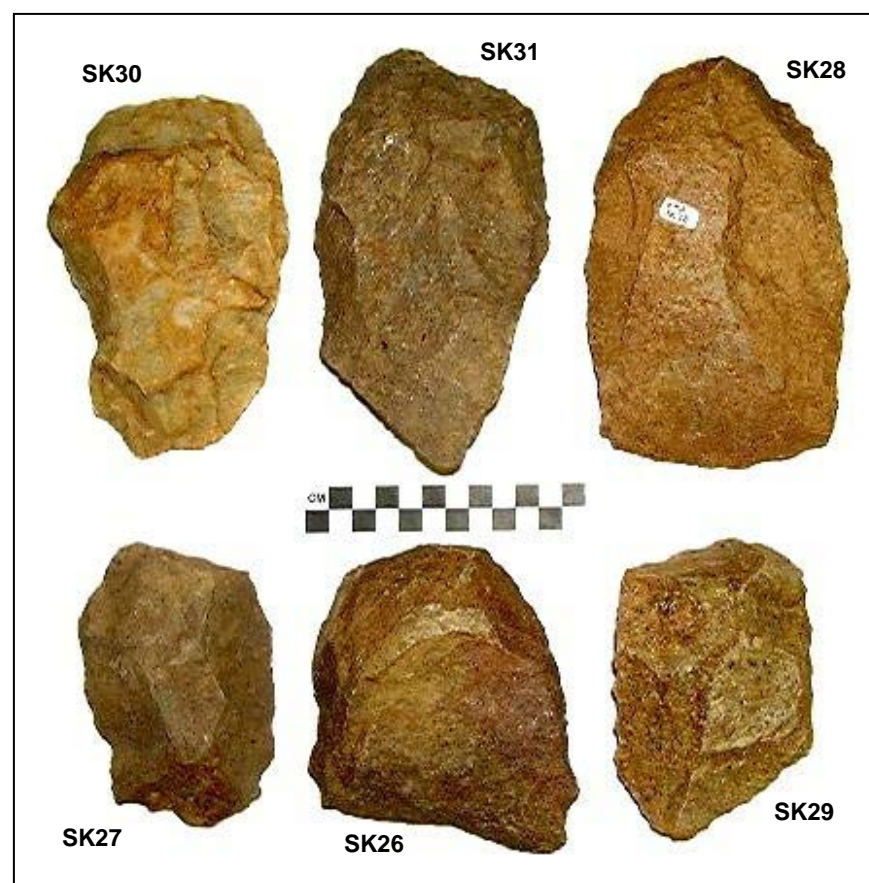


FIGURE 7: CLEAVERS



FIGURE 8: KNIVES



FIGURE 9: DISCOIDAL CHOPPERS



## Appendix A

SPECIMEN	TYPE	STYLE	RAW MATERIAL	PRIMARY FORM	LENGTH	BREADTH	HEIGHT	FLAKING	COMMENT
KMA/SK01	hand axe	classic, large	quartzite	indeterminate	160/170	93	52	sub-invasive	tip broken
KMA/SK02	hand axe	classic, large	quartzite	cobble	180/195	115	57	sub-invasive	tip broken
KMA/SK03	hand axe	classic, large	quartzite	indeterminate	145	75	40	invasive	
KMA/SK04	hand axe	classic, large	meta volcanic	indeterminate	175	90	60	sub-invasive	
KMA/SK05	hand axe	classic, small	quartzite	indeterminate	120	78	35	invasive	
KMA/SK06	hand axe	classic, small	quartzite	corner struck flake	110	68	37	sub-invasive	
KMA/SK07	hand axe	classic, small	quartzite	side struck flake	98/112	68	30	invasive	tip broken
KMA/SK08	hand axe	classic, small	silcrete	indeterminate	100	55	27	invasive	
KMA/SK09	hand axe	classic, small	silcrete	indeterminate	94/120	63	35	invasive	tip broken
KMA/SK10	hand axe	sub-classic, small	silcrete	corner struck flake	105/123	66	32	?	tip broken
KMA/SK11	hand axe	sub-classic, small	banded	indeterminate	114	63	32	sub-invasive	untrimmed butt
KMA/SK12	hand axe	sub-classic	quartzite	cobble	145	85	54	?	
KMA/SK13	hand axe	sub-classic	quartzite	end struck flake	185	115	60	?	
KMA/SK14	hand axe	sub-classic	quartzite	cobble	156	102	60	invasive	
KMA/SK15	hand axe	sub-classic	quartzite	corner struck	130/150	77	46	?	tip broken
KMA/SK16	hand axe	sub-classic, pick-like	quartzite	cobble	128	96	35	marginal	
KMA/SK17	hand axe	sub-classic, pick-like	quartzite	cobble flake	128	105	55	sub-invasive	
KMA/SK18	hand axe	sub-classic, pick-like	silcrete?	side struck flake	111	82	52	sub-invasive	
KMA/SK19	hand axe	sub-classic, pick-like	silcrete	end struck flake	123	93	55	invasive at tip	
KMA/SK20	hand axe	sub-classic, pick-like	silcrete?	indeterminate	125	95	57	invasive	
KMA/SK21	hand axe	sub-classic, pick-like	quartzite	cobble	140	90	48	marginal	unifacial
KMA/SK22	hand axe	sub-classic, pick-like	quartzite	indeterminate	130	75	40	sub-invasive	
KMA/SK23	hand axe	sub-classic, pick-like	silcrete	indeterminate	155	88	48	invasive at tip	
KMA/SK24	hand axe	sub-classic, pick-like	silcrete	cobble?	145	80	56	marginal	rounded tip
KMA/SK36A	hand axe	sub-classic, pick-like	quartzite	cobble	170/198	115	63	sub-invasive	broken into 2 pieces 36A/1, 36A/2
KMA/SK36B	hand axe	sub-classic, pick-like	quartzite	cobble	150	120	51	?	broken into 2 pieces 36B/1, 36B/2
KMA/SK25	cleaver	parallel, convergent, straight	quartzite	indeterminate	111	80	42	marginal	dorsal and ventral
KMA/SK26	cleaver	parallel, oblique	quartzite	end struck flake	135	110	55	sub-invasive	ventral scars
KMA/SK27	cleaver	parallel, oblique	silcrete	side struck flake	125	80	48	sub-invasive	dorsal scars
KMA/SK28	cleaver	parallel, straight	quartzite	side struck flake	177	114	54	marginal	mostly dorsal scars
KMA/SK29	cleaver	parallel, oblique	quartzite	side struck flake	130	88	47	marginal	mostly dorsal scars
KMA/SK30	cleaver	parallel, convergent, straight	quartzite	indeterminate	156	115	47	sub-invasive	dorsal and ventral
KMA/SK31	cleaver	parallel, oblique	silcrete	side struck flake	187	101	55	marginal	mostly dorsal scars
KMA/SK32	pick		silcrete	cobble	165	85	63		
KMA/SK33	pick		silcrete	indeterminate	135	80	60		
KMA/SK34	pick	small	quartz	indeterminate	89	50	45		ventral scars
KMA/SK35	pick		silcrete	indeterminate	124	87	45		
KMA/SK37	knife		silcrete	indeterminate	111	100	45		
KMA/SK38	knife		silcrete	indeterminate	185	100	65		
KMA/SK39	knife		silcrete	corner struck flake	137	105	55		
KMA/SK40	knife		quartzite	cobble?	158	90	52		
KMA/SK41	knife		quartzite	indeterminate	130	80	62		
KMA/SK42	core-like biface		silcrete	indeterminate	146	88	66		
KMA/SK43	core-like biface		quartzite	indeterminate	125	75	56		
KMA/SK44	core-like biface		silcrete	side struck flake	145	105	67		
KMA/SK45	hammerstone		quartzite	cobble	105	74	60		
KMA/SK46	hammerstone		quartzite	cobble	120	70	46		

SPECIMEN	TYPE	STYLE	RAW MATERIAL	PRIMARY FORM	LENGTH	BREADTH	HEIGHT	FLAKING	COMMENT
KMA/SK47	discoidal chopper		silcrete	indeterminate	135	111	72		
KMA/SK48	discoidal chopper		quartzite	indeterminate	120	98	59		
KMA/SK49	retouched flake	bifacial	quartzite	cobble	98	80			broken cobble chopper
KMA/SK50	retouched flake	MSA?			70	48			tri-angular, edge retouch
KMA/SK51	retouched blade		ccs						broken, ventral side and dorsal edge opposite bulb retouched.
KMA/SK52	retouched flake		quartzite		133	65			edge retouch
KMA/SK53	retouched flake		silcrete		140	83			edge retouch
KMA/SK54	blade		silcrete		105	37			no retouch
KMA/SK55	blade		silcrete		80?	30			broken, no retouch
KMA/SK56	blade		quartz		35?	25			broken, no retouch
KMA/SK57	flake		quartzite						
KMA/SK58	flake		ferricrete						
KMA/SK59	flake		quartzite						
KMA/SK60	flake		silcrete						
KMA/SK61	flake		silcrete						
KMA/SK62	flake		silcrete						
KMA/SK63	flake		quartzite						
KMA/SK64	flake		silcrete						
KMA/SK65	flake		quartzite						
KMA/SK66	flake		silcrete						
KMA/SK67	flake		silcrete						
KMA/SK68	flake		silcrete						
KMA/SK69	flake		quartzite						
KMA/SK70	flake		meta volcanic						
KMA/SK71	flake		silcrete						
KMA/SK72	flake		silcrete						
KMA/SK73	flake		silcrete						
KMA/SK77	flake		quartzite						refits to 86, 74
KMA/SK86	flake		quartzite						refits to 77, 74
KMA/SK74	casual core		quartzite						refits to 86, 77
KMA/SK75	casual core		silcrete						
KMA/SK76	casual core		silcrete						
KMA/SK78	casual core		quartz						
KMA/SK79	casual core		silcrete						
KMA/SK79a	casual core		quartzie						
KMA/SK82	casual core		silcrete						
KMA/SK83	casual core		silcrete						
KMA/SK90	regular core	small	silcrete		85	58	40		
KMA/SK91	irregular core	small	quartzite		45	41	34		
KMA/SK80	chunk		quartzite						
KMA/SK81	chunk		shale						
KMA/SK84	chunk		silcrete						
KMA/SK85	chunk		quartzite						
KMA/SK87	chunk		quartz						
KMA/SK88	chunk		quartz						
KMA/SK89	chunk		shale						

