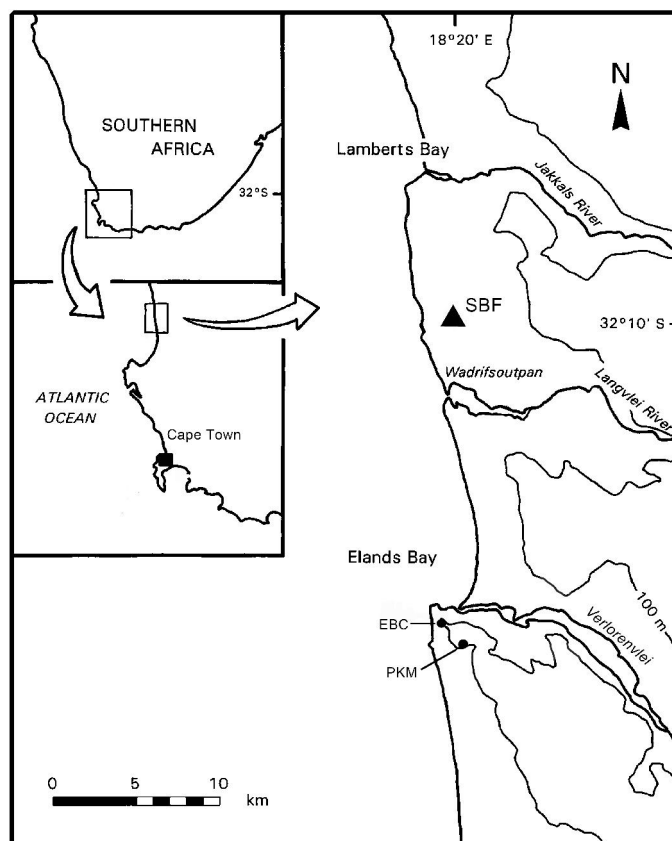


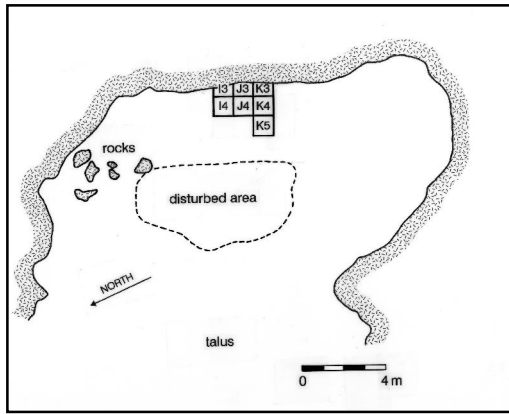
## 9.2: Site description

Steenbokfontein Cave (SBF) is a rock shelter situated in a large rock outcrop on the coastal margin of the Sandveld about 8 km south from Lamberts Bay (Fig. 1). SBF is oriented WNW and overlooks reefs and beaches 1.8 km distant. The mouth of this shelter is 19 m wide, has a recess of 9 m deep and a domed ceiling of 7 m high at its mouth. Several rock paintings are found in SBF. The surrounding vegetation is a mixture of coastal fynbos and karroid shrub vegetation, with rainfall on average not exceeding 120 mm.

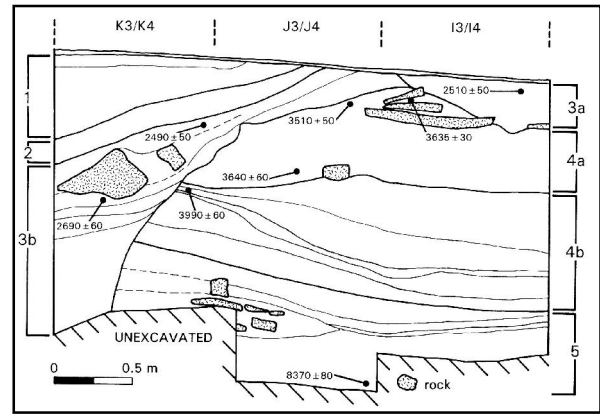


**Figure 1:** geographic location of Steenbokfontein Cave (SBF) and selected other sites for reference; Elands Bay Cave (EBC), Pancho's Kitchen Midden (PKM)

Several excavation seasons took place between 1992 and 1997, the results of which have been published over the years (Jerardino, 1999, 2001, 2010, 2013; Jerardino & Swanepoel, 1999; Jerardino & Yates, 1996; Jerardino *et al.*, 2000, 2008, 2013; Yates & Jerardino, 1996). Close to 8 m<sup>3</sup> have been removed from seven squares (Fig. 2) and to a maximum depth of about 1.8 m below the surface of the cave floor in square J3 (Fig. 3). Bed rock has not been reached. Fourteen radiocarbon dates show that SBF was visited between 2200 and 8400 years BP, although earlier (and yet undated) occupation spanning several millennia is evident from the large and remaining unexcavated deposit.



**Figure 2:** Plan view of Steenbokfontein Cave



**Figure 3:** Steenbokfontein Cave stratigraphy

### 9.3 & 9.4: Project description and its visual documentation

There are two specific project proposals related to this permit application:

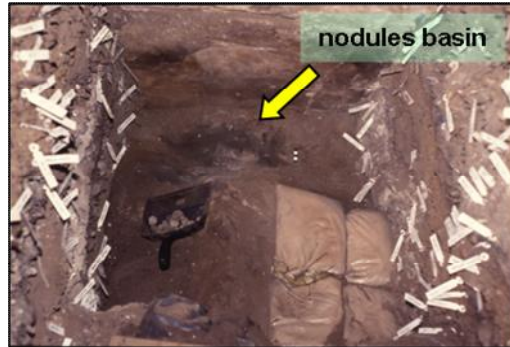
#### **Project Proposal A)**

Material culture in SBF is abundant and diverse (lithics and organic artefacts such as bone tools and beads, worked ostrich eggshells [OES], worked marine shell, twine and cordage ...etc). This is partly the result of a wide range of every day domestic tasks having been undertaken there and other activities more commonly pursued during aggregation phases (Jerardino, 1996). Moreover, conditions conducive to good preservation of archaeological remains characterise the depositional environment at this site (dry and moderate alkaline environment). A report and discussion of the entire SBF flaked stone collection was published recently (Jerardino, 2013), and a large part of the non-lithic artefacts were described in a PhD thesis (Jerardino, 1996). The aim is now to publish observations on this latter material.

Apart from the bone and OES artefacts and twine/ cordage assemblages found throughout excavations, a set of what seems to be human-made nodules were recovered from square K3 (Jerardino, 1996). The maximum diameter of these close to regular spheres or oval balls ranges between 11 and 32 mm, and a few of them show what might be finger press marks from their manufacture (Fig. 3a). However, this is yet to be confirmed with further and detailed studies. Thirty one such objects were found in a small basin (approximately 250 mm in diameter and 70 mm deep) situated 150 mm below a shell lens dated to c. 4000 BP (Fig. 3b). Another fifteen nodules were found in stratigraphic units immediately adjacent to and beneath this small basin. The latter findings is probably the result of a truncation dating to c. 3000 BP (Jerardino & Yates, 1996) that disturbed the edges of this feature, scattering some of the nodules outside the basin. It is very likely that all of them were purposefully placed in the small basin, perhaps as a kind of cache. Although other caches or cache-like features (i.e., OES water flasks, tortoise burials, small stone projectile points) have been described elsewhere in the South African archaeological literature (i.e., Jerardino et al., 2009; Orton, 2012; Wadley, 1987), no other examples of what could be human-made nodules appear to have been encountered before in southern African pre-colonial archaeological sites.



**Figure 4a:** examples of a variety of human-made nodules from Steenbokfontein Cave (scan of photo taken Oct. 1995)



**Figure 4b:** photo of shallow basin in square K3 where most of the nodules were found (nodules in pan) (scan of slide taken Dec. 1992)

Preliminary analyses on the composition of these nodules identified aeolian sand grains as the main component, traces of red pigment, and a third as yet unidentified possible colloidal material (Miller personal communication, 1993). These results appear to confirm initial observations of these nodules being the result of human manufacture, as no natural occurrences match their description and composition. However, more and detailed analyses are needed to characterise these specimens before human agency in the manufacture is concluded.

Consequently, the objective of this project is to conduct further analyses in order to ascertain the composition of these unique finds adequately and in this way shed some light into their origin and/or manufacture and possibly also purpose. It is also important to know whether all of these nodules have been made of the same material or not. Hence, aside of the nodule already studied in 1993 (Figs. 4a & 4b), three other such objects have been set aside for analyses (Fig. 5a & 5b).



**Figure 5a:** Previously sampled human-made nodule (half and a quarter) from Steenbokfontein Cave (view of outer surface; photo March 2014)



**Figure 5b:** Previously sampled human-made nodule (half and a quarter) from Steenbokfontein Cave (view of inner layers; photo March 2014)

The criteria behind the selection of the three additional nodules considered variability in terms of their size (large and small) and relative shape (from nearly round to irregular). Unique nodule types, such as the largest of all and others that appear to be the blend of at least two initial nodules, were not chosen for the purpose of this study. A thorough photographic record for each of the three chosen nodules will be established before they are sampled (estimated not to exceed 25% of the total amount of each nodule).

## Project Proposal B)

At least seventeen categories of SBF mammal taxa have been identified to mostly species and genus level by Richard Klein (Stanford University) (Jerardino, 2010; Jerardino et al., 2013). This vertebrate assemblage is dominated by small bovids (*Raphicerus campestris* and *Sylvicapra grimmia*) and small-medium bovids (generally unidentified to species level), followed by Cape fur seal (*Arctocephalus pusillus*) and rock hyrax (*Procavia capensis*). Dune mole rats (*Bathyergus suillus*), hares (*Lepus* spp.) and small carnivores (i.e., grey mongoose, *Herpestes pulverulentus*) as well as other small mammals make much smaller contributions (Table 1).

		Layers															
		Surface		1		2		3A		3B		4A		4B		5	
Linnaean Names	Vernacular Names	NISP	MNI	NISP	MNI	NISP	MNI	NISP	MNI	NISP	MNI	NISP	MNI	NISP	MNI	NISP	MNI
<i>Lepus</i> spp.	hares	2	2	3	1	1	1			9	1	3	1	22	2	6	2
<i>Bathyergus suillus</i>	Cape dune mole rat			13	2	8	1			12	2	2	2	22	3	11	1
<i>Hystrix africaeaustralis</i>	porcupine													1	1	1	1
<i>Canis mesomelas</i>	black-backed jackal			2	1			3	2					1	1	1	1
<i>Ictonyx striatus</i>	striped polecat													1	1	1	1
<i>Herpestes pulverulentus</i>	gray mongoose	3	1									4	2	4	1		
<i>Herpestes ichheumon</i>	Egyptian mongoose													1	1		
	indet. small viverrid			1	1												
<i>Felis libyca</i>	wildcat									2	1	5	1	4	1	4	1
<i>Felis caracal aut serval</i>	caracal or serval							4	1					1	1		
<i>Arctocephalus pusillus</i>	Cape fur seal			52	3	1	1	2	1	19	2	12	1	40	3	17	2
<i>Procavia capensis</i>	rock hyrax	5	1	15	2	2	1	4	2	6	1	20	4	47	4	19	2
<i>Orycteropus afer</i>	aardvark													4	1		
<i>Raphicerus campestris</i>	steenbok	7	3	11	2	8	2	8	3	23	4	58	8	75	9	27	4
<i>Sylvicapra grimmia</i>	gray duiker			5	3	1	1	5	2	4	1	6	2	2	1	1	1
<i>Ovis aries</i>	sheep	1	1	1	1	1	1										
<i>Bos taurus</i>	cattle	1	1														
	Small bovid(s)	20	3	148	4	46	4	101	6	215	5	699	20	903	29	284	8
	Small-medium bovid(s)	1	1	21	3	3	1	12	2	13	1	34	2	25	3	3	1
	Large-medium bovid(s)			2	1			4	1	1	1	2	1	5	1	2	1
	Large bovid(s)	1	1	1	1					3	1	17	1	41	2	3	1

**Table 1:** Number of identified specimens/ minimum number of individuals of large mammal species at Steenbokfontein Cave (faunal analyst: Richard Klein).

Domestic sheep (*Ovis aries*) was identified on surface material (stratigraphic unit “LSD0”) and in Layer 1 (stratigraphic unit “ST00”) and Layer 2 (stratigraphic unit “PBB0”) (see Table 2; Figs 6–8). Species identification in all three cases is based on teeth, which supports its reliability. According to R. Klein, all teeth could come from the same individual, but this is yet to be ascertained. As reflected in Table 2, the associated ages of SBF domestic sheep teeth (on charcoal) are one to two centuries older than the earliest and directly AMS-dated domestic sheep from Spoeg River Cave (2105 ± 65 BP, OxA-3862) on the west coast of South Africa (Sealy & Yates, 1994; Webley, 2007). It is possible that all three teeth are intrusions from post-2000 BP deposits that were removed along with older material from the cave as reflected by the angle at which pre-2000 BP strata meet the present surface of the cave (Fig. 3). It is also possible that the three teeth are even more recent additions after the cave floor was razed/ levelled to its present state. Alternatively, it is also possible that the teeth from units LSD0 and ST00 are as old as Spoeg River Cave specimen. If the latter is the case, the tooth from PBB0 may be an intrusion from LSD0 or ST00 stratigraphic units.

Layer	Strat. unit & (square)	Material dated	Tooth type	Uncal yrs BP	Cal yrs BP (1σ)	Cal yrs BP (2σ)	Pta lab. Number
Surface	LSD0 (K4)	-	Upper Left M1	undated	-	-	-
1	ST00 (K4)	charcoal	Upper Left dP3	2200 ± 60	2301–2011	2326–1991	6136
2	PBB0 (K5)	bone	Upper Right dP3	2360 ± 45	2356–2183	2460–2153	6498

**Table 2:** Age and stratigraphic context of Steenbokfontein Cave sheep (*Ovis aries*) remains



**Figure 6a:** Upper Left M1 sheep tooth (external view), unit LSD0, square K4 (photo: 31/03/2014)



**Figure 6b:** Upper Left M1 sheep tooth (internal view), unit LSD0, square K4 (photo: 31/03/2014)



**Figure 6c:** Upper Left M1 sheep tooth (top view), unit LSD0, square K4, (photo: 01/04/2014)

Consequently, the specific objective of project proposal **B**) of this permit application is to AMS date one tooth (ST00, square K4: Upper Left dP3) initially, and then doing so again with a second tooth (PBB0, square K5: Upper Right dP3) if the first sample dates to the first millennium AD (c. 2000 BP). It is estimated that a maximum of 1 gram of tooth sample is needed for each AMS date. Funding for this purpose is being sought from local Spanish Government funding sources. Collaboration with a commercial dating laboratory with an active research agenda (i.e., Oxford Radiocarbon Accelerator Unit, or the Center for Applied Isotope Studies at the University of Georgia) is also being considered. Depending on the initial dating results, genetic studies (DNA extraction and genetic sequencing) are to be conducted on SBF teeth in order to confirm (or not) archaeozoological species identification (see Orton et al., 2013: Supplementary Material). A maximum of 5 grams of tooth sample would be needed for these later studies.

Before samples are submitted to an AMS dating laboratory, teeth are to be measured and photographed in order to establish a full record of their size and shape prior to their sampling and partial destruction.



**Figure 7a:** Upper Left dP3 sheep tooth (external view), unit ST00, square K4 (photo: 31/03/2014)



**Figure 7b:** Upper Left dP3 sheep tooth (internal view), unit ST00, square K4 (photo: 31/03/2014)



**Figure 7c:** Upper Left dP3 sheep tooth (top view), (external view), unit ST00, square K4, (photo: 31/03/2014)



**Figure 8a:** Upper Right dP3 sheep tooth (external view), unit PBB, square K5 (photo: 31/03/2014)



**Figure 8b:** Upper Right dP3 sheep tooth (internal view), unit PBB, square K5 (photo: 31/03/2014)



**Figure 8c:** Upper Right dp3 sheep tooth (top view), unit PBB, square K5, (photo: 31/03/2014)

### **9.5: Details and outcome of previous submissions made to the former National Monuments Council (NMC) in respect to this application.**

The applicant obtained three permits from the National Monuments Council between 1992 and 2001, the first of which was signed on 24<sup>th</sup> September 1992 showing a reference number (9/2/022/9) but no permit number. The second permit was signed on 8<sup>th</sup> January 1996, showed the same reference number and included a permit number (No. 8/96/01/006/51). The third excavation permit was signed 10<sup>th</sup> March 1998, showed the same reference number as the other two but displayed a different permit number (80/98/03/001/51). These permits were issued under section 12(4) of the National Monuments Act (Act No. 28 of 1969, as amended) and were issued for the purpose of “excavation and removal of archaeological finds”. The destruction of archaeological finds for the purpose of scientific analyses (i.e., radiocarbon dating) is not explicitly stated in these earlier permits. Copies of these NMC permits are attached as Appendix 1–3.



#### **Bibliography:**

- Jerardino, A. 1996. *Changing Social Landscapes of the Western Cape Coast of Southern Africa over the Last 4500 Years*. PhD dissertation. Cape Town: University of Cape Town.
- Jerardino, A. 1999. A first account of fat-tailed sheep in the rock paintings of the Western Cape coast, South Africa. *South African Archaeological Bulletin* 54: 64-66.
- Jerardino, A. 2001. Diversity in mastic-mounted stone adzes and the use of mastic in precolonial southern Africa. *Antiquity* 75: 859-866.
- Jerardino, A. 2010. Large shell middens in Lamberts Bay, South Africa: a case of hunter-gatherer resource intensification. *Journal of Archaeological Science* 37: 2291-2302.
- Jerardino, A. 2013. Two complementary West Coast Holocene lithic assemblages from Elands Bay and Lamberts Bay: implications for local changes in tool kit and group mobility. *South African Archaeological Bulletin* 68 (198): 188-199.


- Jerardino, A. & Swanepoel, N. 1999. Painted slabs from Steenbokfontein Cave: the oldest known parietal art in southern Africa. *Current Anthropology* 40: 542-548.
- Jerardino, A. & Yates, R. 1996. Preliminary results from excavations at Steenbokfontein Cave: implications for past and future research. *South African Archaeological Bulletin* 51: 7-16.
- Jerardino, A., Branch, G. M. & Navarro, R. 2008. Human Impact on precolonial West Coast marine environments of South Africa. In: *Human Impacts on Marine Environments: A Global Perspective*, Rick, T. C. & Erlandson, J. M. (Eds), Berkeley: University of California Press (pp: 279-296).
- Jerardino, A., Horwitz, L. K., Mazel, A. & Navarro, R. 2009. Just Before Van Riebeck: Glimpses into terminal LSA lifestyle at Connies Limpet Bar, West Coast of South Africa, *South African Archaeological Bulletin* 64(189): 75-86.
- Jerardino, A., Klein, R. G., Navarro, R., Orton, J. & Horwitz, L. K. 2013. Settlement and subsistence patterns since the terminal Pleistocene in the Elands Bay and Lamberts Bay areas. In: *The Archaeology of the West Coast of South Africa*, Jerardino, A., Malan, A. & Braun, D. (Eds). Oxford: Archaeopress (pp: 85-108).
- Jerardino, A., Sealy, J. & Pfeiffer, S. 2000. An infant burial from Steenbokfontein Cave, west coast, South Africa: its archaeological, nutritional and anatomical context. *South African Archaeological Bulletin* 55: 44-48.
- Sealy, J.C. & Yates, R., 1994. The chronology of the introduction of pastoralism to the Cape, South Africa. *Antiquity* 68: 58-67.
- Orton, J. 2012. Tortoise burials in Namaqualand: uncovering ritual behaviour on South Africa's west coast. *Azania: Archaeological Research in Africa* 47(1): 99-114.
- Orton, J., Mitchell, P., Klein, R., Steele, T., Horsburgh, K.A., 2013. An early date for cattle from Namaqualand, South Africa: implications for the origins of herding in southern Africa. *Antiquity* 87: 108-120.
- Wadley, L. 1987. Later Stone Age hunters and gatherers of the southern Transvaal: social and ecological interpretation. Oxford: British Archaeological Reports International Series 380.
- Webley, L., 2007. Archaeological evidence for pastoralist land-use and settlement in Namaqualand over the last 2000 years. *Journal of Arid Environments* 70, 629-640.
- Yates, R. & Jerardino, A. 1996. A fortuitous fall: an early set of rock wall paintings from the west coast of South Africa. *South African Journal of Science* 92: 110.



**Appendix 1:** Permit issued in September 1992 by the National Monuments Council for the purpose of excavations at Steenbokfontein Cave (1992 - 1995)

<b>NATIONAL MONUMENTS COUNCIL</b> <b>RAADVIR NATIONALE GEDENKWAARDIGHED</b>		<small>Telephone: (021) 22-0474 Fax: (021) 22-1992 Telegrams: TENEED PO Box 4837 (Postal Address) Cape Town 8000 127 Bree Street Cape Town 8001  Telefoon: (021) 22-0474 Faks: (021) 22-1992 Telegramme: TENEED Postbus 4837 (Postadres) Kaapstad 8000 Breedstraat 127 Kaapstad 8001</small>
Ref./Verwys: <b>9/2/022/9</b>		
Your Ref.: U-Verwys:	Enquiries / Navrae: <b>PERMIT</b>	
<b>Issued under Section 12(4) of the National Monuments Act (Act No. 28 of 1969, as amended). Permission is hereby given</b>		
to:	<b>Ms A. Jerardino</b>	
of:	<b>the Department of Archaeology, University of Cape Town, Rondebosch, 7700,</b>	
for:	<b>the excavation of a rock shelter on the farm Steenbokfontein</b>	
at:	<b>approximately 32.10S, 18.19E</b>	
in:	<b>the Piketberg District, Cape Province.</b>	
<b>The following conditions apply:</b>		
1.	Adequate recording methods must be employed, the position of all excavations must be marked on a plan of the site and the position of the site must be marked on a 1:50,000 map.	
2.	A standard site recording form must be lodged with the Archaeological Data Recording Centre, South African Museum, Cape Town.	
3.	All collections become the property of and must be catalogued and lodged with the Department of Archaeology, University of Cape Town.	
4.	Preliminary reports are due annually from 1 October 1993 for the period for which the permit is given and a final report is due on or before 1 October 1996.	
5.	Reprints of all papers resulting from this work must be lodged with the NMC.	
6.	Unless a published report has appeared within three years of the lapsing of this permit, the report required in terms of the permit will be made available to researchers on request.	
7.	It is the responsibility of the permit holder to obtain permission from the landowner for each visit and conditions of access imposed by the landowner must be observed.	
8.	It is the responsibility of the permit holder to fill in excavations and protect sites during and after excavation to the satisfaction of the NMC and the landowner.	
9.	The NMC shall not be liable for any losses, damages or injuries to persons or properties as a result of any activities in connection with this permit.	
<b>This permit is valid for three years until 1 October 1995.</b>		
for <b>DIRECTOR</b> _____ 		
Date: <b>24 September 1992</b>		Place: <b>Cape Town</b>
<small>OMMEKOR ALLE OORSPRONKELIKE SAKE DIE DIREKTEUR TE SIEN IN DIE VERVAARDIGINGSOMMER IE WILS. PLEASE ADDRESS ALL CORRESPONDENCE TO THE DIRECTOR AND QUOTE THE REFERENCE NUMBER.</small>		

**Appendix 2:** Permit issued in October 1995 by the National Monuments Council for the purpose of excavations at Steenbokfontein Cave (1995 - 1999)

  
RAAD VIR NATIONALE GEDENKWAARDIGHED E / NATIONAL MONUMENTS COUNCIL

No. 8/96/01/006/51

**PERMIT**

**No. 8/96/01/006/51**


Issued under Section 12(4) of the National Monuments Act (Act No. 28 of 1969, as amended).  
Permission is hereby given

to: Ms Antonietta Jerardino  
of: the Department of Archaeology, University of Cape Town, Rondebosch, 7700,  
for: the excavation of a rock shelter on the farm Steenbokfontein  
at: approximately 32.10S, 18.19E  
in: the Clanwilliam District, Western Cape Province.

**The following conditions apply:**


1. Adequate recording methods as specified in the By-laws pertaining to the National Monuments Act must be employed and the position of all excavations must be marked on a plan of the site.
2. A standard site record form must be lodged with the South African Museum.
3. All material collected and excavated becomes the property of and must be accessioned, catalogued and lodged with the Department of Archaeology, University of Cape Town.
4. A progress report must be submitted to the NMC annually on or before 1 January and a final report is due on or before 1 January 1999.
5. Reprints of all published papers resulting from this work must be lodged with the NMC.
6. Unless a published report has appeared within three years of the lapsing of this permit, the report required in terms of the permit will be made available to researchers on request.
7. It is the responsibility of the permit holder to obtain permission from the landowner for each visit and conditions of access imposed by the landowner must be observed.
8. It is the responsibility of the permit holder to fill in excavations and protect sites during and after excavation to the satisfaction of the NMC and the landowner.
9. The NMC shall not be liable for any losses, damages or injuries to persons or properties as a result of any activities in connection with this permit.

This permit has been issued retrospectively from 1 October 1995 and is valid until 1 January 1999.

for DIRECTOR   
Date: 8 January 1996 Place: Cape Town

(21)

**Appendix 3:** Permit issued in September 1992 by the National Monuments Council for the purpose of excavations at Steenbokfontein Cave (1998 - 2001)



RAAD VIR NATIONALE GEDENKWAARDIGHEDE - NATIONAL MONUMENTS COUNCIL

HARRINGTONSTRAAT 111 KAAPSTAD 111 HARRINGTON STREET CAPE TOWN  
 POSADRES POSTAL ADDRESS  
 POBUS 4637 KAAPSTAD 6000 PO BOX 4637 CAPE TOWN 6000  
 TELEFOON (021) 462 4502 TELEPHONE (021) 462 4502  
 FAKS (021) 462 4509 FAX (021) 462 4509

ONS VIER OUKEREF **920229**

U'CHER' SOKEREF

NAARSE ENQUIRIES

**PERMIT**  
No. 80/98/03/001/51

ISSUED UNDER

issued under Section 12(4) of the National Monuments Act (Act No. 28 of 1969, as amended).  
 Permission is hereby given

to: Dr Antonieta Jerardino  
 of: the Department of Archaeology, University of Cape Town, Rondebosch, 7700,  
 for: the excavation and removal of archaeological finds from a shell midden on the  
 farm Steenbokfontein  
 at: at approximately 32.10S, 18.18.44E,  
 in: the Clanwilliam District, Western Cape Province.

**The following conditions apply:**

1. Adequate recording methods as specified in the By-laws pertaining to the National Monuments Act must be used. Note that the position of all excavations and objects collected must be marked on a plan of the site.
2. A standard site record form must be lodged with the South African Museum.
3. All artefacts and associated materials collected become the property of and must be accessioned and catalogued at the Department of Archaeology, University of Cape Town, until such time as the analysis is completed and they are transferred to the South African Museum for permanent curation.
4. A report on activities connected with this permit must be submitted to the NMC annually on or before 1 March, 1999, 2000 and 2001 and a final report is due on or before 1 March 2002.
5. Reprints of all published papers, or copies of theses or reports resulting from this work must be lodged with the NMC.
6. If a published report has not appeared within three years of the lapsing of this permit, the report required will be made available to researchers on request.
7. It is the responsibility of the permit holder to obtain permission from the landowner for each visit and conditions of access imposed by the landowner must be observed.
8. It is the responsibility of the permit holder to fill in excavations and protect sites during and after excavation to the satisfaction of the NMC and the landowner.
9. The NMC shall not be liable for any losses, damages or injuries to persons or properties as a result of any activities in connection with this permit.
10. The NMC reserves the right to cancel this permit upon notice to the permit holder.

This permit is valid until 1 March 2001

for DIRECTOR ..... *J. De la...*

Date: 10 March 1998 Place: Cape Town

GELIEFTE ALLE BRIEFWISSELING AAN DIE DIREKTEUR TE RIG EN DIE VERWYSINGSNOMMER TE MELD  
 PLEASE ADDRESS ALL CORRESPONDENCE TO THE DIRECTOR AND QUOTE THE REFERENCE NUMBER

