PHASE 1 ARCHAEOLOGICAL IMPACT ASSESSMENT

A 1.1HA MINING DEVELOPMENT, PORTION OF ERF 1, DOUGLAS, NORTHERN CAPE, SOUTH AFRICA

DATE: 2007-12-14



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1) TERMS OF REFERENCE

The developer, Valentine J. Julius, has applied for a mining permit to the Department of Minerals and Energy (DME). The proposed, approximate 1.1ha development will be located on municipal owned land comprising of a portion of Erf 1, Douglas, Northern Cape, South Africa (DME Ref – NC30/5/1/3/2/1330MP).

1.1) DEVELOPMENT LOCATION AND IMPACT

The proposed 1.1ha mining area is located on a portion of Erf 1, Douglas, Northern Cape, South Africa (1:50,000 map reference – 2923BB).

The proposed mining site is cited approximately 1.2km north-north-west (NNW) from the centre of Douglas and within 300m north of the Vaal River. The site is situated between 2 gravel roads intersecting the R370 and R385 prior to their junction.

Mechanized mining development impact on the affected area will be total; resulting in the loss of all surface and sub-surface heritage sites / features that may be present within the proposed development area.



Figure 1: Douglas, Northern Cape, South Africa



Figure 2: Locality of the proposed 1.1ha mining development area in relation to Douglas



Figure 3: The proposed mining development area (red outline) and the AIA assessed area (blue outline) in association with identified contemporary cultural heritage resources Sites S1-S3.

Мар	SITE	ТүрЕ	DESCRIPTION	CO-ORDINATES	RECOMMENDATIONS				
CODE									
PROPOSED 1.1HA MINING DEVELOPMENT AREA, PORTION OF ERF, 1 DOUGLAS, NORTHERN CAPE									
VJ1	-	-	-	S-29.04579°; E23.76911°	-				
VJ2	-	-	-	S-29.04578°; E23.77073°	-				
VJ3	-	-	-	S-29.04636°; E23.77079°	-				
VJ4	-	-	-	S-29.04637°; E23.76897°	-				
ARCHAEOLOGICALLY ASSESSED AREA									
A	-	-	-	S-29.04551°; E23.76914°	-				
В	-	-	-	S-29.04707°; E23.76875°	-				
C	-	-	-	S-29.04747°; E23.77036°	-				
D	-	-	-	S-29.04750°; E23.77092°	-				
E	-	-	-	S-29.04521°; E23.77071°	-				
IDENTIFIED CULTURAL HERITAGE RESOURCES									
S1	Site S1	Contemporary	Structure remains	S-29.04594°; E23.77067°	Destruction				
				,	No SAHRA permit required				
S2	Site S2	Contemporary	Residential remains	S-29.04527°; E23.77094°	N/A				
S3	Site S3	Contemporary	Residence	S-29.04711°; E23.77121°	N/A				
				*					

Table 1: The proposed 1.1ha Mining development and associated AIA assessed area, portion of Erf 1, Douglas

2) THE PHASE 1 ARCHAEOLOGICAL IMPACT ASSESSMENT

2.1) ARCHAEOLOGICAL LEGISLATIVE COMPLIANCE

The Phase 1 Archaeological Impact Assessment (AIA) was requested by the South African Heritage Resources Agency (SAHRA) mandatory responsible for the National Heritage Resources Act, Act No 25 of 1999 (NHRA 1999).

The Phase 1 AIA was requested as specialist sub-section to the Environmental Impact Assessment (EIA) in compliance with requirements of the Mineral and Petroleum Resources Development Act, No 28 of 2002 (MPRDA 2002), the National Environmental Management Act, No 107 of 1998 (NEMA 1998) and associated regulations (2006), and the NHRA 1999 and associated regulations (2000).

The Phase 1 AIA aimed to locate, identify and assess the significance of cultural heritage resources, inclusive of archaeological deposits / sites, built structures older than 60 years, sites of cultural significance associated with oral histories, burial grounds and graves, graves of victims of conflict and cultural landscapes or viewscapes as defined and protected by the NHRA 1999, that may be affected by the proposed development. Palaeontological deposits / sites as defined and protected by the NHRA 1999 are not included as subject to this report.

2.2) COVERAGE AND GAP ANALYSIS

The Phase 1 AIA covered an approximate 4ha area incorporating the proposed 1.1ha mining development area.

Access to the development area is via existing gravel access roads, intersecting with the R370 / R385.

2.3) METHODOLOGY

The Phase 1 AIA was conducted on 2007-12-05 by one archaeologist. The assessment was done by foot and limited to a Phase 1 surface survey; no excavation or sub-surface testing was done. Visibility across the assessed area was very good. Sub-surface interpretations were based on limited gravel road exposures.

GPS co-ordinates were taken with a Garmin e-Trex Vista GPS (Datum: WGS84). Photographic documentation was done with a Casio X-S2 Exilim camera. A combination of Garmap and Google Earth software was used in the display of spatial information

Archaeological and cultural heritage site significance assessment and associated mitigation recommendations were done according to the system prescribed by SAHRA (2007).

SITE SIGNIFICANCE	FIELD RATING	GRADE	RECOMMENDED MITIGATION
High Significance	National Significance	Grade 1	Site conservation / Site development
High Significance	Provincial Significance	Grade 2	Site conservation / Site development
High Significance	Local Significance	Grade 3A / 3B	Site conservation or extensive mitigation prior to
			development / destruction
High / Medium	Generally Protected A	-	Site conservation or mitigation prior to development /
Significance			destruction
Medium Significance	Generally Protected B	-	Site conservation or mitigation / test excavation /
			systematic sampling / monitoring prior to or during
			development / destruction
Low Significance	Generally Protected C	-	On-site sampling, monitoring or no archaeological
			mitigation required prior to or during development /
			destruction

Table 2: Cultural Heritage Site Significance Assessment and Mitigation Recommendations

2.4) PHASE 1 AIA ASSESSMENT FINDINGS

The total of the approximate 4ha AIA assessed area comprised of virgin land, aside from a single access road leading to Site S3, a contemporary residence located south-east of the proposed mining development area. The AIA assessed area is further bordered by gravel access roads to the north and south. Scraped road sections provided for shallow sub-surface interpretation. The AIA assessed area is bordered in the south by existing mechanized mining activity along the banks of the Vaal River.



Figure 4: General view of the AIA assessed area taken towards the north-east



Figure 5: General view of the AIA assessed area with Site S3 in the background



Figure 6: General view of the southern portion of the AIA assessed area wih neighboring mining activities in the background and typical road scraped sections in the foreground



Figure 7: General view of the southern portion of the AIA assessed area

A low density Stone Age occurrence characterized the total of the assessed area. Artefact ratios (artefacts: m²) approximated 1:5. Artefacts were primarily produced from hornfels and in lesser quantities from fine grained dolorite. Primary types included scrapers, flakes and flake-blades produced by means of flake and blade technology typical of the Middle Stone Age (MSA). Relatively small artefact size may be indicative of a later MSA assignation, or a MSA / macrolithic Later Stone Age (LSA) mix. Inspection of scraped road sections, yielding a sub-surface stratigraphic section of up to 30cm, reflected artefact quantities observed on the surface; no definitive sub-surface anthropic member could be identified within exposed sections. Inspection of nearby mine dumps produced similar low quantities of artefacts, giving the impression that the surface observed low quantity presence of artefacts continues sub-surfacely. Artefacts located on mine dumps were typologically similar to those observed on the surface; no sub-surface stratigraphic sequence can thus be inferred from mine dump finds. The presence of artefacts is ascribed to their proximity to the Vaal River, where artefacts in varying quantities are known to occur in geological gravel deposits.

The find can be described as a low density Stone Age occurrence rather than a Stone Age site as defined and protected by the NHRA 1999. The Stone Age occurrence is not of National or Provincial Level significance. On a Local Level the occurrence is, based on low artefact quantities without a definite context ascribed a *Low Significance* and a *Generally Protected C* field rating. It is recommended that the occurrence be destroyed without the developer having to apply for a *Site Destruction Permit* from SAHRA.

The developer should however take cognizance of the fact that should artefacts be encountered in higher quantities at sub-surface levels during the course of development the Site Significance assignation may be altered. In such a case development in the vicinity of the find should immediately be ceased and reported to SAHRA.



Figure 8: Stone Age artefacts from the surface and road sections of the AIA assessed area



Figure 9: Stone Age artefacts located within the AIA assessed area

In addition to the low density Stone Age occurrence 3 sites were identified. Of the 3 identified sites Site S1 will directly be impacted on by the development. Sites S2 and S3 are located east of the proposed mining development area and will not be directly affected. Site S2 may be impacted on, should development require an alternative access road to Site S3, a linear development that will not exceed 300m in length.

All 3 identified sites comprise of Contemporary Cultural Heritage Resources where structures or structure remains post-dates 60 years of age. The sites are thus not formally protected under the NHRA 1999. Mining impact on none of the identified sites, whether located within the proposed mining development area or with reference to proximity thereto, are thus subject to approval by SAHRA.

Sites S1-S3 are described in Section 2.4.1) Site Descriptions.

2.4.1.1) SITE S1: Contemporary Cultural Heritage Resource - Structure remains

- S-29.04594°; E23.77067°

Site S1 is located in the eastern part of the proposed mining development area. The site comprises of the cement floor of a former structure, inferred to represent residential remains or related farming infrastructure. Floor measurements approximated 8x8m in diameter. Recent debris including metal, plastic, tin and building rubble was found adjacent to, and in direct association with the site. Building and related debris are indicative of a post 60 years of age origin of the site. The site is thus not formally protected by the NHRA 1999.

Site Significance and Recommendations: Site S1, structure remains and related recent cultural debris, postdates 60 years of age. The site is not formally protected under the NHRA 1999; neither is the site of
contemporary cultural significance or sensitivity. A SAHRA Site Significance assignation is thus
irrelevant. Proposed mining will necessitate destruction of the site. Site destruction is not subject to
SAHRA approval.

Site S1 may be destroyed without the developer having to comply with further cultural heritage mitigatory requirements. Site destruction is not subject to SAHRA approval.



Figure 10: The remaining Site S1 cement floor with related recent cultural debris in the background

Site S2 is located north-east of the proposed mining development area. The site comprises of the brick and cement remains of a recent residential structure. The roof, windows and door of the structure have in the interim been removed, leaving only the skeletal structure in tact. Origins of the site post-dates 60 years of age. The site is thus not formally protected by the NHRA 1999. Development will not directly impact on the site. Indirect impact due to DME development requirements with relation to the rerouting of the access road to Site S3, a linear development that will not exceed 300m in length, may however impact on the site. In the event, destruction of the site would not be subject to SAHRA approval.

♣ Site Significance and Recommendations: Site S2, residential remains post-dating 60 years of age, is not formally protected under the NHRA 1999. A SAHRA Site Significance rating is thus irrelevant. The proposed mining development may indirectly impact on the site, necessitating site destruction. Should secondary development requirements include destruction of the site, destruction would not be subject to SAHRA approval.

Site S2 may be destroyed without the developer having to comply with further cultural heritage mitigatory requirements. Site destruction is not subject to SAHRA approval.

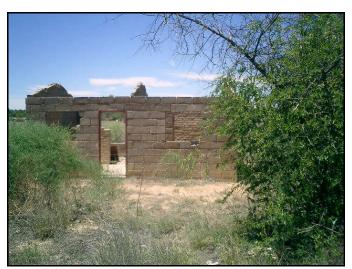


Figure 11: Site S2 recent skeletal structure remains

The contemporary residence, currently still occupied, post-dates 60 years of age; the site is by implication not protected by the NHRA 1999. The proposed mining development will not impact directly on the site. Inferred indirect impact will be restricted to the access road to the residence.

Site Significance and Recommendations: Site S3, a contemporary occupied residence, post-dates 60 years of age; the site is not formally protected under he NHRA 1999. The proposed mining development will not impact on the site.

Site S3 will not be impacted on by the proposed mining development.



Figure 12: The access road, cross-cutting the proposed mining site, leading up to the Site S3 contemporary residence in the background

2.4.1) CONCLUSION

The total of the approximate 4ha AIA assessed area, inclusive of the 1.1ha proposed mining site, is characterized by a low density Stone Age occurrence of inferred later MSA or macrolithic LSA designation. The presence of low quantity surface artefacts is echoed sub-surfacely as observed in approximate 30cm deep scraped road sections and from unidentified sub-surface levels on adjacent mine dumps. The occurrence is on a Local Level assigned a *Low Significance* and a *Generally Protected C* field rating. It is recommended that the occurrence be destroyed without the developer having to apply for a SAHRA *Site Destruction Permit*.

Should higher quantities of artefacts be observed on a sub-surface level during the course of development the developer should cease operation in the immediate vicinity and report the find to SAHRA.

In addition to the low density Stone Age occurrence 3 further sites were identified, located within the AIA assessed area and immediate surrounds:

- 1. Site S1 is located within the proposed mining development area. Development will necessitate destruction of the site. The site post dates 60 years of age and is not formally protected under the NHRA 1999. Destruction of the site is not subject to SAHRA approval.
- 2. Site S2 may be indirectly impacted on by secondary development (DME requirements to reroute the access road to Site S3). Site S2 postdates 60 years of age; the site is thus not formally protected under the NHRA 1999. Should the linear development, which will not exceed 300m in length, necessitate destruction of Site S2, destruction will not be subject to SAHRA approval.
- 3. Site S3, a contemporary residence located south-east of the proposed mining development area will not be impacted on by the proposed development.

3) **RECOMMENDATIONS**

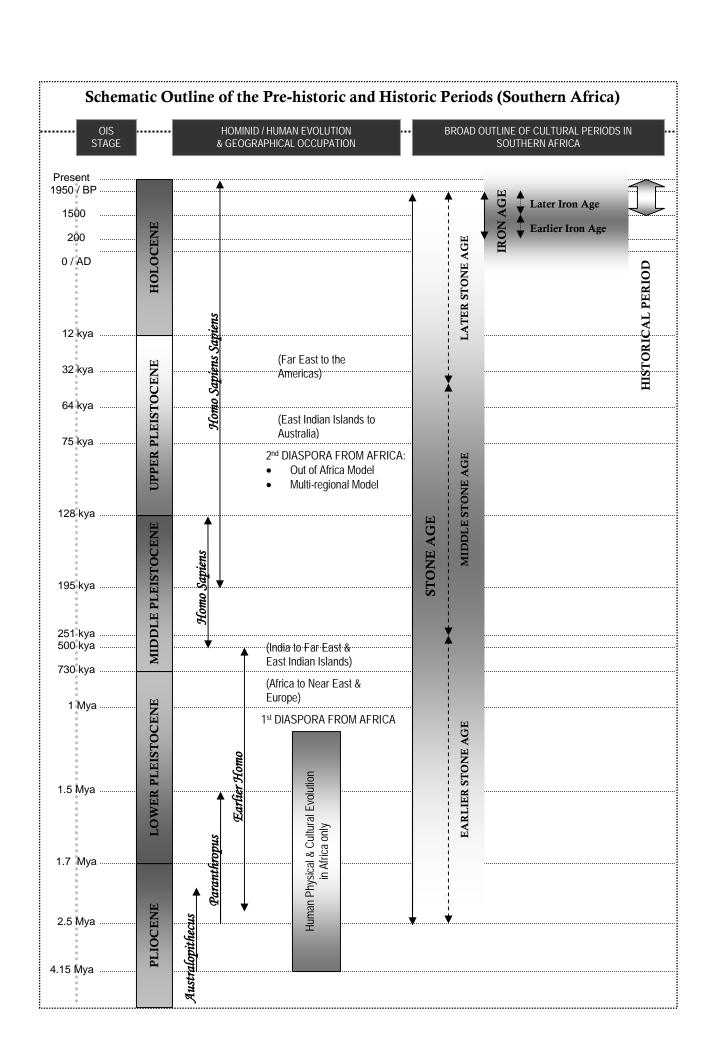
The proposed 1.1ha mining development to be located on a portion of Erf 1, Douglas, Northern Cape, will not impact on any identified cultural heritage resources as defined and protected by the NHRA 1999. It is recommended that the low density Stone Age occurrence characterizing the general area be destroyed during the course of development without the developer having to apply for a *Site Destruction Permit* from SAHRA.

Recommendations: It is recommended that, with reference to cultural heritage compliance as per the requirements of the NHRA 1999, the development proceeds as applied for.

[Should artefact quantities radically increase at any sub-surface level encountered during the course of development it is recommended that the developer cease operation in the immediate vicinity and report the find to SAHRA.]

4) REFERENCES CITED

- 1. South African Government. (No. 107) of 1998. National Environmental Management Act.
- 2. South African Government. (No. 25) of 1999. National Heritage Resource Act.
- 3. South African Heritage Resources Agency. 2007. *Minimum standards for the archaeological and heritage components of impact assessments*. Unpublished guidelines.



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;
 - 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 trance:
 - 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, PALAEONTOLOGY 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;
 - 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
 - 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
 - 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;
 - 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;
 - 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
 - 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
 - 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.