
**Cultural Resources Management Impact Assessment:
(PORTION OF) UITDRAAI 33,
PRIESKA DISTRICT, NORTHERN CAPE, SOUTH AFRICA**

2005-06-29



McGREGOR MUSEUM, KIMBERLEY

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REPORT TO –

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ATTENTION –

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1) Project Brief

The McGregor Museum CRM Unit was contracted by the Environmental Consultant, Digby Wells & Accosiates, on behalf of the developer, Diamond Core Resources, to conduct a Phase 1 Cultural Resources Management (CRM) impact assessment. The impact assessment was requested in compliance with prospecting and mining right environmental requirements as set out in the Mineral and Petroleum Resources Development Act, No 28 of 2002, represented by the Department of Minerals and Energy (DME), the particulars of which are described in the National Environmental Management Act, No 107 of 1998, represented by the Department of Environmental Affairs & Tourism (DEAT) and the National Heritage Resources Act, No 25 of 1999, represented by the South African Heritage Resources Agency (SAHRA).

This document reports on the findings of the CRM assessment.

2) The CRM Assessment

PROPERTY DESCRIPTION:

The proposed development is situated on (a portion of) the property Uitdraai 33, in the Prieska District of the Northern Cape, South Africa (1:50,000 map reference: 2922DB Prieska-oos).

DEVELOPMENT IMPACT:

Proposed development; core prospecting with the intent to mine, will impact on an approximate 2 x 1 km (200 ha) area. The development area comprises a terrace bordered to the north east and south west by a distinctive meander in the lower Orange River. It is the developers' intention to not impact on the natural outline of the terrace. Development impact will be restricted to the surface area of the terrace and the southern terrace slope.

An existing access road runs across the terrace surface. The road will be retained and will carry main traffic throughout prospecting and mining.

Core prospecting will directly impact on a number of areas ($\leq 30 \times 30$ cm) at initial intervals of approximately 100 x 100 m. Secondary coring intervals will decrease, subject to core analysis. The aim of core prospecting is to define future mining management; it is expected that the total terrace surface will be mined. One pick-up (bakkie) and a compressor (with trailer) will be used to conduct core prospecting. Impact throughout the prospecting period will thus be limited.

Mining is expected to impact on the total of the terrace surface. Mechanised mining equipment will be used and will result in the total loss of surface and sub-surface context of cultural material.

A processing plant will be erected on the southern side of the terrace slope, directly adjacent to the existing access road and at an (un-rehabilitated) area already impacted on by former mining.

CRM ASSESSMENT METHODOLOGY:

One McGregor Museum CRM Unit staff member, accompanied by Mr. Martin Swanepoel (Diamond Core Resources) visited the site on 2005-06-21. The assessment was limited to a Phase 1 surface survey. No excavation or subsurface testing was done since a permit from SAHRA is required to do so. GPS co-ordinates were taken with a Garmin e-trex vista GPS (5-8 m error margin). Photographic documentation was done with a Casio exilim EX-S2 camera.

The assessment covered:

- i. The access road to the proposed prospecting and mining area;
- ii. The un-rehabilitated former mining area (terrace slope) where the processing plant will be erected, and
- iii. The terrace surface.

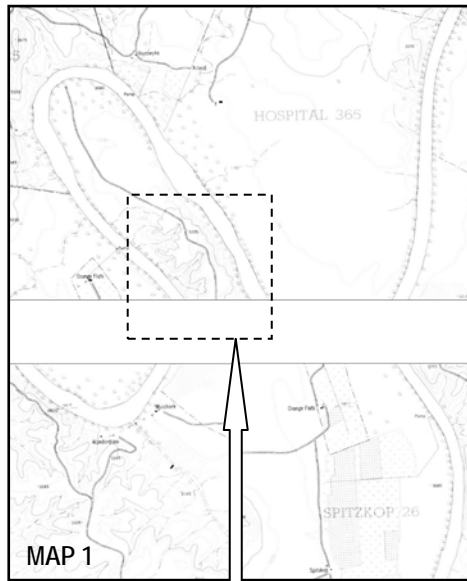
In accordance with current legislation no development had started prior to the CRM impact assessment.

CRM ASSESSMENT FINDINGS:

i THE ACCESS ROAD:

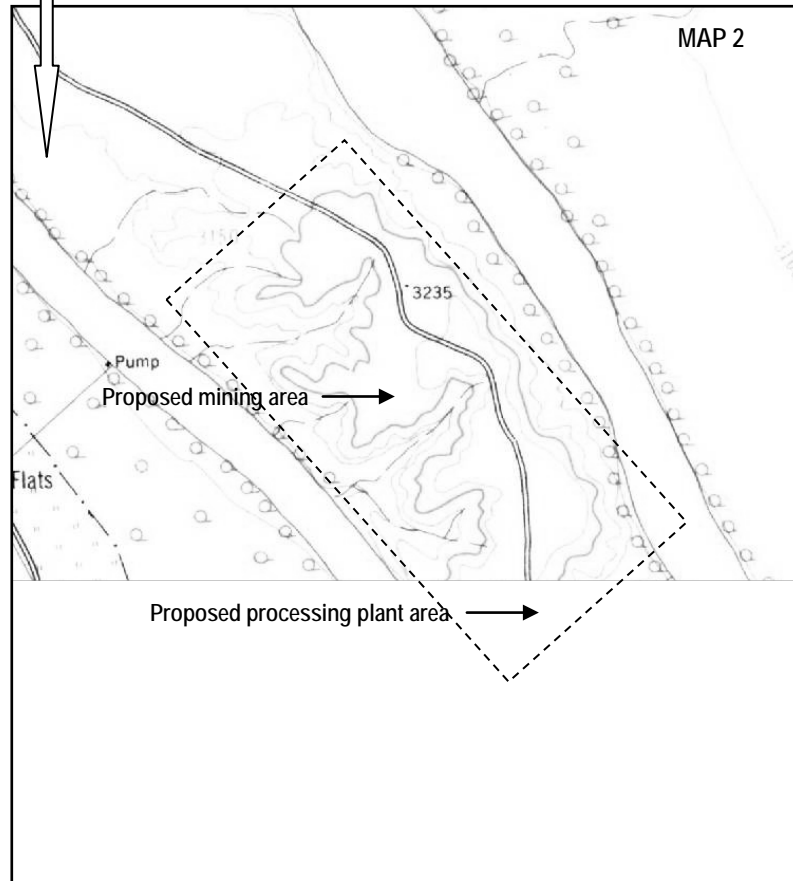
Access to the proposed development area is from the Prieska-Hopetown road via an existing farm road on Uitdraai 33 that currently runs across the terrace surface. The farm road is longer than 300 m and will form an integral part of the mining area; impact thereon or any alteration thereto is therefore covered by the M&PRDA (2002) and the NHRA (1999). No cultural heritage resources as defined in the Act were identified (to the point of

actual mining impact). Increased traffic on the road due to the development may well necessitate the broadening of the road, an activity that will not impact on any identified cultural heritage resources.



MAP 1:
Extract of the 1:50,000 2922DB Prieska-005 map indicating the general geographical locality of the proposed Uitdraai 33 development

MAP 2:
Close-up of the proposed terrace development area



ii THE PROCESSING PLANT AREA:

The access road runs through the proposed processing plant area at the slope of the terrace. The area thus forms part of the proposed mining area, any impact or alteration to the area is covered by the M&PRDA (2002) and the NHRA (1999). The area is characterised by un-rehabilitated dumps from former mining activity. No cultural heritage resources as defined in the NHRA (1999) were identified.

iii THE MINING AREA:

The terrace surface (approximately 200 ha) will form the focal point of the development; environmental regulations pertaining to any impact or alteration to the area is addressed in the M&PRDA (2002), NEMA (1998) and the NHRA (1999).

The total of the terrace surface can be described as an exceptionally large Middle Stone Age (MSA) site (S1). The site is characterised by MSA formal tools, flakes and waste material made primarily from jasperlite and to a lesser extent from hornfels, banded ironstone and jasper; raw material resources evidently available on site.

It seems as though the richest concentration of artefactual material is located to the eastern side of the access road, with quantities gradually decreasing towards the west.

The rich array of surface or *ex situ* artefactual material may well be the result of an eroded context. Remaining sub-surface context is expected to be relatively shallow (surface - ≤1 m); the assumed anthropic sterile calcrete substrate is often visible on the surface. Inspection of the terrace slope supported the conclusion of a shallow Hutton sand context.

No clear evidence for Later Stone Age (LSA) use of the site was recognised. Despite the fact that a number of smaller tools (generally associated with the LSA) were identified, these often form an integral part of MSA assemblages. Inferences relating to LSA use of the area may well, through further investigation, be stratigraphically verified, or by comparison with *in situ* MSA assemblages.

No Earlier Stone Age (ESA) artefacts were identified. However, Mr Swanepoel reported on what seems to have been a single handaxe having apparently been picked-up from the terrace surface in the distant past.

The site can be described as of high cultural significance as defined and protected by the NHRA (1999). Development in the area will need to be preceded by a Phase 2 archaeological project to salvage a representative sample of the site.

Development section	Recorded sites / findplaces / features	Image nr	Co-ordinates	
			South	East
Access road	N/A			
Terrace surface	Identified MSA site (S1)			
		Image 1	S 29°33'36.5"	E 22°51'57.4"
		Image 2	S 29°33'47.2"	E 22°51'48.7"
		Image 3	S 29°33'51.7"	E 22°52'14.4"
		Image 4	S 29°34'08.3"	E 22°51'57.0"
		Image 5	S 29°34'20.8"	E 22°52'25.6"
		Image 6	S 29°34'16.2"	E 22°52'30.0"
		Image 7	S 29°34'39.3"	E 22°52'17.3"
Processing plant	N/A			

TABLE 1: GPS co-ordinates of the proposed development area, identified and associated sites and features

3) Image Gallery



IMAGE 1



IMAGE 2



IMAGE 3



IMAGE 4



IMAGE 5



IMAGE 6



IMAGE 7

4) Conclusion

The focal point of the development, namely mining of the terrace surface, will directly impact on a MSA site (S1) of high cultural significance as defined and protected by the NHRA (1999).

No cultural heritage resources were identified on the proposed southern terrace slope locality of the processing plant or on, or directly adjacent to the access road.

5) Recommendations

PROSPECTING:

I would recommend that prospecting in the area proceeds as applied for.

No cultural heritage resources were identified on, or immediately adjacent to the access road up to the point where the road cuts across the terrace surface. Negative impact of the road on the terrace surface and the identified MSA site (S1) has already been done (prior to current prospecting, mining and development environmental requirements). Taken into account the vast extent of the site, past impact of the road on the MSA site can be described as relatively minimal. Proposed prospecting will not affect the site to any noteworthy extent.

MINING:

In the event of the developer applying for a mining lease / right, I would recommend that mining proceed provided the developer complies with the following requirements:

- i. Access road - N/A
- ii. Processing plant / terrace slope - N/A
- iii. Mining / terrace surface - Mining be preceded by a Phase 2 archaeological project to salvage and interpret a representative sample of the identified MSA (S1) site.

NOTE: Phase 2 archaeological salvage work should be done by an ASAPA (Association of South African Professional Archaeologists) accredited CRM archaeologist, and in accordance with an agency agreement between SAHRA and the Northern Cape PHRA (Provincial Heritage Resources Agency), under a permit issued by SAHRA.

Permit applications for Phase 2 archaeological work should be submitted by the appointed ASAPA accredited CRM archaeologist to SAHRA (permits are not transferable).

SAHRA permit review committee members have an approximate period of 8 weeks in which to reply to applications. Please ensure that a formal request to apply for a permit is done in due time to ensure that development is not impacted on unnecessarily.

PHASE 2 MITIGATION RECOMMENDATIONS (MCGREGOR MUSEUM CRM UNIT)

I would recommend that a Phase 2 archaeological project with the aim to salvage a representative sample of the MSA site (S1) to interpret artefactual content, site context, geographical locality and MSA environmental exploitation should include:

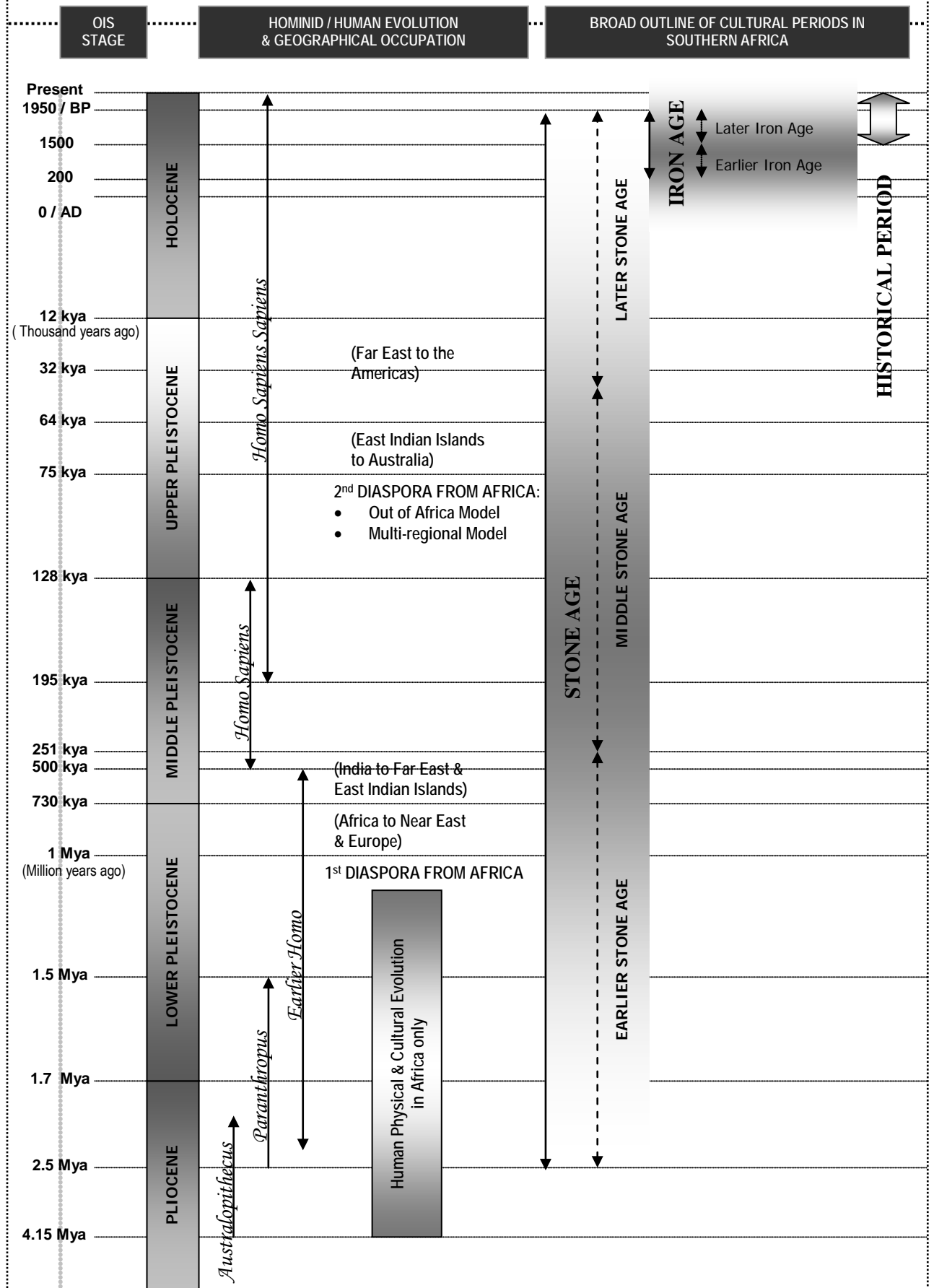
- i. A surface survey of the immediate terrace surroundings;
- ii. 2 Salvage excavations of $\leq 7 \times 7 \text{ m}$ ($\leq 49 \text{ m}^2$) each, situated on the eastern side of the access road;
- iii. 3 Surface collection (control) areas of $\leq 2 \times 2 \text{ m}$ (4 m^2) each, located at various intervals along the western side of the access road;
- iv. Analysis of collected data and excavated material; and
- v. Documentation of the findings.

6) Acknowledgements

I would like to thank Mr. Martin Swanepoel (Diamond Core Resources) for accompanying me to the site and for supplying prospecting, mining and on site information.

McGregor Museum, Department of Archaeology, CRM Unit		
Name	Designation	ASAPA Accreditation
David Morris	Head of Archaeology	Principal Investigator
Karen van Ryneveld	Archaeologist	Field Director

Schematic Outline of the Pre-historic and Historic Periods



National Heritage Resources Act (No 25 of 1999)

DEFINITIONS

Section 2

In this Act, unless the context requires otherwise:

- ii. “*Archaeological*” means –
 - a) material remains resulting from human activity which are in a state of disuse and are in or on land and which are older than 100 years, including artefacts, human and hominid remains and artificial features and structures;
 - b) rock art, being any form of painting, engraving or other graphic representation on a fixed rock surface or loose rock or stone, which was executed by human agency and which is older than 100 years, including any area within 10 m of such representation;
 - c) wrecks, being any vessel or aircraft, or any part thereof, which was wrecked in South Africa, whether on land, in the internal waters, the territorial waters or in the maritime culture zone of the Republic,... and any cargo, debris, or artefacts found or associated therewith, which is older than 60 years or which SAHRA considers to be worthy of conservation.
- viii. “*Development*” means any physical intervention, excavation or action, other than those caused by natural forces, which may in the opinion of a heritage authority in any way result in a change to the nature, appearance or physical nature of a place, or influence its stability and future well-being, including –
 - a) construction, alteration, demolition, removal or change of use of a place or structure at a place;
 - b) carrying out any works on or over or under a place;
 - c) subdivision or consolidation of land comprising, a place, including the structures or airspace of a place;
 - d) constructing or putting up for display signs or hoardings;
 - e) any change to the natural or existing condition or topography of land; and
 - f) any removal or destruction of trees, or removal of vegetation or topsoil;
- xiii. “*Grave*” means a place of interment and includes the contents, headstone or other marker of such a place, and any other structure on or associated with such place;
- xxi. “*Living heritage*” means the intangible aspects of inherited culture, and may include –
 - a) cultural tradition;
 - b) oral history;
 - c) performance;
 - d) ritual;
 - e) popular memory;
 - f) skills and techniques;
 - g) indigenous knowledge systems; and
 - h) the holistic approach to nature, society and social relationships.
- xxxii. “*Palaeontological*” means any fossilised remains or fossil trace of animals or plants which lived in the geological past, other than fossil fuels or fossiliferous rock intended for industrial use, and any site which contains such fossilised remains or trances;
- xli. “*Site*” means any area of land, including land covered by water, and including any structures or objects thereon;
- xliv. “*Structure*” means any building, works, device or other facility made by people and which is fixed to land, and includes any fixtures, fittings and equipment associated therewith;

NATIONAL ESTATE

Section 3

- 1) For the purposes of this Act, those heritage resources of South Africa which are of cultural significance or other special value for the present community and for future generations must be considered part of the national estate and fall within the sphere of operations of heritage resources authorities.
- 2) Without limiting the generality of subsection 1), the national estate may include –
 - a) places, buildings, structures and equipment of cultural significance;
 - b) places to which oral traditions are attached or which are associated with living heritage;
 - c) historical settlements and townscapes;
 - d) landscapes and natural features of cultural significance;
 - e) geological sites of scientific or cultural importance
 - f) archaeological and palaeontological sites;
 - g) graves and burial grounds, including –
 - i. ancestral graves;
 - ii. royal graves and graves of traditional leaders;
 - iii. graves of victims of conflict
 - iv. graves of individuals designated by the Minister by notice in the Gazette;
 - v. historical graves and cemeteries; and
 - vi. other human remains which are not covered in terms of the Human Tissue Act, 1983 (Act No 65 of 1983)

- h) sites of significance relating to the history of slavery in South Africa;
- i) movable objects, including –
 - i. objects recovered from the soil or waters of South Africa, including archaeological and palaeontological objects and material, meteorites and rare geological specimens;
 - ii. objects to which oral traditions are attached or which are associated with living heritage;
 - iii. ethnographic art and objects;
 - iv. military objects;
 - v. objects of decorative or fine art;
 - vi. objects of scientific or technological interest; and
 - vii. books, records, documents, photographic positives and negatives, graphic, film or video material or sound recordings, excluding those that are public records as defined in section 1 xiv) of the National Archives of South Africa Act, 1996 (Act No 43 of 1996).

STRUCTURES

Section 34

- 1) No person may alter or demolish any structure or part of a structure which is older than 60 years without a permit issued by the relevant provincial heritage resources authority.

ARCHAEOLOGY, PALAEOLOGY AND METEORITES

Section 35

- 3) Any person who discovers archaeological or palaeontological objects or material or a meteorite in the course of development or agricultural activity must immediately report the find to the responsible heritage resources authority, or to the nearest local authority offices or museum, which must immediately notify such heritage resources authority.
- 4) No person may, without a permit issued by the responsible heritage resources authority –
 - a) destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or any meteorite;
 - b) destroy, damage, excavate, remove from its original position, collect or own any archaeological or palaeontological material or object or any meteorite;
 - c) trade in, sell for private gain, export or attempt to export from the Republic any category of archaeological or palaeontological material or object, or any meteorite; or
 - d) bring onto or use at an archaeological or palaeontological site any excavation equipment or any equipment which assists in the detection or recovery of metals or archaeological and palaeontological material or objects, or use such equipment for the recovery of meteorites.
- 5) When the responsible heritage resources authority has reasonable cause to believe that any activity or development which will destroy, damage or alter any archaeological or palaeontological site is under way, and where no application for a permit has been submitted and no heritage resources management procedure in terms of section 38 has been followed, it may –
 - a) serve on the owner or occupier of the site or on the person undertaking such development an order for the development to cease immediately for such period as is specified in the order;
 - b) carry out an investigation for the purpose of obtaining information on whether or not an archaeological or palaeontological site exists and whether mitigation is necessary;
 - c) if mitigation is deemed by the heritage resources authority to be necessary, assist the person on whom the order has been served under paragraph a) to apply for a permit as required in subsection 4); and
 - d) recover the costs of such investigation from the owner or occupier of the land on which it is believed an archaeological or palaeontological site is located or from the person proposing to undertake the development if no application for a permit is received within two weeks of the order being served.
- 6) The responsible heritage resources authority may, after consultation with the owner of the land on which an archaeological or palaeontological site or meteorite is situated, serve a notice on the owner or any other controlling authority, to prevent activities within a specified distance from such site or meteorite.

BURIAL GROUNDS AND GRAVES

Section 36

- 3) No person may, without a permit issued by SAHRA or a provincial heritage resources authority –
 - a) destroy, damage, alter, exhume or remove from its original position or otherwise disturb the grave of a victim of conflict, or any burial ground or part thereof which contains such graves;
 - b) destroy, damage, alter, exhume, remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority; or
 - c) bring onto or use at a burial ground or grave referred to in paragraph a) or b) any excavation equipment, or any equipment which assists in the detection or recovery of metals.
- 4) SAHRA or a provincial heritage resources authority may not issue a permit for the destruction of any burial ground or grave referred to in subsection 3a) unless it is satisfied that the applicant has made satisfactory arrangements for the exhumation and re-interment of the contents of such graves, at the cost of the applicant and in accordance with any regulations made by the responsible heritage resources authority.

- 5) SAHRA or a provincial heritage resources authority may not issue a permit for any activity under subsection 3b) unless it is satisfied that the applicant has, in accordance with regulations made by the responsible heritage resources authority –
 - a) made a concerted effort to contact and consult communities and individuals who by tradition have an interest in such grave or burial ground; and
 - b) reached agreements with such communities and individuals regarding the future of such grave or burial ground.
- 6) Subject to the provision of any other law, any person who in the course of development or any other activity discovers the location of a grave, the existence of which was previously unknown, must immediately cease such activity and report the discovery to the responsible heritage resources authority which must, in co-operation with the South African Police Service and in accordance with regulations of the responsible heritage resources authority –
 - a) carry out an investigation for the purpose of obtaining information on whether or not such grave is protected in terms of this Act or is of significance to any community; and
 - b) if such grave is protected or is of significance, assist any person who or community which is a direct descendant to make arrangements for the exhumation and re-internment of the contents of such grave or, in the absence of such person or community, make any such arrangements as it deems fit.

HERITAGE RESOURCES MANAGEMENT

Section 38

- 1) Subject to the provisions of subsections 7), 8) and 9), any person who intends to undertake a development categorised as –
 - a) the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300 m in length;
 - b) the construction of a bridge or similar structure exceeding 50 m in length;
 - c) any development or other activity which will change the character of a site –
 - i. exceeding 5 000 m² in extent; or
 - ii. involving three or more existing erven or subdivisions thereof; or
 - iii. involving three or more erven or subdivisions thereof which have been consolidated within the past five years; or
 - iv. the costs which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;
 - d) the rezoning of a site exceeding 10 000 m² in extent; or
 - e) any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority,

must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.
- 2) The responsible heritage resources authority must, within 14 days of receipt of a notification in terms of subsection 1) –
 - a) if there is reason to believe that heritage resources will be affected by such development, notify the person who intends to undertake the development to submit an impact assessment report. Such report must be compiled at the cost of the person proposing the development, by a person or persons approved by the responsible heritage resources authority with relevant qualifications and experience and professional standing in heritage resources management; or
 - b) notify the person concerned that this section does not apply.
- 3) The responsible heritage resources authority must specify the information to be provided in a report required in terms of subsection 2a) ...
- 4) The report must be considered timeously by the responsible heritage resources authority which must, after consultation with the person proposing the development decide –
 - a) whether or not the development may proceed;
 - b) any limitations or conditions to be applied to the development;
 - c) what general protections in terms of this Act apply, and what formal protections may be applied, to such heritage resources;
 - d) whether compensatory action is required in respect of any heritage resources damaged or destroyed as a result of the development; and
 - e) whether the appointment of specialists is required as a condition of approval of the proposal.

APPOINTMENT AND POWERS OF HERITAGE INSPECTORS

Section 50

- 7) Subject to the provision of any other law, a heritage inspector or any other person authorised by a heritage resources authority in writing, may at all reasonable times enter upon any land or premises for the purpose of inspecting any heritage resource protected in terms of the provisions of this Act, or any other property in respect of which the heritage resources authority is exercising its functions and powers in terms of this Act, and may take photographs, make measurements and sketches and use any other means of recording information necessary for the purposes of this Act.
- 8) A heritage inspector may at any time inspect work being done under a permit issued in terms of this Act and may for that purpose at all reasonable times enter any place protected in terms of this Act.

- 9) Where a heritage inspector has reasonable grounds to suspect that an offence in terms of this Act has been, is being, or is about to be committed, the heritage inspector may with such assistance as he or she thinks necessary –
 - a) enter and search any place, premises, vehicle, vessel or craft, and for that purpose stop and detain any vehicle, vessel or craft, in or on which the heritage inspector believes, on reasonable grounds, there is evidence related to that offence;
 - b) confiscate and detain any heritage resource or evidence concerned with the commission of the offence pending any further order from the responsible heritage resources authority; and
 - c) take such action as is reasonably necessary to prevent the commission of an offence in terms of this Act.
- 10) A heritage inspector may, if there is reason to believe that any work is being done or any action is being taken in contravention of this Act or the conditions of a permit issued in terms of this Act, order the immediate cessation of such work or action pending any further order from the responsible heritage resources authority.