

McGregor Museum

Department of Archaeology



Archaeological Impact Assessment,
Portions of the farms Kraaybosch and
Dooren Kuilen, near Petrusville,
Northern Cape.

David Morris
May 2008

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Introduction

The author was contacted by Ms Betsie Meyer (Tel/Fax 053-8321834 0826036474) concerning an application for a prospecting right by Pink Potato Trading 3 (Pty) Ltd, on parts of the properties Kraaybosch 16 and Dooren Kuilen 62 (NC 30/5/1/1/2/1329). The area in question was inspected on 29-30 April 2008.

Fieldnotes and photographs generated during the visit are lodged with the McGregor Museum, Kimberley.

Legislation

The National Heritage Resources Act (No 25 of 1999) (NHRA) provides protection for archaeological resources.

It is an offence to destroy, damage, excavate, alter, or remove from its original position, or collect, any archaeological material or object (defined in the Act), without a permit issued by the South African Heritage Resources Agency (SAHRA).

Section 35 of the Act protects all archaeological and palaeontological sites and requires that anyone wishing to disturb a site must have a permit from the relevant heritage resources authority. Section 36 protects human remains older than 60 years. In order for the authority to assess whether approval may be given for any form of disturbance, a specialist report is required. No mining, prospecting or development may take place without heritage assessment and approval.

SAHRA at national level acts on an agency basis for the Provincial Heritage Resources Agency (PHRA) in the Northern Cape, where archaeological sites are concerned. Permit applications should be made to the SAHRA office in Cape Town. In the event of any archaeological material being encountered during prospecting, SAHRA should be contacted immediately (021-4624502).

Methods and limitations

A background literature/museum database search provides indications of what might be expected in the region.

During the site investigation, the area of proposed development was inspected on foot. A hand held Garmin GPS was used to define localities. Large areas were under cultivation (mealie fields), but access between these afforded an indication of what to expect in those parts of the area.

The setting consists of a low-lying flood plain adjacent to the Orange River (substantially put to the plough, with centre-pivot irrigation), a 'vlei' area which is an extension of the flood plain, occasional low mounds and ridges of shale rising from this flood plain, and, in the south, more substantial hills of dolerite, presently fenced off as a game camp.

It was anticipated that Later Stone Age material might be found on the silt banks near to the river, with possibly a mix of Stone Age material on higher ground.

Background: archaeological resources in the region

The Northern Cape has a wealth of archaeological sites (Beaumont & Morris 1990; Morris & Beaumont 2004), with locales along and adjacent to the major river systems being of particular significance. Stone Age material found in the broader region spans the Earlier, Middle and Later Stone Ages through Pleistocene and Holocene times. Late Holocene material with pottery is known to occur on the river banks, while rock engravings are richly distributed in the region (Wilman 1933; Fock & Fock 1989; Morris 1988). A particularly notable rock engraving is known from the adjacent farm Kraai Bosch, while others occur on the hills near Petrusville.

Observations

The area to be examined was defined by the following grid references

+34467.66	+3313290.93
+33021.69	+3312812.32
+32698.80	+3313054.10
+32056.52	+3315954.15
+33952.28	+3316732.16
+34914.37	+3316151.44
+34611.12	+3315970.14
+34906.45	+3315234.44
+34922.45	+3314950.14
+34924.37	+3314676.46
+34670.52	+3314726.10
+34488.01	+3314395.51
+34564.13	+3314103.37
+34525.75	+3313895.21
+34339.60	+3313675.65

Only three areas were found to have any heritage traces.

The first was the hilly area in the south of the property, which is not expected to be impacted at all by the proposed prospecting (it consists of dolerite hills). Here sporadic Stone Age material was noted, including both Middle Stone Age (e.g. at 29.95609 S; 24.65688 E) and localized patches of Lockshoek (early Holocene) material (e.g. near 29.95388 S; 24.65460 E). At no point was any significant density of stone artefacts noted: it would be difficult to define 'sites' here.



View from the hills looking to the north

The second was one of the shale mound at 29.93761 S; 24.65723 E, where heavily patinated and weathered MSA material was found strewn and deflated onto a shale/shallow soil substrate.



Highly patinated and weathered artefacts.



The artefacts lie on a shale substrate, exposed here by farming activity.

The third matched expectations in the form of Later Stone Age material occurring in small site scatters, or more widely dispersed individual artefacts, spread out along the river bank, now in a narrow strip of undisturbed ground between the mealie fields and the thick riverine vegetation (which grows on the steep river bank). Three localized situations where higher than usual densities (but, even so, mostly only about 1 artefact /m²) were found are situated at 29.95506 S; 24.66543 E, 29.95120 S; 24.66328 E, and 29.94965 S; 24.66300 E. At the first of these ceramics were also found.

Adjacent areas are substantially disturbed by farming activity, and these scatters are very likely only remnants of perhaps not very much larger river-side encampments.

Inspection of artefacts associated with ceramics indicated a few formal 'Smithfield' scrapers.

Rounded river hornfels cobbles, close to hand, had served as raw material.

Hornfels was also the favoured raw material at the MSA and Lockshoek occurrences, but evidently derived from a different source, probably amongst the hills away from the river.



Between mealie fields and river: an exposure of Later Stone Age lithics and ceramics.



Artefacts from one of the sites along the river bank, at
29.95506 S; 24.66543 E.

Note two end scrapers (one snapped), top middle. Flakes derived from water-worn river cobbles (below). The ceramics are thick grass-tempered sherds with rocker stamped decoration.

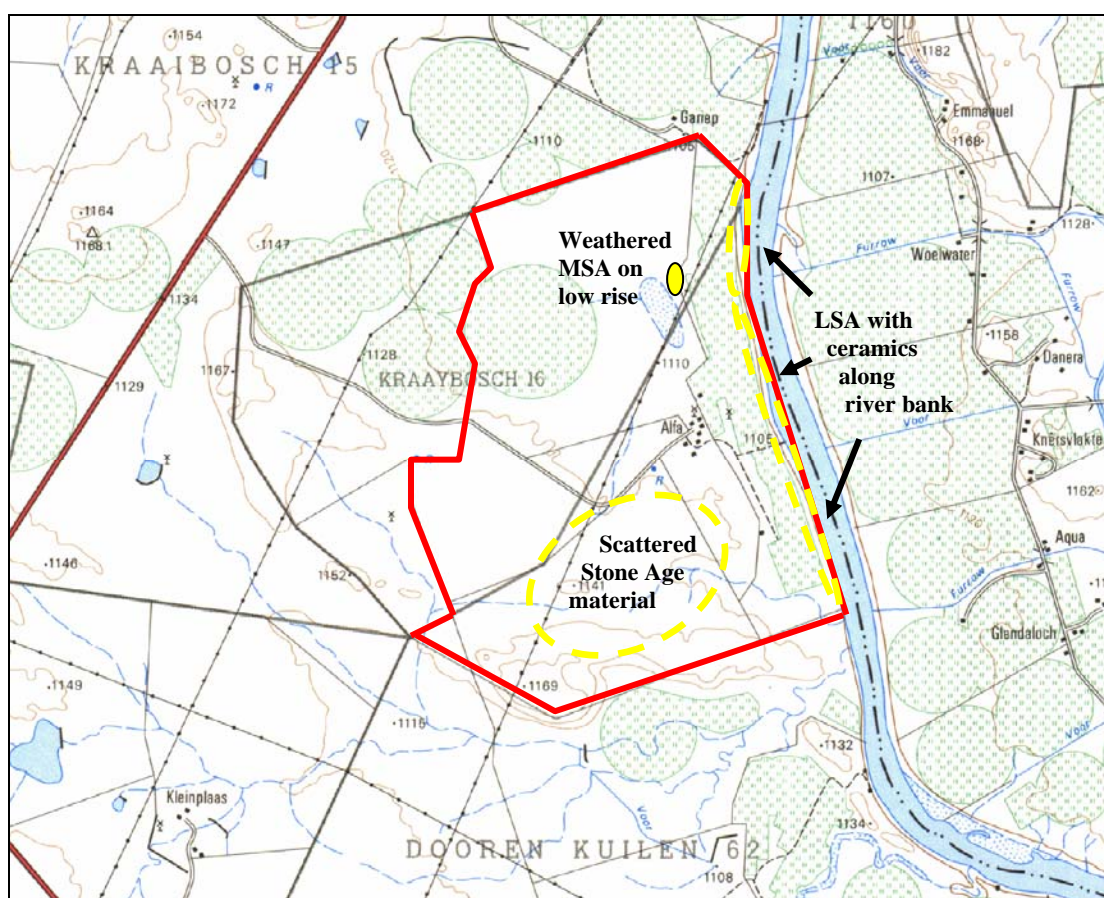


Access to areas under cultivation (above and below) was difficult but the perimeters of these fields were closely inspected. Mr Masuret pointed out that the underlying soils here are deep. No artefacts were noted adjacent to them except on the eastern edge, against the river.





A view eastwards from the hills in the south, towards the river, with cultivated lands in the middle distance. The narrow strip between the cultivated field and the river has LSA scatters.



Extract from 1:50 000 Map Sheet 2924DC showing features noted in the report.

Recommendations

Stone Age traces were found in three principal parts of the landscape examined: weathered MSA on a low shale hill in the northern half of the area surveyed; MSA and Lockshoek on and amongst the koppies in the south of the area; and LSA with one scatter yielding ceramics along the narrow strip between mealie fields and the river. Apart from the river-side sites, none of these occurrences is on an area where prospecting is likely to occur and hence there is not expected to be a major impact, except in terms of mine-related infrastructure. It is also not expected that mining would occur at the river's edge.

No colonial-era structures or graves were found.

In the event that shale hills would be impacted, these may be fossil-bearing contexts.

From an archaeological perspective it is recommended that the proposed prospecting would have an insignificant impact on the regional archaeology.

There is a proviso that archaeological sites or features could be found below the surface, particularly on the flood plain (where it is said the soils are deep). In the event that such a feature is found in the course of prospecting/mining – such as an area of substantially greater artefact density, a burial, or buried ostrich eggshell cache – SAHRA should be contacted immediately (021-4624502: Dr A. Jerardino), as well as the McGregor Museum in Kimberley (053-8392732) so that the find can be investigated and mitigation measures recommended. Heritage officials should be allowed to inspect exposed sections at any time.

Acknowledgements

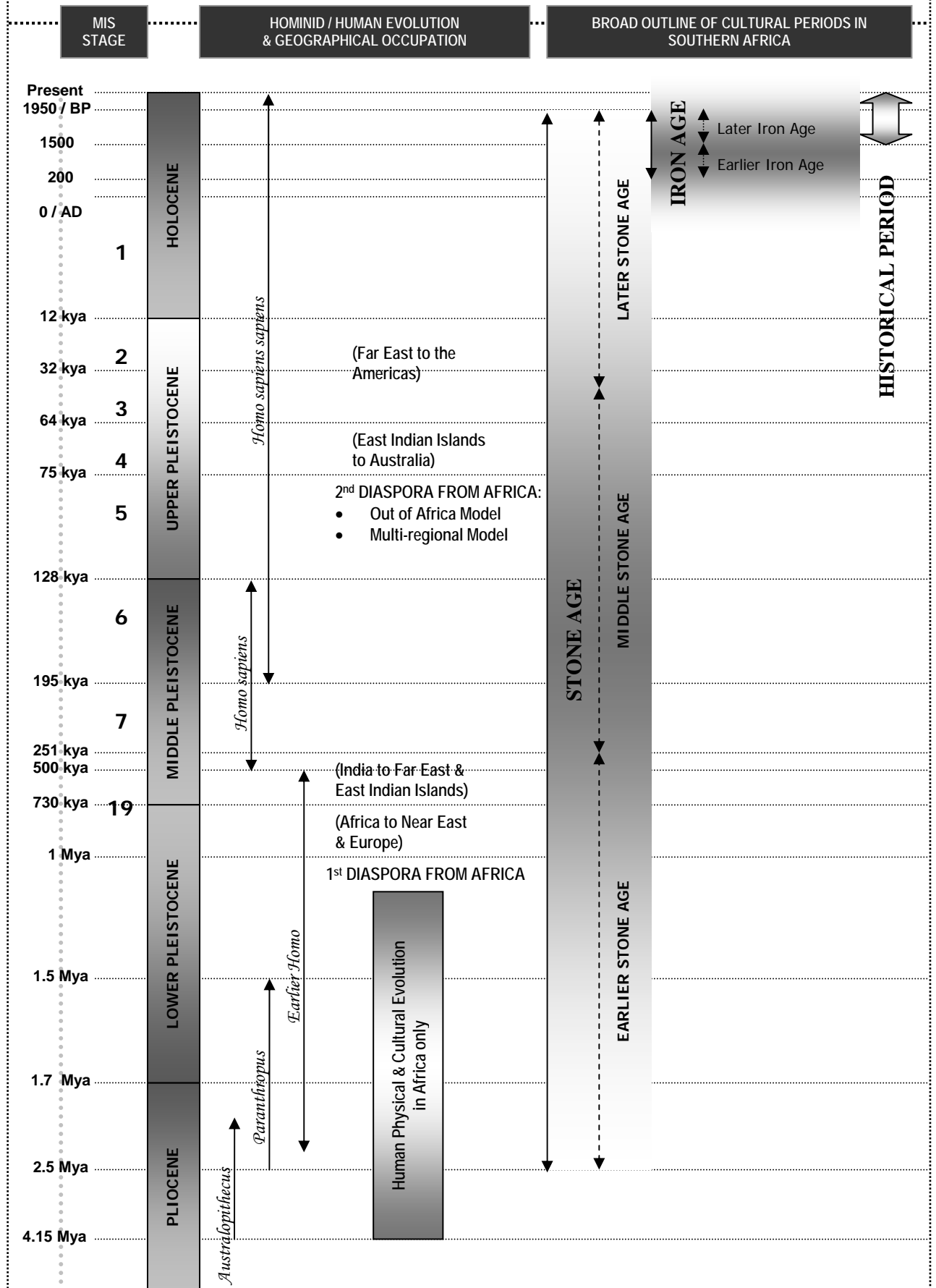
I thank Mr Elia Andrews who assisted with fieldwork. Dr Ben Spies gave permission for us to inspect his lands, and Mr Emile Masuret, farm manager, indicated access routes.

References

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Wilman, M. 1933. *Rock engravings of Griqualand West and British Bechuanaland, South Africa*. Cambridge: Deighton Bell.

Schematic Human Physical and Cultural Evolution in Africa



Extracts from the

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.
- xxxi. "*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 trace;
- 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-interment 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.

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.