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REVISED PROJECT PROPOSAL

For the Scientific and Project Management Content of Stabilization of Archaeological Sites

PREPARED BY:

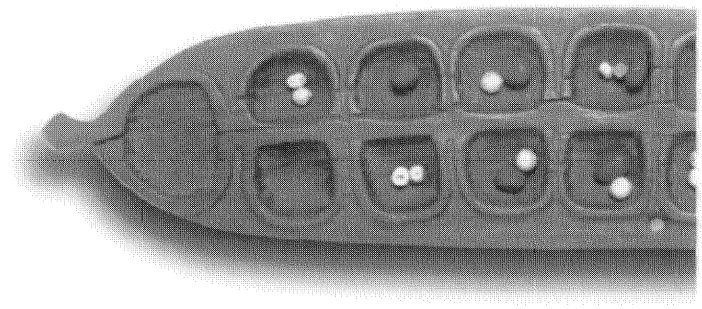
WC Nienaber

- Business Enterprises at University of Pretoria (Pty) Ltd
- Anthropology Private Practice (APP)

PREPARED FOR:

MAPUNGUBWE NATIONAL PARK
PHASE IV OF REHABILITATION THROUGH
POVERTY ALLEVIATION FUNDING

JANUARY 2006



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This Project Proposal implements the recommendations: Mapungubwe National Park Phase IV of Rehabilitation through Poverty Alleviation funding. Recommendations on stabilization of archaeological sites, compiled by a sub-committee of the Mapungubwe National Park Archaeological Task Group, October 2004, with regards to the scientific and project management content of the project.

1. INTRODUCTION

The stabilization of archaeological sites in the Mapungubwe National Park by means of Poverty Alleviation funding has been ongoing since 2001. Three Phases of stabilization, coupled to rounds of funding, has been completed. These efforts have secured the main archaeological sites against erosion threat. As part of the utilization of a next round of funding for rehabilitation some of the other sites, imminently threatened by erosion, as well as minor additional and maintenance work at the main sites is required.

2. SCOPE OF WORK

(Refer: Mapungubwe National Park Phase IV of Rehabilitation through Poverty Alleviation funding. Recommendations on stabilization of archaeological sites, compiled by a sub-committee of the Mapungubwe National Park Archaeological Task Group, October 2003).

2.1 REHABILITATION OF SPECIFIC LOCATIONS

2.1.a. Schroda

Location: S 22°11.021' E029°25.595' (Refer Fig. 1).

i. Remove old power line pylon anchors along old road.
ii. Rehabilitate old road route (±800m) with topsoil.
iii. Rehabilitate two erosion ditches running from south to north and ending in the old road.
iv. Remove rubbish on site and in vicinity.
v. Rehabilitate extensive erosion of "Area 6" locality:
    a. Improve present gabion to slow down water flow from up-slope.
    b. Channel water flow along existing erosion ditches around site after ditches have been stabilized (Fig. 2 & 3).
    c. Stabilize archaeological deposits (Fig. 2 & 3).
    d. Document the profiles of archaeological deposits exposed by erosion (Fig. 2 & 3).
    e. Map exposed archaeological deposits, stabilization measures and indicate profile drawings done with reference to existing site maps.
    f. Recreate original site surface of "Area 6" by means of returning archaeological dump material to old excavation.
    g. Screen and recover significant and diagnostic materials from all materials used.

2.1.b. K2

Location: S 22°13.032' E029°22.853' (Refer Figure 1).

i. Backfill space around, and fill and landscape roof of K2 interpretation structure with old dump material to recreate original surface. Screen and recover significant and diagnostic materials from dump materials used (Fig. 4).

ii. Repair Gardner 1939 excavation eastern wall stabilization measures damaged by contractor.
iii. Establish rock paved water flow off channel from Gardner test trench through main midden and repair and improve damaged stabilization measures currently in place (Fig. 5).
iv. Stabilize all exposed archaeological deposits on southern slope of Bambandyanalo hill and place measures to prevent erosion, especially in the vicinity of old excavations (TS (1934), TS2 (1972), D4 (1993), Rn1 (1972), TS1 (1972) and structures on the slope (Fig. 6).
v. Repair and improve erosion control measures in place in *donga* that formed along excavation TS2 of 1935, and down slope from there (Fig 7).
vi. Document the profiles of archaeological deposits exposed by erosion.
vii. Map exposed archaeological deposits, stabilization measures and indicate profile drawings done with reference to existing site maps.
viii. Screen and recover significant and diagnostic materials from all materials used.

2.1.c. Mapungubwe

Location: S 22°12.694′ E029°23.279′ (Refer Fig. 1)

i. Revisit access route path and repair and improve water drainage and flow off from path.
ii. Improve stabilization measures in place in the north-western corner of JS2(b) by adding additional sandbags and rocks.
iii. Pave total northern wall and north-western corner of JS2(b) with sandstone slabs from a suitable source.
iv. Improve stabilization measures placed by Meyer in 1999 in erosion *donga* south of JS1 and pave embankments with suitable sandstone slabs (Fig. 8).
v. Improve stabilization measures in place in the north-western corner of Gardner's 1938/39 "Great Depression" excavation by adding additional sandbags and rocks.
vi. Pave north-western corner of Gardner's 1938/39 "Great Depression" excavation and adjacent stabilized excavation walls with sandstone slabs from a suitable source.
vii. Improve stabilization measures in place in the south-eastern corner of Gardner's 1938/39 "Great Depression" excavation by adding additional sandbags and rocks.
viii. Pave south-eastern corner of Gardner's 1938/39 "Great Depression" excavation and adjacent stabilized excavation walls with sandstone slabs from a suitable source.
ix. Improve stabilization measures in place on the northern wall of Gardner's 1938/39 "Great Depression" excavation by adding additional sandbags and rocks.
x. Extend compacted gravel landing at top of main ascent staircase to provide more visitor space.

xi. Rehabilitate and stabilize erosion trenches on hill slope terrace at extreme western side of Mapungubwe Hill.
xii. Stabilize, with special attention to stonewalls, the water flow area directly north off JS6. Direct water flow to suitably stabilized water flow off channels (Fig. 9).
xiii. Clean exposed Profile S-P at K8 by brushing with soft brushes.
xiv. Document the profiles of archaeological deposits exposed by erosion.
xv. Map exposed archaeological deposits, stabilization measures and indicate profile drawings done with reference to existing site maps.
xvi. Screen and recover significant and diagnostic materials from all materials used.
xvii. Oversee:
    a) Extension of Mapungubwe main ascent staircase handrail down to landing.
    b) Placement of insect control measures at K8.
    c) Installation of rubber flaps to sliding dome at K8.

2.1.d. Zhizo site on Little Muck

Location: S 22°15.662' E029°16.240' (Refer Fig. 1).

i. Survey donga
ii. Document the profiles of archaeological deposits exposed by erosion.
iii. Map exposed archaeological deposits, stabilization measures and indicate profile drawings done with reference to existing site maps.
iv. Screen and recover significant and diagnostic materials from all materials used.
v. Stabilize all archaeological deposits.
vi. Rehabilitate erosion *donga* by suitable means (Fig. 10).

2.1.e. Meyer's PON5 site on Den Staat

Location: S 22°12.804' E029°13.919' (Refer Fig. 1).

i. Rehabilitate warthog damage to PON5/1 site (Fig. 11).
ii. Survey donga.
iii. Document the profiles of archaeological deposits exposed by erosion.
iv. Map exposed archaeological deposits, stabilization measures and indicate profile drawings done with reference to existing site maps.
v. Screen and recover significant and diagnostic materials from all materials used.
vi. Stabilize all archaeological deposits.
vii. Improve erosion control measures currently in place.

viii. Rehabilitate erosion *donga* by suitable means (Fig. 12).

2.2 GENERAL WORKS

i. Screen all *ex situ* deposits originating from excavation profiles and recover culturally significant objects. Use screened material to stabilize *in situ* deposits as per terms of reference.

ii. Address the cultural complexity of the deposits by suitable rehabilitation and documentation means taking the logistical difficulties of the locality into account.

2.3 RESEARCH

i. Problem oriented research aimed at the interpretation of the sites to be undertaken where the opportunity presents itself during the process of rehabilitating the site. All exposed deposits to be documented before stabilization.

ii. In order to attain the terms of reference and effectively stabilize and conserve the remaining *in situ* cultural deposits within a restricted budget all activities should be prioritized to provide for the documentation of previously unrecorded profiles and structures that answer specific research questions and address inadequacies in current knowledge. Previously documented and studied deposits should be stabilized without exposing them.

iii. It is proposed that researchers with a long-standing research interest in sites included in this project be included in the Project Team as scientific advisors.

2.4 CURATION OF CULTURALLY SIGNIFICANT MATERIALS RECOVERED

i. Prepare all recovered objects for curation and storage by SANParks.

2.5 CAPACITY BUILDING

ii. Involve local labor in interpretative work/documentation/research to entrench the capacity for future rehabilitation and interpretation of archaeological sites.

3. TERMS OF REFERENCE

(Refer: Vhembe/Dongola National Park Archaeological Task Group: Proposed Utilization of Poverty Alleviation Funding: Recommendations: The Conservation and Rehabilitation of Archaeological Sites in the Core Area of the Vhembe/Dongola National Park; Mapungubwe National Park ATG meeting of 2002/08/02; and Mapungubwe National Park Phase IV of Rehabilitation through Poverty Alleviation funding. Recommendations on stabilization of archaeological sites, compiled by a sub-committee of the Mapungubwe National Park Archaeological Task Group, October 2003.

3.1. AIMS OF REHABILITATION

i. The minimization of erosion of archaeological deposits.
ii. The rehabilitation of previously unfilled excavations.
iii. The rehabilitation of the cultural landscape of the sites.
iv. The rerouting of access routes to less sensitive areas of the sites.
v. Enabling access with minimum impact.

3.2. PRINCIPLES OF REHABILITATION

i. All conservation measures employed to have minimum visual impact.
ii. All conservation measures employed to be reversible.
iii. *In situ* conservation where at all possible.
iv. Optimising research opportunities
    - Project Team to identify and assess research needs together with SANParks.
    - Schedule activities to incorporate identified research projects.
    - Support collaborating researchers within project scope
v. A holistic, integrated and multi-disciplinary approach to rehabilitation.
vi. Public participation and empowerment to be incorporated in all activities

3.3. DURATION

Commencement: 1 February 2006
Completion: 30 June 2006

Contingency: Days lost to adverse weather on the no work no pay principle will be retained as a contingency period.

For time line and location-specific time allocation refer Fig. 13.

3.4. CURATION

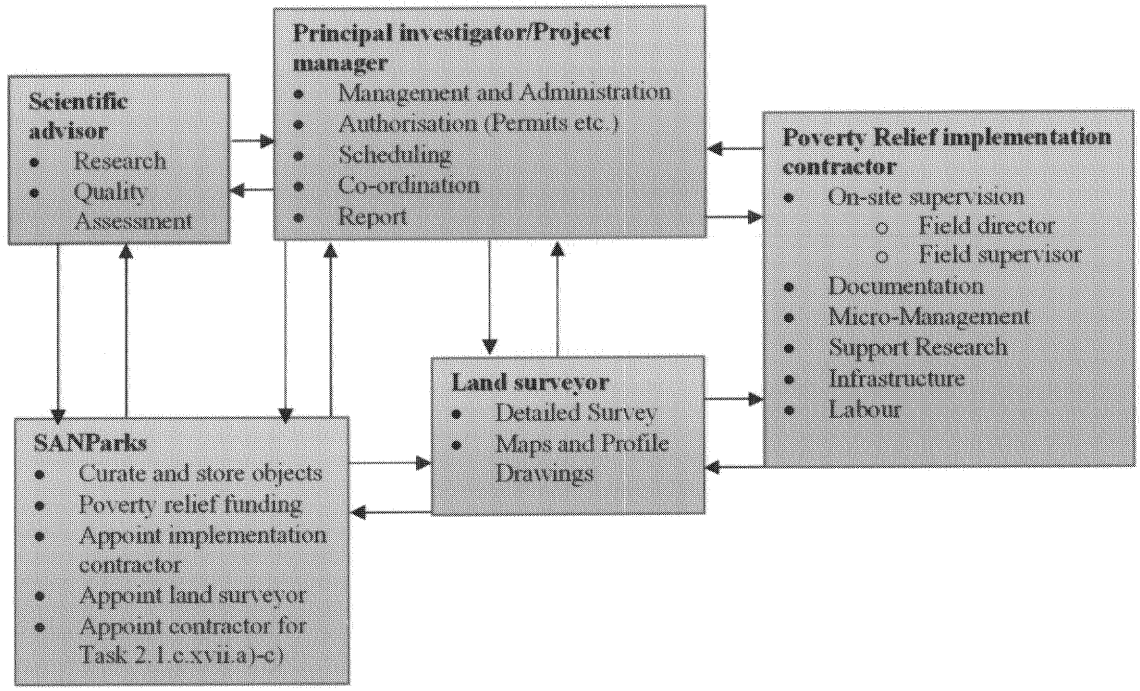
i. SANParks to provide for the curation and long-term storage of all recovered objects to South African Museums Association (SAMA) standards.

3.5. INFRASTRUCTURE, FACILITIES AND LABOUR

i. Housing for the project team; office space and all labour to be supplied by SANParks or their implementation contractor.
ii. SANParks or their implementation contractor to provide a suitably qualified Field Director and Field Supervisor.
iii. SANParks or their implementation contractor to provide a suitably qualified land surveyor to be made available to the project.
iv. A labour force of 20 (excluding Field Director and Field Supervisor) to be recruited and managed by SANParks or their implementation contractor.
v. Sufficient ablutions on site to be provided by SANParks or their implementation contractor.
vi. 1 6X6m Marquis tent with tables and chairs to be erected and maintained on site for the duration of the project by SANParks or their implementation contractor.

4. PROJECT TEAM / STRUCTURE

In order to comply with the terms of reference the following Project Team structured at different tiers of involvement (each with a specific focus) is proposed:



The following Project Team members are proposed:

Principal investigator/Project manager

WC Nienaber

Department of Anatomy, University of Pretoria under the auspices of Business Enterprises at University of Pretoria (BE at UP (Pty) Ltd).

In consultation with:

- SAHRA
- SAN Parks CRM Section

Scientific advisor

E Hanish

University of Venda

To advise work on Schroda and Little Muck Zhizo site

Poverty Relief implementation contractor

Appointment of a suitably qualified and equipped contractor by SANParks is required. It is suggested that Archaeo Info Northern Province be approached.

Infrastructure and Labour

All infrastructure and labour to be supplied by SANParks or their implementation contractor.

Surveyor

A suitably qualified and experienced surveyor to be provided by SANParks.

5. BUDGET

Description	Location/Task	No. of Units	Unit price	Unit	Total
Project management/Scientific					
Professional fee: Principal Investigator	Logistics	30	R 138.00	per hour	R 4,140.00
Professional fee: Principal Investigator	K2	60	R 138.00	per hour	R 8,280.00
Professional fee: Principal Investigator	Schroda	90	R 138.00	per hour	R 12,420.00
Professional fee: Principal Investigator	Zhizo Little Muck	60	R 138.00	per hour	R 8,280.00
Professional fee: Principal Investigator	Den Staat (PON5)	60	R 138.00	per hour	R 8,280.00
Professional fee: Principal Investigator	Mapungubwe	120	R 138.00	per hour	R 16,560.00
Professional fee: Principal Investigator	Report	60	R 138.00	per hour	R 8,280.00
Disbursements					
Travel: Principal Investigator	All	7200	R 2.38	per km	R 19,287.00
Road Toll: Principal Investigator	All	1	R 640.00	at cost	R 640.00
Subsistence: Principal Investigator	All	58	R 72.00	R/day	R 4,176.00
Travel: Scientific advisor	Schroda & Little Muck	600	R 2.38	per km	R 1,428.00
Road Toll: Scientific advisor	Schroda & Little Muck	1	R 150.00	at cost	R 150.00
Subsistence: Scientific advisor	Schroda & Little Muck	22	R 72.00	R/day	R 1,584.00
	Subtotal:				**R 93,496.00**
	VAT:				R13, 089.44
	TOTAL:				**R106,585.44**

This quotation is valid 30 days.

Please note that a contract must be drawn up and signed before any work will commence. The terms and Conditions will be stipulated in mentioned contract, which will include the finalization of:

- Dates
- Confidentiality of information
- Code of conduct
- Payment detail and
- Intellectual Property rights

6. LIST OF FIGURES

FIGURE 1: Map showing sites included in recommendations

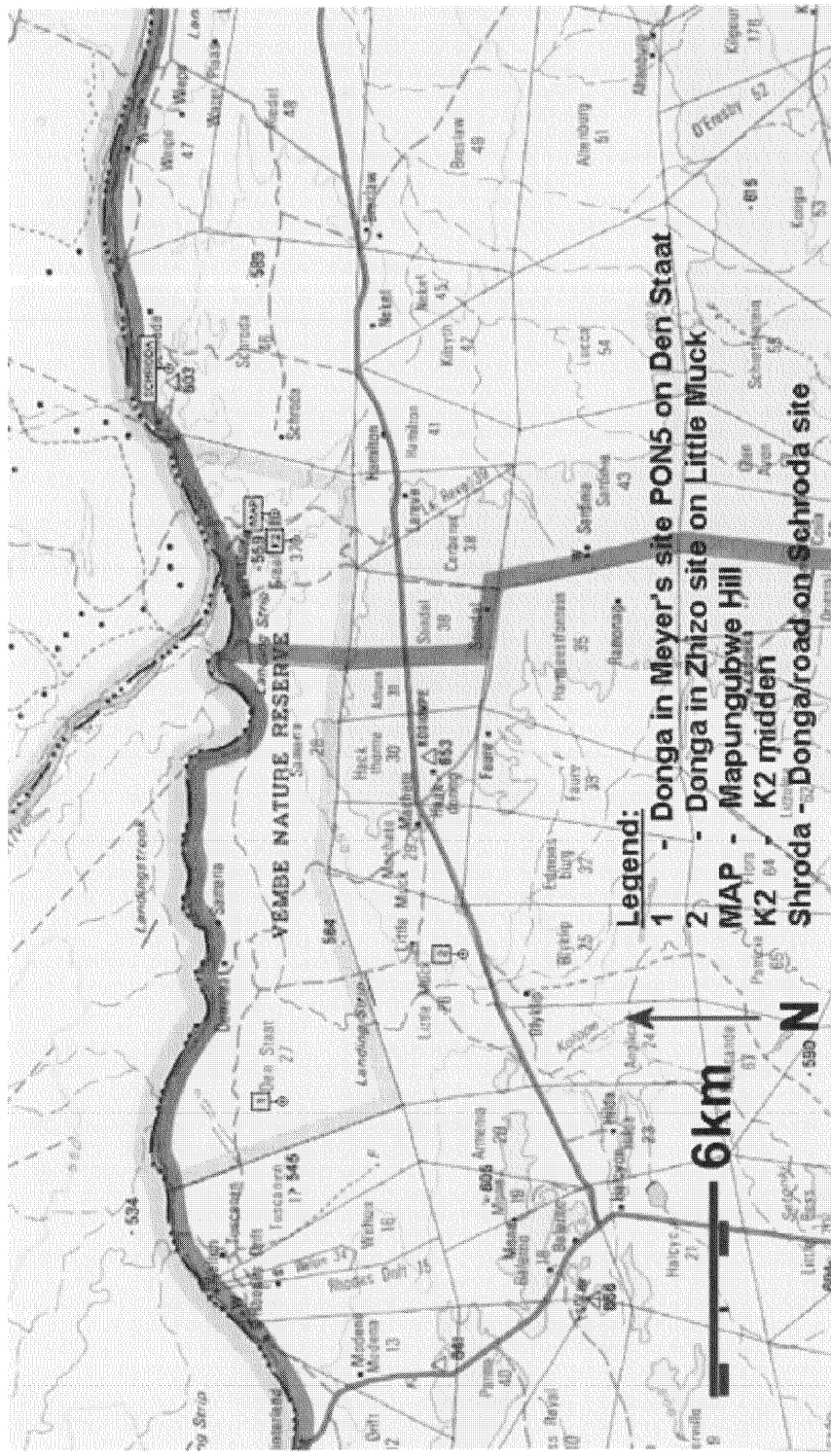


FIGURE 2: Proposed stabilization of extensive erosion of Shroda "Area 6" locality

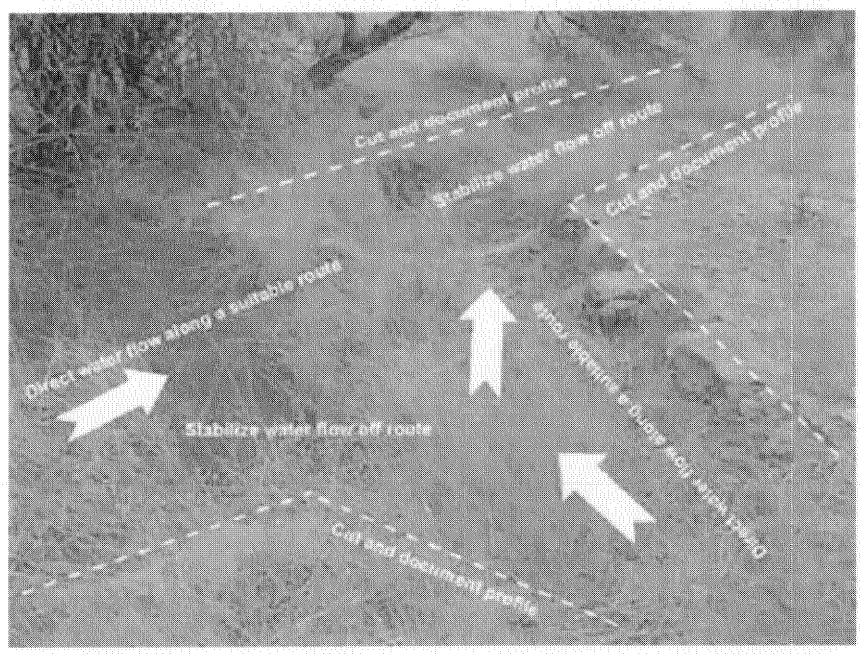


FIGURE 3: Proposed stabilization of extensive erosion of Shroda "AREA 6" locality

FIGURE 4: Proposed stabilization of K2 roof structure

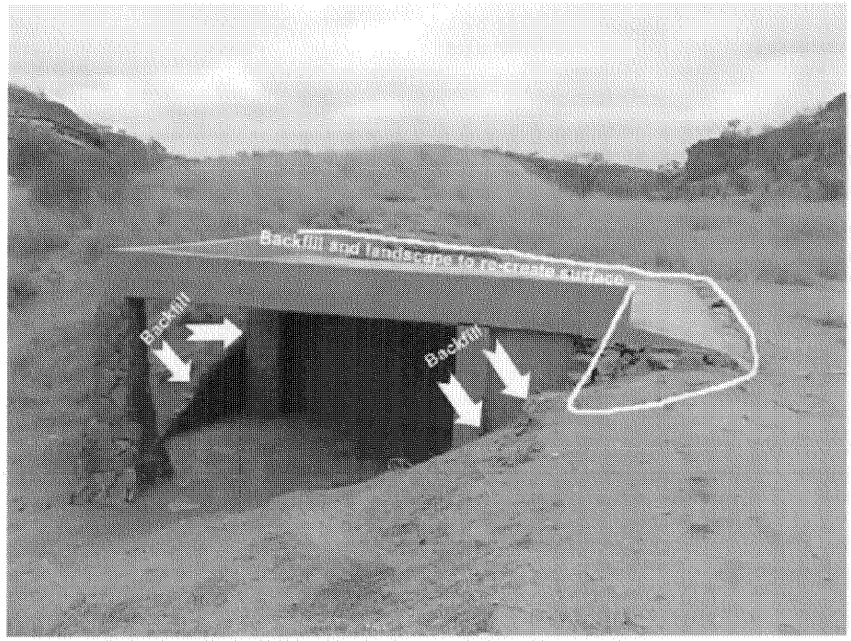


FIGURE 5: Proposed additional stabilization of gardener's test trench at K2

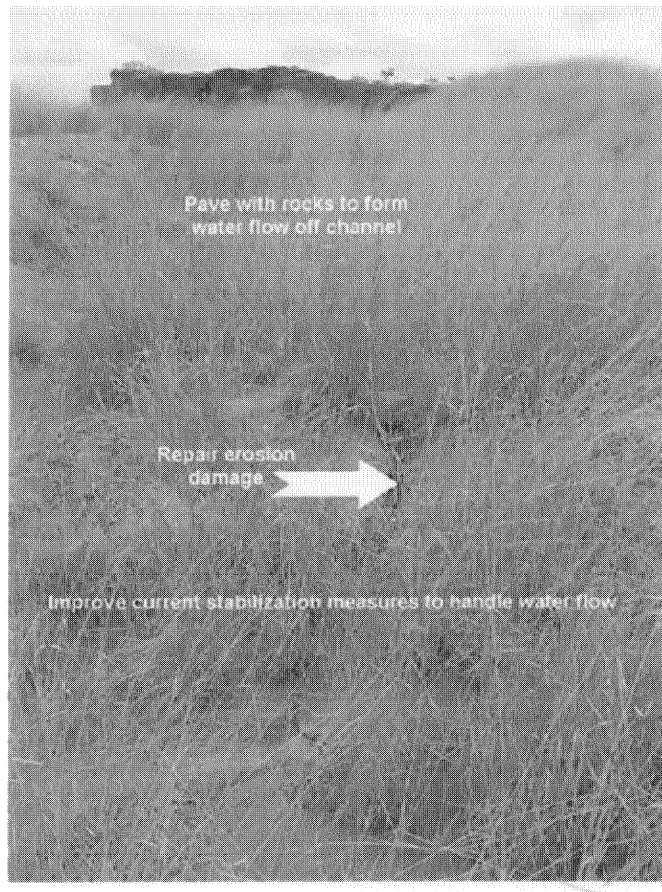


FIGURE 6: Map of K2 showing old excavations

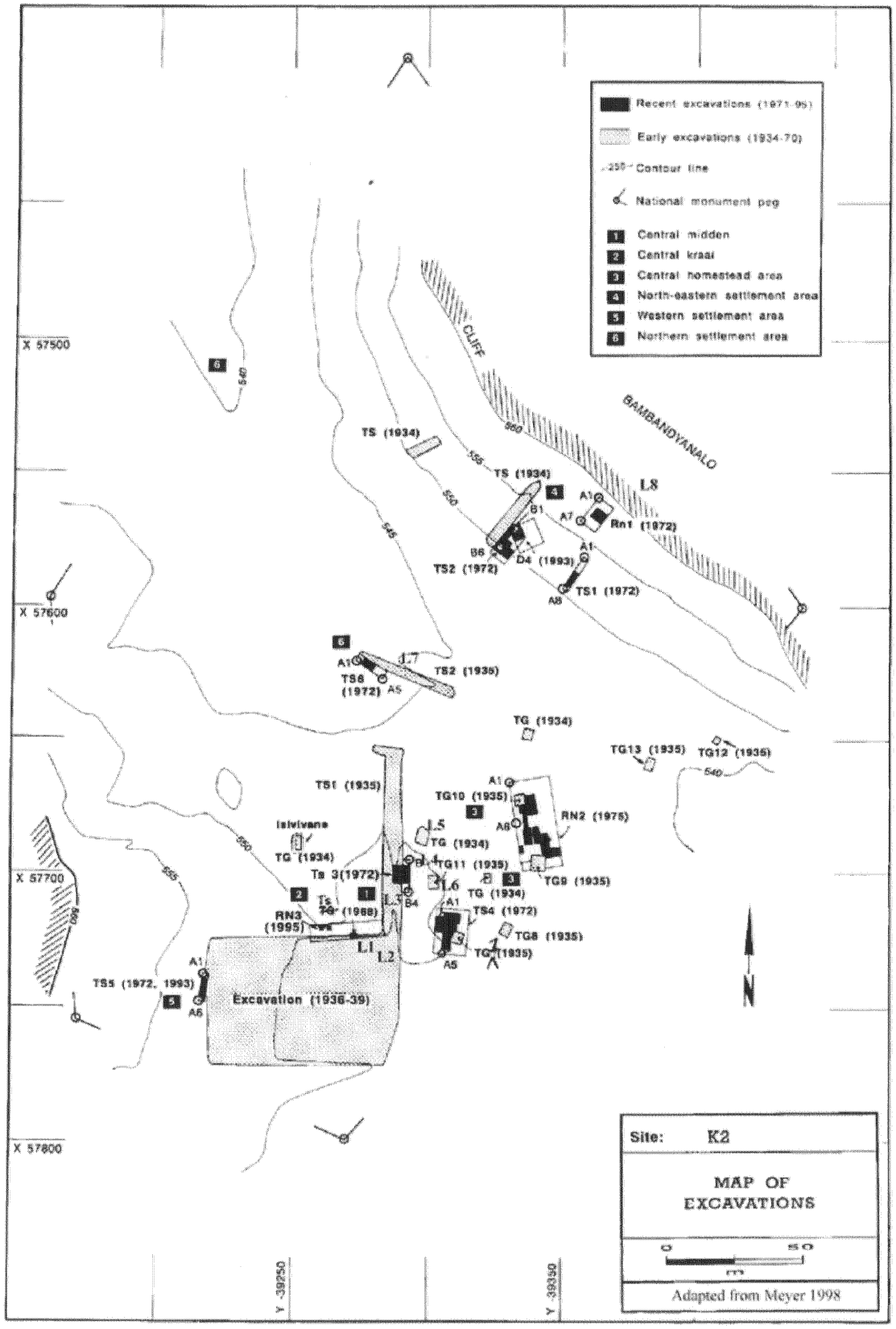


FIGURE 7: Proposed stabilization of TS2 (1935) at K2

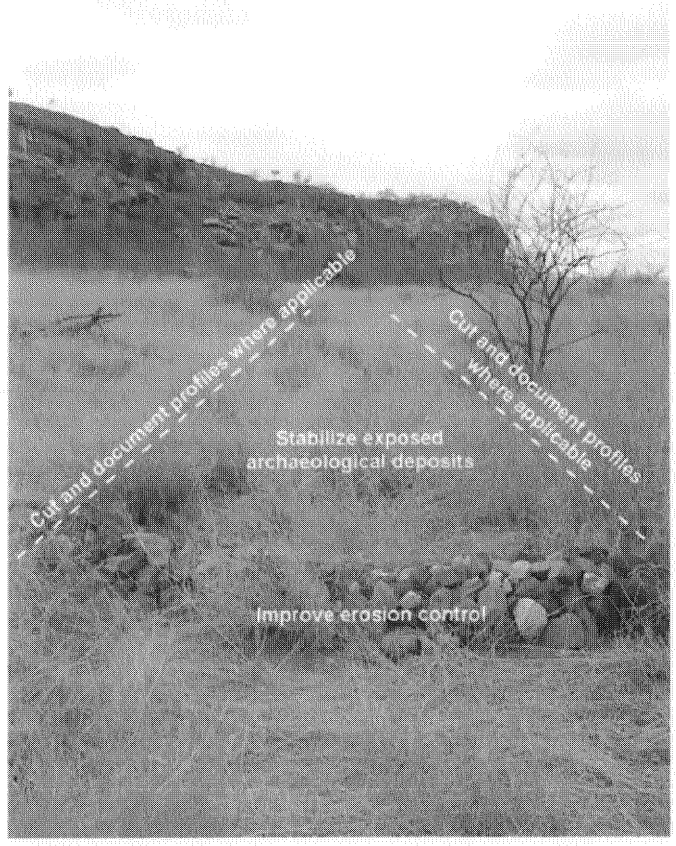


FIGURE 8: Proposed stabilization of north of JS6

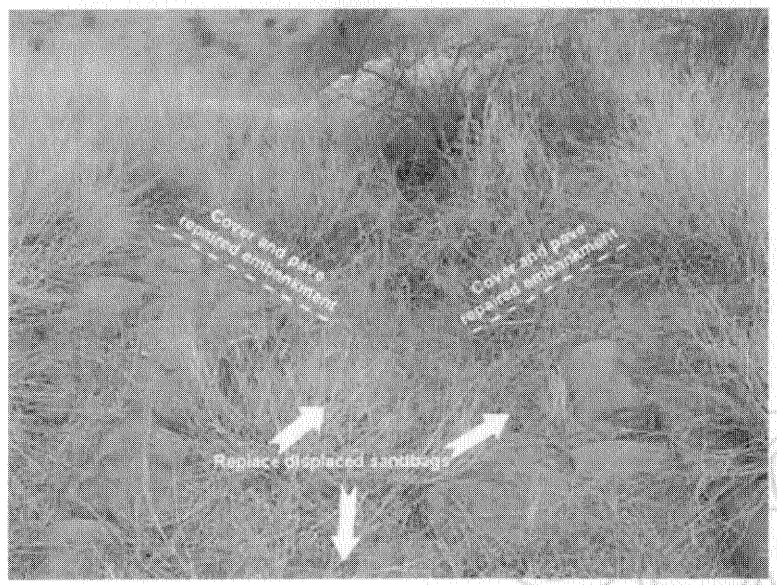


FIGURE 9: Proposed stabilization of North of JS6

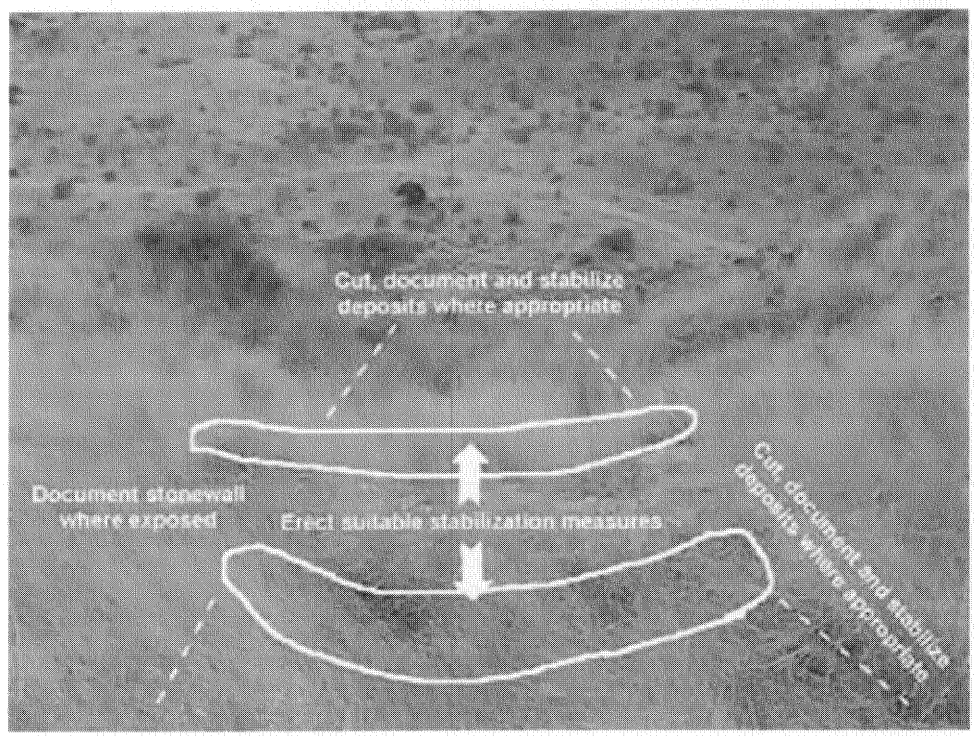


FIGURE 10: Proposed stabilization of Donga in Zhizo Site on Little Muck

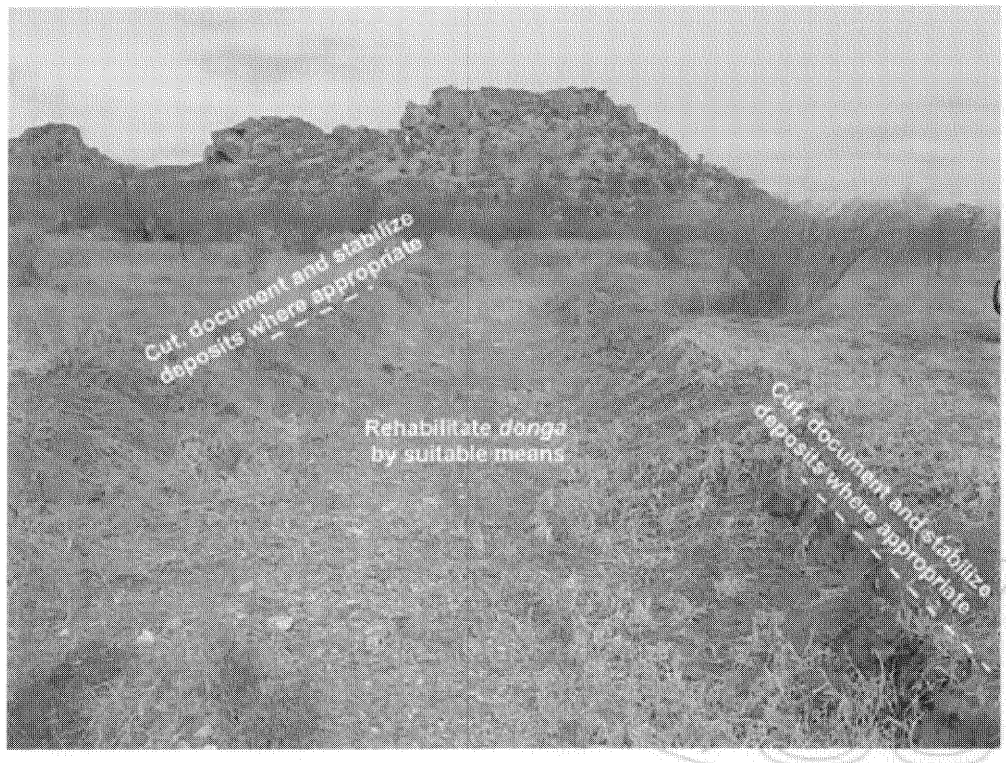


FIGURE 11: Proposed stabilization of Warthog damage at PON5/1 Site

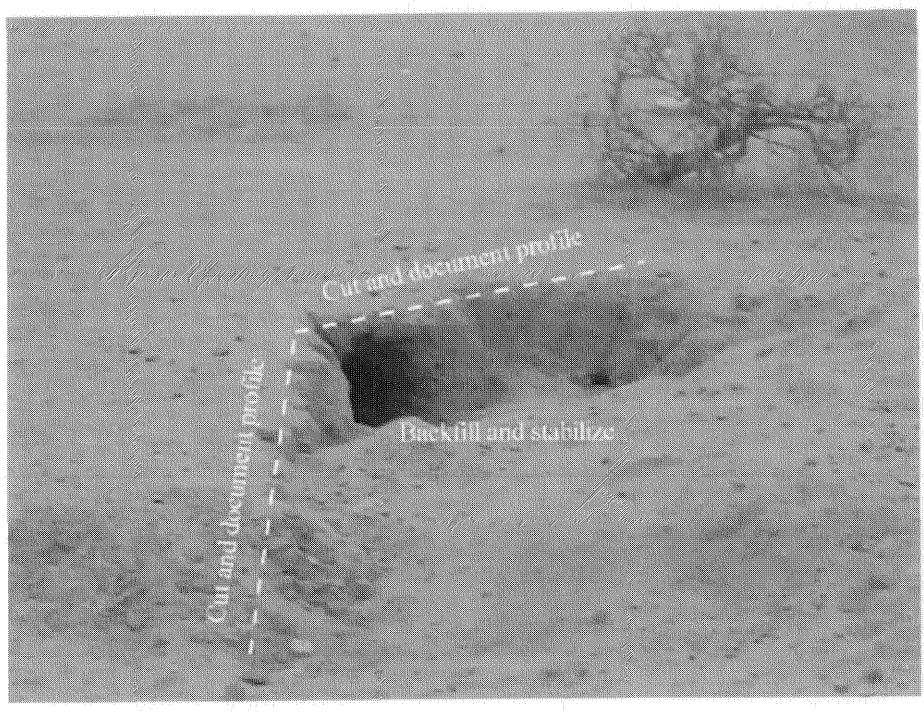


FIGURE 12: Proposed stabilization of erosion *Donga at* Pon5

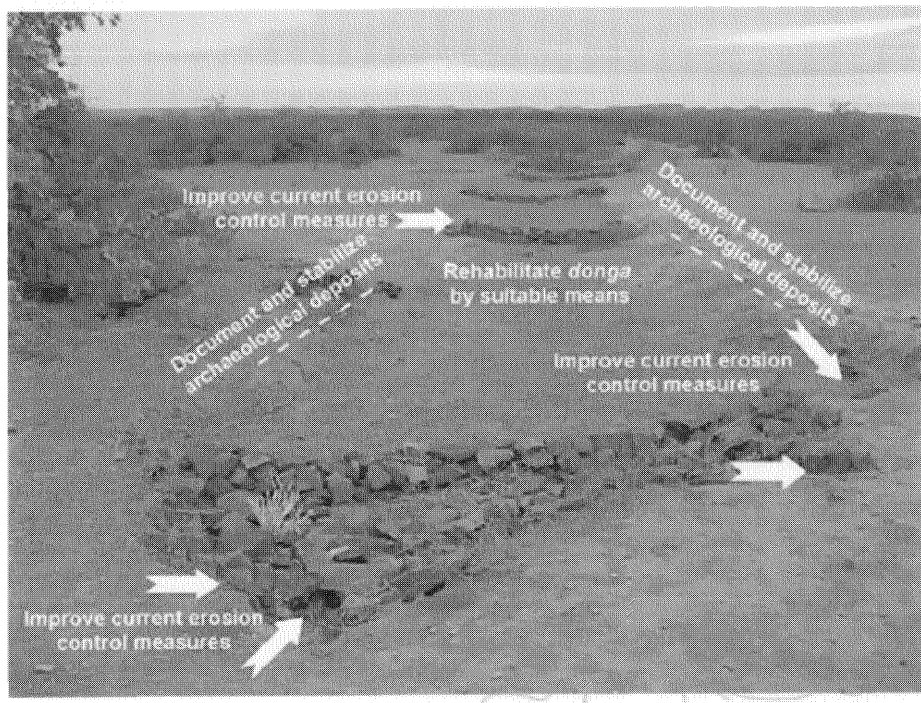


Figure 13. Mapungubwe rehabilitation Phase IV: Project time line.

		1-3 Feb 2006	6-10 Feb 2006	13-17 Feb 2006	20-24 Feb 2006	27 Feb-3 Mar 2006	6-10 Mar 2006	13-17 Mar 2006	20-24 Mar 2006	27-31 Mar 2006	3-7 Apr 2006	10-13 Apr 2006	18-21 Apr 2006	24-26 Apr 2006	2-5 May 2006	8-12 May 2006	15-19 May 2006	15-19 May 2006	22-26 May 2006	29 May-2 Jun 2006	5-9 Jun 2006	12-15 Jun 2006	19-23 Jun 2006	26-30 Jun 2006
		Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	Week 13	Week 14	Week 15	Week 16	Week 17	Week 18	Week 19	Week 20	Week 21	Week 22	Week 23
Project Logistics/Training	2 weeks																							
Mapungubwe	8 weeks																							
K2	4 weeks																							
Shroda	4 weeks																							
Zhizo Little Muck	3 weeks																							
Den Staat (PON 5)	2 weeks																							
Site Presence: Principal Investigator	58 days																							
Site Presence: Scientific Advisor	22 days																							

A. COMPANY PROFILE

THE UNIVERSITY OF PRETORIA

The University of Pretoria has emerged as a national university in the true sense of the word, and one that occupies a leadership position in tertiary education in South Africa. The University is one of the major research universities in the country and fully acknowledges the responsibilities implied by such a position. It places a high premium on research, and considers the creation, application and transfer of knowledge as its major task. Over the last several years the University of Pretoria has produced more audited research outputs than any other tertiary institution in the country .The number of 1 research outputs per academic also compares very favourably with the best in the country. These achievements are the result of a sustained research focus.

The University of Pretoria is proud to be at the forefront of the Innovation Generation and to complement this vision of innovation, two private companies wholly owned by the University of Pretoria were established, namely Business Enterprises at University of Pretoria (Pty) Ltd and Continuing Education at University of Pretoria (Pty) Ltd.

BUSINESS ENTERPRISES AT UNIVERSITY OF PRETORIA (PTY) LTD

As business becomes more complex, more sophisticated, more technologically orientated, so its needs change. Every business needs expertise in different fields but it's no longer possible, or even necessary to have all these resources on board yourself. Now you can concentrate on your core business, do what you do best; and turn to us for your specialised needs.

BE at UP provides easy access to the technology and skills located within the University and offers an effective 'business to business' service. BE at UP facilitates consulting and commercial research of the University of Pretoria

Business Enterprises at University of Pretoria (Pty) Ltd was established during 1999 as a company wholly owned by the University of Pretoria. All historical and future applications of the intellectual property of the university have been positioned within the company. The main objective of BE at UP (Pty) Ltd is to provide easy access to the technology and skills located at the university and to offer an effective "business to business" service.

A core team of 12 personnel is responsible for the day-to-day management of the company and is complemented by 240 specialised units/departments on campus. The continuously growing client list is in excess of 600.

Consulting teams can include experts from different environments including:

- Economic and Management Sciences
- Education
- Engineering, Build Environment & Information Technology
- Health Sciences
- Humanities
- Law
- Natural and Agricultural Sciences
- Theology
- Veterinary Science

Please visit our website for more information: www.be.up.co.za

ANTHROPOLOGY PRIVATE PRACTISE PROFILE

Anthropology Private Practice (APP) evolved out of the need expressed by developers and industry to obtain access to experience and skills pertaining to human skeletal material and archaeological sites (heritage resource management). APP is currently one of the foremost providers of a comprehensive consultation service of this nature in Southern Africa. It offers skills and competency in cultural impact assessment, cultural resource mitigation (including graves), materials analysis (including anthropological and physical archaeozoological analysis) and support in graphically presenting project findings.

APP SERVICES

The **main objective** of APP is to provide easy access to heritage management strategies and skills pertaining to all aspects of cultural resource management and grave relocation and to offer an effective "business to business" service. We assist clients in:

Grave Relocation

- Social consultation
- Relocating, repatriating and researching human remains and related social, cultural and legal issues

Cultural Resource Management

- Heritage impact assessment
- Mitigation of affected cultural resources

Materials Analysis

- Analysis of archaeological materials
- Analysis of human remains
- Analysis of animal remains

Desktop publishing of graphical representations of findings

APP prides itself in delivering on the agreed deadline, and is always available to convey interim project results and information when it is needed. APP is supported in this function by professionally qualified desktop publishers and the best communication infrastructure available.

APP is fully equipped to handle large excavation projects of long duration. Fully mobile equipment can be deployed and maintained in even the remotest locations. APP has full mobile computer and state of the art GPS and software support for conducting detail surveys and documentation.

HOW DOES APP WORK?

A core team is responsible for the day-to-day management of the company and is complemented by several project-dictated; contracted specialists on an outsource basis. A central theme of service provision by APP is the inclusion of other scientists and heritage management practitioners in projects. This ensures **multi-disciplinary project teams** that can address and solve far ranging issues regarding all aspects of heritage resource management and grave relocation.

Since all the partners are actively involved in academic research, APP has a good standing in the international scientific community. Where applicable, the partners involve students in the projects to increase capacity in the field and to ensure that training is focused on the needs of the South African society. This combination of contract service provision, academic involvement where the opportunity presents itself and **continuous training involvement** have ensured that APP stays abreast of current developments regarding heritage resource management and issues pertaining to human remains, as well as the social, cultural and heritage implications of the exhumation and re-interment of human remains.

All activities are under the auspices of **BE at UP (Pty) Ltd**, the umbrella consultation company for the University of Pretoria. All legal, administrative and financial aspects of contracts are centrally managed by BE at UP (Pty) Ltd leaving the APP team unencumbered and focused on service provision.

B: CURRICULUM VITAE

Willem C NIENABER (PROJECT MANAGER)

Profession	:	Archaeologist
Professional affiliations	:	Association of South African Professional Archaeologists Anatomical Society of Southern Africa World Archaeological Congress ASAPA CRM Section (Field director: skeletal analysis) Pan African Association for Prehistory and Related Studies
Professional Office	:	Council Member 2004-06 Term: ASAPA Secretary 2004-06 Term: ASAPA CRM Section Member: Mapungubwe National Park Archaeological Task Group, 1998 - 2005 Member: Organising committee of International Symposium of Morphological Sciences 2001 Member: Organising committee ASAPA 2006 Bi-ennial Congress
Education	:	BA[Hons] Archaeology, University of Pretoria 1995 Bsc[Hons] Anatomy, University of Pretoria 1999
Languages	:	Afrikaans (speaking, writing, reading - excellent) English (speaking, writing, reading - excellent)
Countries of work experience	:	South Africa, Swaziland, Zimbabwe

KEY QUALIFICATIONS:
Archaeology, anthropology, forensic archaeology, applicable survey methods, fieldwork and project management, exhumation and re-interment of human remains, repatriation of human remains, social consultation and public participation, culture resource management.

Experience record
1995 – 1998: City Council of Pretoria
1995 – present: University of Pretoria

- 19 Research projects: 4 at Field Supervisor; 12 at Field Director and 3 at Principal Investigator level.
- 3 Forensic remains recoveries at Principal Investigator level.
- 3 Phase I Cultural Resource Management projects at Principal Investigator level.
- 36 Phase II Cultural Resource Management projects: 3 at Field Director and 33 at Principal Investigator level.
- 2 Phase III Cultural Resource Management projects at Principal Investigator level.
- 25 National and International scientific conferences attended (51 papers or posters presented).
- 18 Publications in accredited scientific journals. (1 in print; 4 submitted)
- 1 Book Chapter with M Steyn and MY Iscan on Forensic Archaeology.
- Peer review referee to:
    - South African Archaeological Bullitin 2004
    - International Journal of Forensic Sciences 2004

C: UP EMPLOYMENT EQUITY

The University's second formal Employment Equity Plan set numerical targets for the period mid 2003 to mid 2006 and supported them with a range of affirmative action strategies. This report reviews progress made during the first year of this 3 year planning period.

TOTAL PERMANENT STAFF - ALL OCCUPATIONAL CATEGORIES
June 2003 VERSUS JUNE 2004 VERSUS 2006 TARGET

Academic staff	Male				Female				Total
	Af	Co	In	Wh	Af	Co	In	Wh	
Target (June 2006)	147	21	22	569	99	17	34	451	**1360**
Percentages	10.8%	1.5%	1.6%	41.8%	7.3%	1.3%	2.5%	33.2%	100%
Start Headcount (June 2003)	67	13	12	652	46	6	24	454	**1274**
Percentages	5.3%	1.0%	0.9%	51.2%	3.6%	0.5%	1.9%	35.6%	100%
Current headcount (June 2004)	72	11	14	644	54	7	23	457	**1282**
Percentages	5.6%	0.9%	1.1%	50.2%	4.2%	0.5%	1.8%	35.6%	100%

The overall picture is one of modest increases in numbers of black academic employees and White female academic employees, and a decrease in the number of White male academic employees.

Support staff	Male				Female				Total
	Af	Co	In	Wh	Af	Co	In	Wh	
Target (30 June 2006)	632	23	17	351	353	52	43	913	**2384**
Percentages	26.5%	1.0%	0.7%	14.7%	14.8%	2.2%	1.8%	38.3%	100%
Start Headcount (30 June 2003)	556	15	5	407	248	21	12	1054	**2318**
Percentages	24.0%	0.6%	0.2%	17.6%	10.7%	0.9%	0.5%	45.5%	100%
Current headcount (30 June 2004)	542	17	4	431	262	27	19	1083	**2385**
Percentages	22.7%	0.7%	0.2%	18.1%	11.0%	1.1%	0.8%	45.4%	100%

Progress by occupational level

At the Top management occupational level, African males increased by 1, bringing representation to 30.0%. Other black staff and White female staff remain un-represented at this level. White males increased by 1, bringing representation to 70.0%.
At the Senior management occupational level, African males decreased by 2, bringing representation down to 11.5%. African females and Coloured and Indian males and females, remain un-represented. White females increased by 2, bringing representation to 19.2% and the year 2006 target has thus already been exceeded. White males decreased by 2, bringing representation down to 69.2 %.

At the level of Professionally qualified, experienced specialists and mid management, African males increased by 1, bringing their representation to 4.5%. African females remained the same as in June 2003. Male and female Coloured and Indian employees in this occupational level increased by 1, bring their representation to 2.0%. Most of the gain in this occupational level was White females who increased by 6, bringing their representation to 22.1%. There was a decrease of 6 White males, bringing their representation down to 70.7%. In no race/gender group was the desired +33.3% value achieved for the % target achieved index.

At the level of Skilled technical and academically qualified workers, junior management, supervisors, foremen, superintendents, African males increased by 9, bringing representation to 5.9%. African females increased by 26, bringing representation to 6.7%. Male and female Coloured and Indian employees increased by 12, bringing representation to 4.3%. White females increased by 38, bringing their representation to 57.3%. White males increased by 12, bringing their representation to 25.8%. In no race/gender group was the desired +33.3% value achieved for the % target achieved index. In fact there was retrogression in regard to White males and White females, that is the representation in these groups went in the opposite direction to that desired.

At the levels of Semi-skilled and discretionary decision making, Unskilled and defined decision-making combined, African males decreased by 29, bringing the representation to 66.2% . African females remained unchanged. Male and female Coloured and Indian employees deceased by 1 bringing representation to 1.2%. White females decreased by 1 bringing representation to 6.9%. White males increased by 4 bringing representation to 2.8%. The desired +33.3% value for the % target achieved index was greatly exceeded for White males, who are under represented in these groups. There was retrogression in regard to African males and Coloured females.

TOTAL NUMBER OF PERMANENT EMPLOYEES WITH DISABILITIES 52 (1.4%).

TOTAL NUMBER OF NEW RECRUITS

384 new employees were appointed at the University between 1 July 2003 and 30 June 2004. 129 (33.6%) of these were black persons and 148 (38.5%) were White females. 6 (1.6%) of the new appointments were persons with disabilities.

TOTAL NUMBER OF PROMOTIONS

207 employees were promoted at the University between 1 July 2003 and 30 June 2004. 60 (29.06%) of these were black persons and 95 (45.9%) were White females. 3 (1.4%) of the promotions were persons with disabilities. 143 (69.1%) of promotions were to the level of Skilled technical and academically qualified workers, junior management. 30 (21.0%) were black employees. 78 (54.5%) were White females.

AFFIRMATIVE ACTION MEASURES IMPLEMENTED 2003 TO 2004

- Relocation of recruitment office
- Integration of employment equity considerations into policy and procedure documents for recruitment, selection and promotions
- PUNIV Personnel Development Programme (PDP)
- Activities of the Diversity Creation Committee
- Increasing the accessibility of the university buildings and facilities to persons with disabilities
- Project to ensure that staff at low levels (Peromnes 14 to 18) have development plans
- Diversity awareness courses
- Training of recruitment and selection committee members

Mapungubwe National Park

Phase IV of Rehabilitation through Poverty Alleviation funding

Recommendations on stabilization of archaeological sites

Compiled by:
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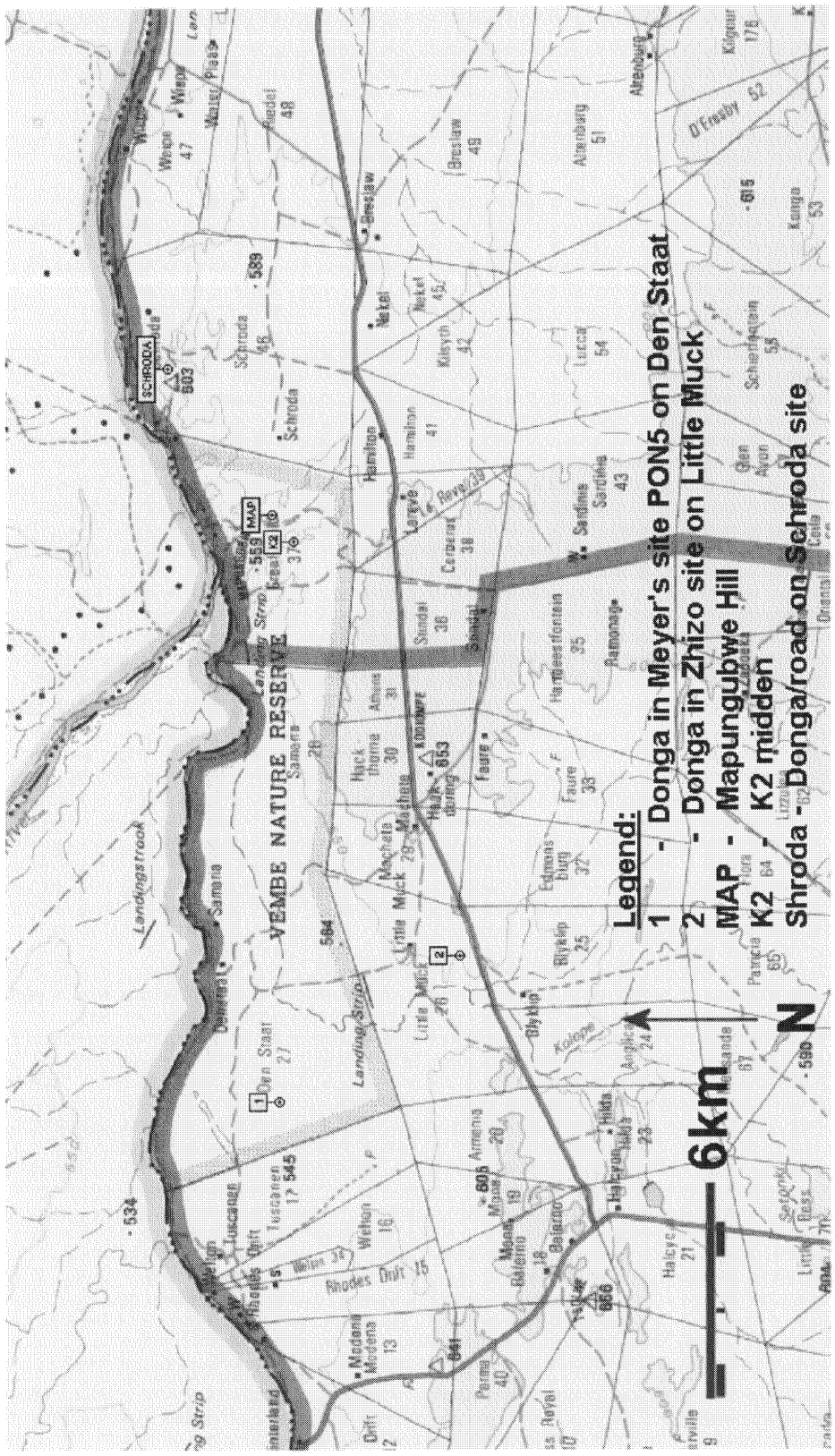
These recommendations were made by a sub-committee of the Mapungubwe National Park Archaeological Task Group consisting of Mss J Verhoef and B van Lente (SANParks); Mr E Hanish (UNIVEN); Mr D de Witt (Limpopo Province Dept. Sports, Arts and Culture); Prof J Meiring and Mss J van der Walt and C Nienaber (Dept. of Anatomy, UP) during a series of site visits and assessments on 11 October 2004.

October 2004

1. Introduction

Map showing sites included in recommendations



The stabilization of archaeological sites in the Mapungubwe National Park by means of Poverty Alleviation funding has been ongoing since 2001. Three Phases of stabilization, coupled to rounds of funding, has been completed. These efforts have secured the main archaeological sites against erosion threat. As part of the utilization of a next round of funding for rehabilitation some of the other sites, imminently threatened by erosion, as well as minor additional and maintenance work at the main sites is required.

2. Sites requiring attention

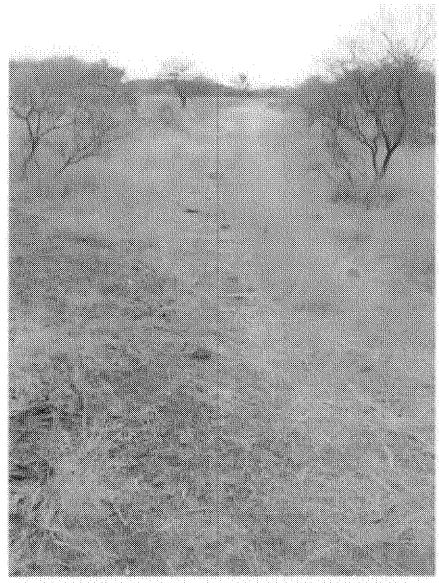
2.1. Schroda

Location: S 22°11.021' E029°25.595' (Refer site location map)

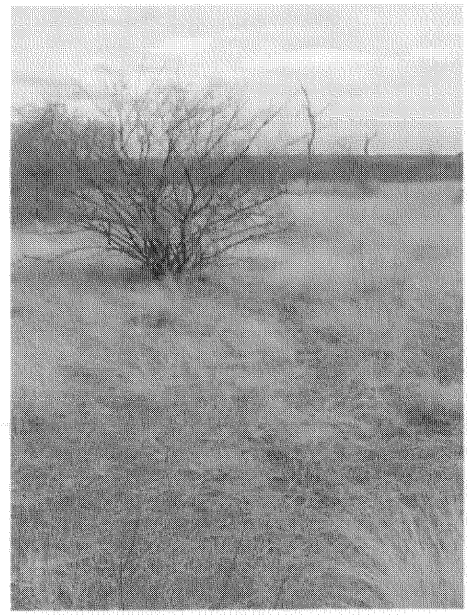
Recommendations:

i. Remove old power line pylon anchors along old road.

ii. Rehabilitate old road route (±800m) with topsoil.

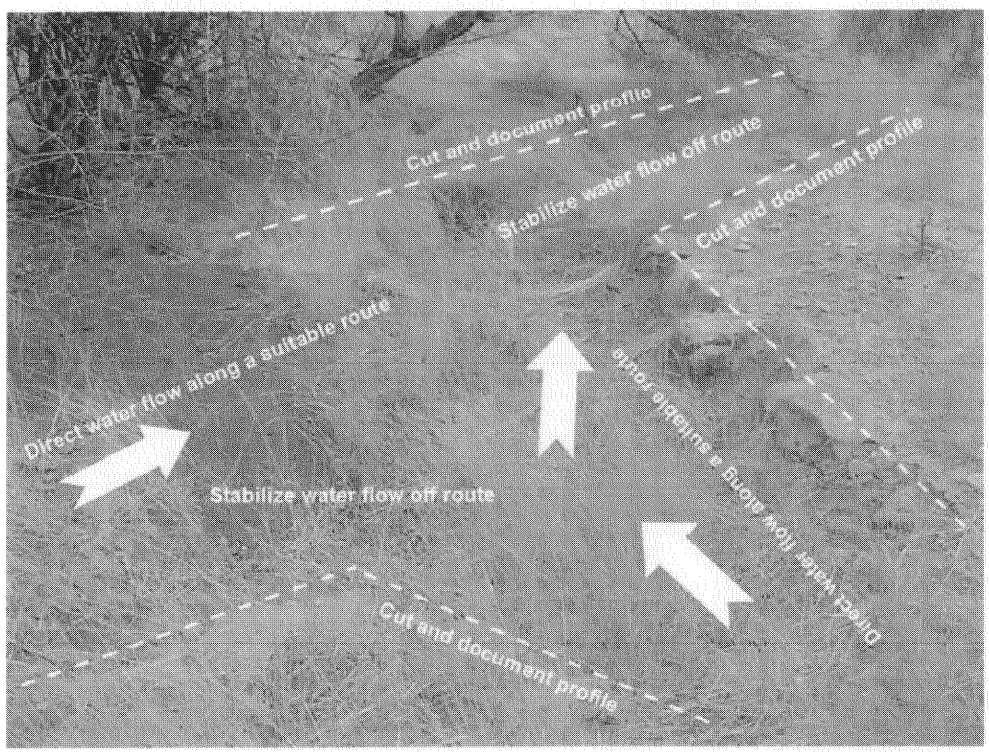


iii. Rehabilitate two erosion ditches running from south to north and ending in the old road.



iv. Remove rubbish on site and in vicinity.

v. Rehabilitate extensive erosion of "Area 6" locality
   a. Improve present gabion to slow down water flow from up-slope
   b. Channel water flow along existing erosion ditches around site after ditches have been stabilized



c. Stabilize archaeological deposits
d. Document the profiles of archaeological deposits exposed by erosion
e. Map exposed archaeological deposits, stabilization measures and indicate profile drawings done with reference to existing site maps
f. Recreate original site surface of "Area 6" by means of returning archaeological dump material to old excavation.

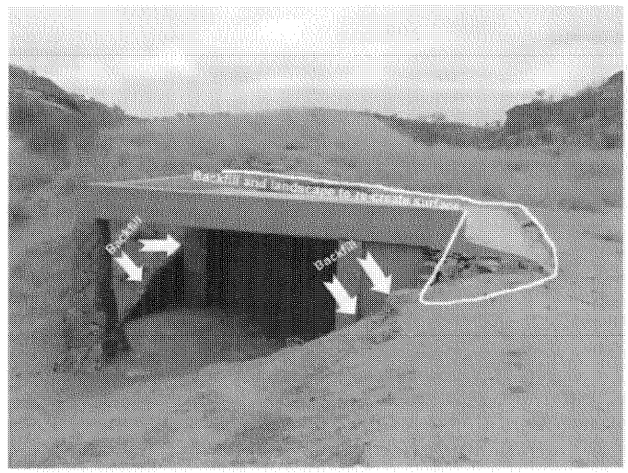
i. Screen and recover significant and diagnostic materials from all materials used.

2.2. K2

Location: S 22°13.032' E029°22.853' (Refer site location map)

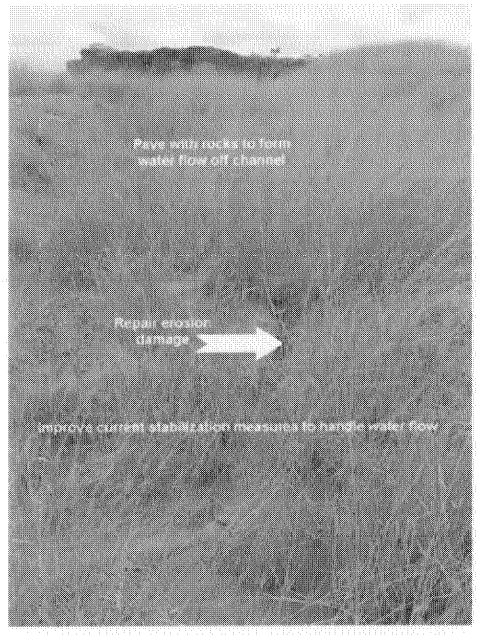
Recommendations:

ii. Backfill space around, and fill and landscape roof of K2 interpretation structure with old dump material to recreate original surface. Screen and recover significant and diagnostic materials from dump materials used.



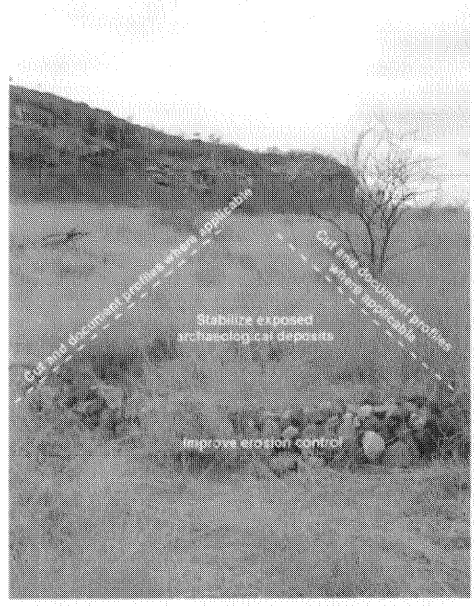
iii. Repair Gardner 1939 excavation eastern wall stabilization measures damaged by contractor.

iv. Establish rock paved water flow off channel from Gardner test trench through main midden and repair and improve damaged stabilization measures currently in place.



v. Stabilize all exposed archaeological deposits on southern slope of Bambandyanalo hill and place measures to prevent erosion, especially in the vicinity of old excavations (TS (1934), TS2 (1972), D4 (1993), Rn1 (1972), TS1 (1972) and structures on the slope.

vi. Repair and improve erosion control measures in place in *donga* that formed along excavation TS2 of 1935, and down slope from there.



vii. Document the profiles of archaeological deposits exposed by erosion.
viii. Map exposed archaeological deposits, stabilization measures and indicate profile drawings done with reference to existing site maps.
ix. Screen and recover significant and diagnostic materials from all materials used.

2.3. Mapungubwe

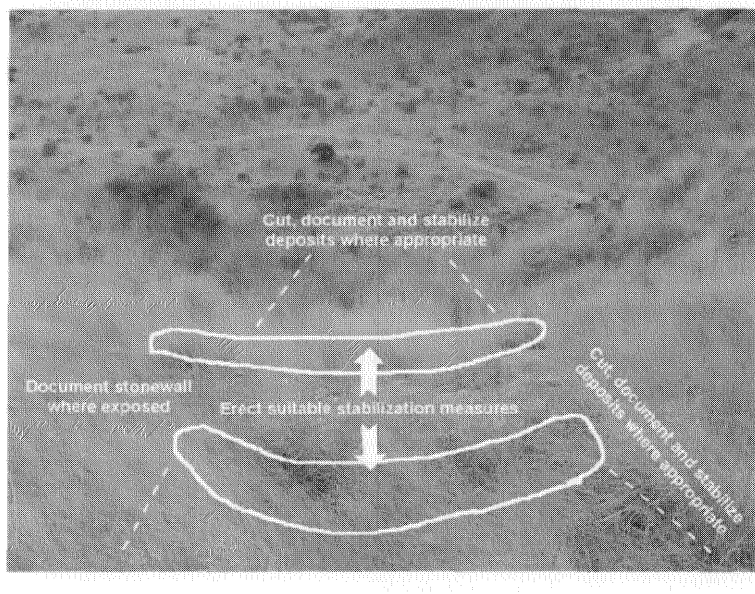
Location: S 22°12.694' E029°23.279' (Refer site location map)

Recommendations:

i. Revisit access route path and repair and improve water drainage and flow off from path.
ii. Improve stabilization measures in place in the north-western corner of JS2(b) by adding additional sandbags and rocks.
iii. Pave total northern wall and north-western corner of JS2(b) with sandstone slabs from a suitable source.
iv. Improve stabilization measures placed by Meyer in 1999 in erosion *donga* south of JS1 and pave embankments with suitable sandstone slabs.

v. Improve stabilization measures in place in the north-western corner of Gardner's 1938/39 "Great Depression" excavation by adding additional sandbags and rocks.
vi. Pave north-western corner of Gardner's 1938/39 "Great Depression" excavation and adjacent stabilized excavation walls with sandstone slabs from a suitable source.
vii. Improve stabilization measures in place in the south-eastern corner of Gardner's 1938/39 "Great Depression" excavation by adding additional sandbags and rocks.

viii. Pave south-eastern corner of Gardner's 1938/39 "Great Depression" excavation and adjacent stabilized excavation walls with sandstone slabs from a suitable source.
ix. Improve stabilization measures in place on the northern wall of Gardner's 1938/39 "Great Depression" excavation by adding additional sandbags and rocks.
x. Extend main ascent staircase handrail down to landing.
xi. Extend compacted gravel landing at top of main ascent staircase to provide more visitor space.
xii. Rehabilitate and stabilize erosion trenches on hill slope terrace at extreme western side of Mapungubwe Hill.
xiii. Stabilize, with special attention to stonewalls, the water flow area directly north off JS6. Direct water flow to suitably stabilized water flow off channels.



x. Clean exposed Profile S-P at K8 by brushing with soft brushes.
xi. Place insect control measures.
xii. Install rubber flaps to sliding dome.
xiii. Document the profiles of archaeological deposits exposed by erosion.
xiv. Map exposed archaeological deposits, stabilization measures and indicate profile drawings done with reference to existing site maps.
xiv. Screen and recover significant and diagnostic materials from all materials used.

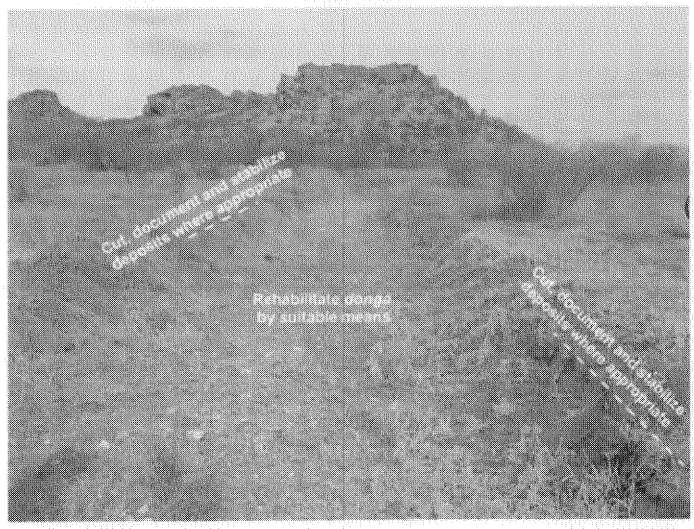
2.4. Zhizo site on Little Muck

Location: S 22°15.662' E029°16.240' (Refer site location map)

Recommendations:

i. Survey donga
ii. Document the profiles of archaeological deposits exposed by erosion.

iii. Map exposed archaeological deposits, stabilization measures and indicate profile drawings done with reference to existing site maps.
iv. Screen and recover significant and diagnostic materials from all materials used.
v. Stabilize all archaeological deposits.
vi. Rehabilitate erosion *donga* by suitable means.



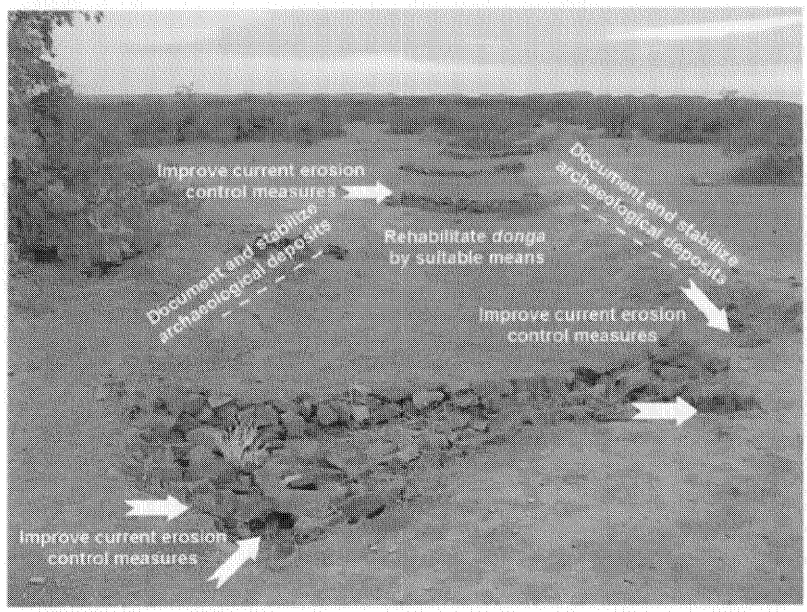
2.5. Meyer's PON5 site on Den Staat

Location: S 22°12.804' E029°13.919' (Refer site location map)

Recommendations:

i. Rehabilitate warthog damage to PON5/1 site.

ii. Survey donga
iii. Document the profiles of archaeological deposits exposed by erosion.
iv. Map exposed archaeological deposits, stabilization measures and indicate profile drawings done with reference to existing site maps.
v. Screen and recover significant and diagnostic materials from all materials used.
vi. Stabilize all archaeological deposits.
vii. Improve erosion control measures currently in place.
viii. Rehabilitate erosion *donga* by suitable means.

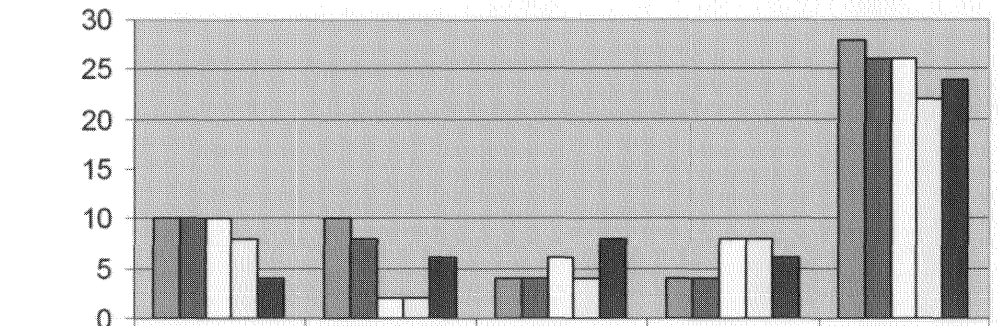


3. Assessment of priority

In order to prioritize the recommended stabilization, rehabilitation and erosion control measures per site the following were considered:

- archaeological importance of the site
  - whether the site is of local, regional, national or international importance
  - the research potential of the site
  - the archaeological uniqueness of the site
  - relevance of the site to current research questions
  - state of preservation
- operational importance of the site
  - the value of the site for tourism
  - accessibility of the site
  - level of tourism infrastructure, or proximity thereof
  - importance of the site to SANParks
- site sensitivity
  - how prone the potentially affected deposits are to damage
- erosion threat
  - the level of threat posed by erosion

Each of these were considered and scored out of a possible 10 in an attempt to quantify and inform the urgency of attention required. The scores were added to indicate the highest priority, *i.e.* the higher the score awarded to a site the higher the priority.



	Archaeological	Operational Inportance	Site sensitivity	Erosion threat	Priority
Map	10	10	4	4	28
K2	10	8	4	4	26
Shroda	10	2	6	8	26
Zhizo	8	2	4	8	22
PON5	4	6	8	6	24

As a result it is recommended that funds be allocated according to the site priorities indicated in the above graph and table. It would be possible to rate each of the individual recommendations, without reference to site, using this method. This would achieve a more balanced indication of where the most urgent specific attention is needed, rather than an indication of the highest priority site.

SOUTH AFRICAN HERITAGE RESOURCES AGENCY
111 HARRINGTON STREET, CAPE TOWN, 8000
PO BOX 4637, CAPE TOWN, 8000
TEL: (021) 462 4502 FAX: (021) 462 4509

DATE: 03 September 2003
ENQUIRIES: Mrs Mary Leslie
E-mail: mleslie@sahra.org.za
Web site: www.sahra.org.za
OUR REF: 9/2/240/2/1

COEN

Dear Dr Nienaber

Attached please find the permit for rehabilitation at Mapungubwe.

I have sent the permit out for review and now have the following comment:

Both reviewers are satisfied with the overall project and are satisfied that we issue the permit as soon as possible.

The following matters need to be addressed :

1. The Zhizo Site on Little Muck (2.1.d) must be mapped (pont iii).
2. Which archaeological dumps at K2 will be used?
3. The sections and profiles must be drawn by an archaeologist (not a land surveyor). Who will do these?
4. Note that the caption to Fig 5 in the main proposal should read 'Gardner', not 'gardener'.
5. It should be made very clear that that vehicles transporting workers to the sites must stay on designated roads and paths to avoid damage to surface material. Even though this type of instruction goes with the poverty alleviation part of the proposal, this should be stressed from the archaeological point of view.
6. We require an assessment of the rehabilitation methods used in phases I-III? The monitoring function of this work is very important for future planning both at Mapungubwe and at other archaeological sites.
7. Where will SANParks store the material recovered? Will there be storage space in the Park? and if so, who is responsible for curation?

8. The Management Plan adhered to at all times.

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Sincerely

Mary Leslie
SAHRA: Archaeology, Palaeontology and Meteorite Unit.

SOUTH AFRICAN HERITAGE RESOURCES AGENCY

PO Box 4637, CAPE TOWN, 8000
FAX: (021) 462 4509 * TEL: (021) 462 4502

TO: Archaeology, Palaeontology, Meteorites, Heritage Objects and Burial Units Permit Committee
FROM: Mary Leslie (mleslie@sahra.org.za)
DATE: 24 January 2006

ARCHAEOLOGY, PALAEONTOLOGY, METEORITES, HERITAGE OBJECTS AND BURIAL UNITS PERMIT COMMITTEE, SAHRA PROVINCIAL OFFICES, SPECIALIST ADVISORS & PROVINCIAL HERITAGE RESOURCES AGENCY REPRESENTATIVES

No: 80/06/01/004/51
Ron Clarke has applied for a permit for excavation at Sterkfontein. As this is a National Heritage Site the full application proposal will be forwarded to two referees as usual.

No: 80/06/01/005/51
John Parkington and Cedric Poggenpoel applied for a permit for the urgent rescue of a skeleton disturbed by the construction of a pig pen in a shelter near the Clanwilliam weir. The SA Police have already collected part of the skeleton and the intention is to rescue what remains and assess its relationship with any deposit in the shelter. This is an urgent rescue and it would be appreciated if permit committee could respond today.

No: 80/06/01/006/51
Frans Roodt applied for a permit for the urgent rescue of an Iron Age skeleton disturbed by development of a retaining wall around a reservoir at Lonmin Platinum Mine in the Rustenburg District. He will be consulting with the local community.

No: 80/06/01/007/51
Tom Huffman has applied for a permit for the processing small samples from bone from 20 skeletons from Schroda for isotopic analysis for dietary studies. The work will be undertaken by Anne Raath who is undertaking a project studying the relationship between people, animals and plants during the Middle Iron Age (AD900-AD1000) at Schroda. She has submitted a full proposal.

What about permit for sampling of bone. Communities.

No: 80/06/01/008/51
Coen Nienaber has applied for a permit to continue the rehabilitation work at Mapungubwe, K2, Schroda and Little Muck. He will be the project director and Stephan Gaigher and Marco Hutten have been contracted to do the work by the Poverty Relief programme of SANParks. We have had an urgent request from SANParks to expedite this permit as the work with the Poverty Relief Program was to have started on 16 January (although the archaeologist was only fully informed on 20 January so was unable to apply for a permit earlier).
As this is a National Heritage Site the application proposal will be forwarded to two referees as usual.

Should you have any concerns or require further information please let us know by Thursday 26 January 2006.
Thereafter we will proceed as seems best in terms of the responses we receive or issue the permit(s).

Mary Leslie
SAHRA: Archaeology, Palaeontology & Meteorite Unit