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PHASE 1 ARCHAEOLOGICAL IMPACT ASSESSMENT

**BULK RISING MAIN EAST, NGCOBO CLUSTER 6,  
EASTERN CAPE, SOUTH AFRICA**

**DATE:** 2011-04-22

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**REPORT TO:**

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**PHASE 1 ARCHAEOLOGICAL IMPACT ASSESSMENT  
BULK RISING MAIN EAST, NGCOBO CLUSTER 6,  
EASTERN CAPE, SOUTH AFRICA**

**EXECUTIVE SUMMARY**

**TERMS OF REFERENCE:**

AGES has been appointed as independent environmental consultant by Stemele Bosch Africa (SBA) / Sinakho Consulting Joint Venture, on behalf of the project proponent, the Chris Hani District Municipality (CHDM), to prepare the EIA and EMP for the *Bulk Rising Main East, Ngcobo Cluster 6* component of the greater *Ngcobo Water Backlog Project*. The *Bulk Rising Main East, Ngcobo Cluster 6* project centers on the development of approximately 10.5km of the Bulk Rising Main pipeline, associated Booster Pump Stations and a Command Reservoir, to be situated in the CHDM, Eastern Cape. ArchaeoMaps has been appointed by AGES to conduct the Phase 1 Archaeological Impact Assessment (AIA) for the project.

**THE PHASE 1 ARCHAEOLOGICAL IMPACT ASSESSMENT:**

**PROJECT AREA:** Approximately 30kms north-east of Ngcobo, CHDM, Eastern Cape [1:50,000 Map Ref – 3128AC; 3128AD and 3128CB].

**GAP ANALYSIS:** Phase 1 AIA field assessment excluded 2 areas of near vertical topography:

- 1) Between BP1 and co-ordinate 11; and
- 2) Between co-ordinates 15-16.

**METHODOLOGY:** Three day field assessment; GPS co-ordinates – Garmin GPSMap60CSx; Photographic documentation – Pentax K20D. Archaeological and cultural heritage site significance assessment and mitigation recommendations – SAHRA 2007 system.

**SUMMARY:**

Site	Type	Co-ordinates	Recommendations
BMRE1	Colonial / Contemporary – Structure (School)	S31°27'02.8"; E28°12'55.2"	<i>In situ</i> conservation (Conservation measures already in place)
BMRE2	Iron Age / Contemporary – Stock enclosure	S31°29'16.7"; E28°15'24.9"	<i>In situ</i> conservation
BMRE3	Iron Age / Contemporary – Stock enclosure	S31°29'22.1"; E28°15'26.0"	<i>In situ</i> conservation
BMRE4	Iron Age / Contemporary – Stock enclosure	S31°29'27.5"; E28°15'26.2"	<i>In situ</i> conservation
BMRE5	Iron Age / Contemporary – Stock enclosure	S31°29'28.9"; E28°15'26.5"	<i>In situ</i> conservation
BMRE6	Iron Age / Contemporary – Stock enclosure	S31°29'29.2"; E28°15'26.7"	<i>In situ</i> conservation
BMRE7	Iron Age / Contemporary – Stock enclosure	S31°29'31.1"; E28°15'27.1"	<i>In situ</i> conservation

**RECOMMENDATIONS:**

It is recommended that the proposed development, the *Bulk Rising Main East, Ngcobo Cluster 6* project, to be located in the Chris Hani Municipal District of the Eastern Cape, proceeds as applied for provided the developer complies with the abovementioned recommendations.

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## 1) TERMS OF REFERENCE

Africa Geo-Environmental Services (AGES) has been appointed as independent environmental consultant by the service provider for the *Ngcobo Water Backlog Project*, Stemele Bosch Africa (SBA) / Sinakho Consulting Joint Venture, on behalf of the project proponent, the Chris Hani District Municipality (CHDM), to prepare the Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP) for the *Bulk Rising Main East, Ngcobo Cluster 6* component of the greater *Ngcobo Water Backlog Project*. ArchaeoMaps Archaeological Consultancy has been appointed by AGES to conduct the Phase 1 Archaeological Impact Assessment (AIA) as specialist sub-section to the EIA.

### 1.1) *Development Location, Details & Impact*

The *Bulk Rising Main East, Ngcobo Cluster 6* (also called the *Nqancule-Gqaga Rising Main East, Ngcobo Cluster 6*) component of the greater *Ngcobo Water Backlog Project* is situated roughly 40kms south-east of Elliot, 30kms north-east of Ngcobo and 50kms west-north-west of Umtata in the Eastern Cape, and more specifically surrounded by the more prominent villages of Madwaleni, Singqumeni, Mboleni, Ngapezulu, Komkhulu, Ludadeni, Ngwemnyama and Hlophekazi [1:50,000 Map Ref – 3128AC; 3128AD and 3128CB] (SBA / Sinakho Consulting 2011).

Ngcobo Cluster 6 incorporates Ngcobo Wards 9, 13, 15 and 16 and comprises an estimated 125 villages with some 6,369 households and 38,214. It has been recommended that the design for water supply to the Cluster be based on the initial utilization of spring water, followed by the augmentation of this supply by the bulk supply from 2 abstraction points, once the bulk supply scheme has been implemented (SBA / Sinakho Consulting 2011):

- Abstraction Point 1 is located on the Nqancule River, from where treated water will be pumped from the proposed Gqaga Water Treatment Works (WTW) via Bulk Rising Main East to Command Reservoir 1 (Supply Area 1) and via Bulk Rising Main West to Command Reservoir 2 (Supply Area 2) from where it will gravitate to the Village Reservoirs of the respective Village Supply Schemes; and
- Abstraction Point 2 is situated on the Mbashe River, from where treated water will be pumped from the proposed Sitholeni Water Treatment Works (WTW) via a Bulk Rising Main to Command Reservoir 3 (Supply Area 3) from where it will gravitate to the Village Reservoirs of the respective Village Supply Schemes.

The current proposal focuses only on *Bulk Rising Main East, Ngcobo Cluster 6* component of the greater *Ngcobo Water Backlog Project* and includes (SBA / Sinakho Consulting 2011):

- Rising Mains (approximate 10.5km pipeline route, in places across steep and rocky terrain).
- Two Booster Pump Stations; and
- One Command Reservoir.

The *Bulk Rising Main East, Ngcobo Cluster 6* component of the project will facilitate in the supply of water to a population of 18,660 residents of the affected 53 villages (Bula, Jalisa, Komkhulu B, Ku Cibi, Kunomyayi, Kusandile, Kwandlana, lanced, Lower Gqaga – D, Lower Gqaga, Lwandlana – M, Mboleni – B, Mdeni – Z, Mhlanlane – A, Mkonko, Mnyolo Drift, Ndlunkulu – B, Ngubo, Nqala – A, Nqala – B, Sandile – A, Zabasa – C, Zabura, Ziburha, Zabaza – A, Dulathi – A, Emgudu, Esigangeni – B, Esinqumeni – A, Esinqumeni – B, Gqaga – B, Hendy Plaas – A, Lower Gqaga – A, Masameni – D, Mbabakazi – A, Mboleni – A, Mdeni AA, Mgudu – A, Mgudu – B, Mgudu AA, Mgudu AB, Mgudu AE, Ngentla, Ngwemnyame, Ncancule, Nqancule – B, Ntsinga – A, Ntsinga – B, Ntsinga – C, Ntsinga – D, Xhokonxa, Zabaza – B and Zabaza – D) (SBA / Sinakho Consulting 2011).



Figure 1: General locality of the proposed Bulk Rising Main East, Ngcobo Cluster 6 project



Figure 2: Close-up of the general locality of the proposed Bulk Rising Main East, Ngcobo Cluster 6 project

## 2) THE PHASE 1 ARCHAEOLOGICAL IMPACT ASSESSMENT

### 2.1) *Archaeological Legislative Compliance*

The Phase 1 Archaeological Impact Assessment (AIA) was requested in partial fulfillment to Heritage Impact Assessment (HIA) compliance requirements by the South African Heritage Resources Agency (SAHRA) in terms of the National Heritage Resources Act, No 25 of 1999 (NHRA 1999), with specific reference to Section 38.

The Phase 1 AIA was requested as specialist sub-section to the HIA for the Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP) of the proposed project in compliance with requirements of the National Environmental Management Act, No 107 of 1998 (NEMA 1998), the NEMA 2<sup>nd</sup> Amendment Act, No 62 of 2008 (NEMA 2008) and the NEMA Regulations (2006 & 2010), and the NHRA 1999 and NHRA Regulations (2000 & 2002).

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, burial grounds and graves, graves of victims of conflict and cultural landscapes or viewsapes 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 (Palaeontological Impact Assessment - PIA).

The Phase 1 AIA comprises of a Basic Phase 1 AIA report. The report excludes:

- A pre-feasibility or desktop study; and
- Any specialist cultural heritage studies, including socio-cultural consultation, historical architecture or cultural landscapes.

### 2.2) *Methodology & Assessor Accreditation*

Fieldwork for the Phase 1 AIA was conducted over a 3 day period (2011-04-12, 04-19 and 04-20) 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. GPS co-ordinates were taken with a Garmin GPSmap 60CSx GPS (Datum: WGS84). Photographic documentation was done with a Pentax K20D 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).

SAHRA ARCHAEOLOGICAL AND CULTURAL HERITAGE SITE SIGNIFICANCE ASSESSMENT			
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 Significance	Generally Protected A	-	Site conservation or mitigation prior to development / 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 1:** SAHRA archaeological and cultural heritage site significance assessment

The assessment was done by Karen van Ryneveld (ArchaeoMaps):

- Qualification: MSc Archaeology (2003) WITS University.
- Accreditation:
  1. 2004 – Association of Southern African Professional Archaeologists (ASAPA) – Professional Member.
  2. 2005 – ASAPA CRM Section: Accreditation – Field Director (Stone Age, Iron Age, Colonial Period).
  3. 2010 – ASAPA CRM Section: Accreditation – Principle Investigator (Stone Age).

Karen van Ryneveld is a SAHRA listed CRM archaeologist.

### 2.3) Coverage and Gap Analysis

The Phase 1 AIA covered the proposed *Bulk Rising Main East, Ngcobo Cluster 6* study site, but excluding 2 areas of near vertical topography between Booster Pump Station 1 (BP1) and co-ordinate 11 and between co-ordinates 15-16.

The Phase 1 AIA focused on an approximate 40m in width development corridor. However, visibility proved to be very good across the majority of the area allowing for a wider assessment corridor across the areas described as co-ordinate 11-15 and 16 to Command Reservoir 1 (CR1), and only deviating in places from the 40m development corridor across the steep slopes of the area described as the Gqaga Abstraction Point (Gqaga AP / GAP) to Booster Pump Station 1 (BP1).

### 2.4) Phase 1 AIA Assessment Findings

The Phase 1 AIA assessment indicated that the proposed *Bulk Rising Main East, Ngcobo Cluster 6* project will not impact directly on any identified archaeological or cultural heritage resources.

Seven (7) archaeological and cultural heritage resources (BRME1-BRME7) were identified during the assessment. Site BRME1 is located approximately 100m west of the western extremity of the proposed study site, in the vicinity of the Gqaga Abstraction Point (Gqaga AP / GAP), while the 6 contemporary cultural heritage resources labeled BRME2-BRME7 were located sheltered amongst the stony outcrops running roughly parallel with the development line route between co-ordinates 47-BP2 (Booster Pump Station 2), situated between co-ordinates 52-53, and more directly 100-250m east of the development line between co-ordinates 50-52.



- Site BRME1 may constitute an archaeological and cultural heritage site (Built Structure pre-dating 60 years of age) formally protected under the NHRA 1999.
- Cultural heritage sites BRME2-BRME7 comprises of fairly contemporary sites, most probably not pre-dating 100 years of age, thus not formally protected under the NHRA 1999, but nonetheless of contemporary cultural sensitivity significance.

The majority of the southern portion of the study site comprises of rolling hills of fairly open grassland, with steep slopes along the western extremity of the project area. Village areas traversed yielded no archaeological and cultural heritage sites, inferred to be the result of relatively recent occupation, supported by the lack of evidence of earlier habitation, often tangibly expressed by old residential remains and very prominently old cemeteries or burial places. The general lack of cemeteries or burial places supports both recent occupation and changing cultural customs; where male burial places are often encountered in close proximity to cattle enclosures, the general lack of family oriented cattle enclosures specifically along the top of the escarpment, where cattle are kept collectively in a large fenced off area, replacing private structures and management strategies, testifies to changing economically oriented customs. After a heavy rainy season lush agricultural fields may well conceal small family cemeteries: Family burials in agricultural fields have been recorded across the greater Transkei area. Burial within fenced homestead yards may well be norm.

More recent occupation of the area is evidenced by sites BRME2-BRME7, all of which comprises of small stock enclosures hidden along a rocky outcrops situated to the east of the proposed line route. In all cases naturally formed small 'cave' overhangs were transformed into enclosures by partially stacked stone walls. Enclosures are fairly small, with dung deposits indicative of goat or small livestock keeping.

Assessment of the rocky outcrops, a typical environment exploited by Later Stone Age (LSA) hunters and gatherers, yielded no LSA sites or painted shelter panels.

- [The SAHRA database (Report Mapping Project 2009) indicated no assessments having been done in the immediate surrounds of the study site. A fairly recent study (Van Ryneveld, K. 2011. *Gqaga Villages Water Reticulation Supply Scheme – Bulk water Supply Backlog: Ngcobo Cluster 6, Eastern Cape, South Africa*) traverses the proposed study site towards the north-west. However, at the time of the assessment water levels in the Nqancule River were too high to cross and the only river crossing providing more formal access to the area was washed away prohibiting assessment of the northern portion of Gqaga reticulation study site. A SAHRA ARC Comment of the Gqaga reticulation project is still pending.]



Figure 3: Archaeological and cultural heritage sites along the proposed *Bulk Rising Main East, Ngcobo Cluster 6* study site



Figure 4: Close-up of the general Site BRME2-BRME7 area in relation to the development alignment and BP2



**Figure 5:** View of the development alignment west of the Nqancule River (co-ordinates 1-4)



**Figure 6:** View from approximate co-ordinate 5 down to the Nqancule River (with Site BRME1 to the left)



**Figure 7:** General view of the western part of the study site (co-ordinate 10-BP1)



**Figure 8:** View from approximate co-ordinate 16 down to the semi-plateau of co-ordinates 12-15



**Figure 9:** View of the study site along the co-ordinate 24-29 line route portion



**Figure 10:** View of the proposed line route from approximate co-ordinate 37 back towards the village



**Figure 11:** General view of the proposed line route (vicinity of co-ordinate 40)



**Figure 12:** View from approximate co-ordinate 59 back towards the north of the study site with the Sites BRME2-BRME7 situated in the rocky outcrops towards the right middle-ground of the image



**Figure 13:** General view of the southern portion of the proposed development line route (vicinity of CR1)

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2.4.1) Site BRME1 - Colonial / Contemporary Period Structure (S31°27'02.8"; E28°12'55.2")

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Site BRME1 is situated approximately 130m west of the Gqaga Abstraction Point (Gqaga AP / GAP). Landscape topography distinguishes the site locale from the abstraction point, being situated partly up the steep slope from the abstraction points' riverbed locale. The site may well pre-date 60 years of age, but the exact date thereof is unknown, implying that the site may well be formally protected under the NHRA 1999. The site comprises of an old school building, but seemingly at present in disuse – school tables are stacked inside classrooms, but the structure is dilapidated and doors and windows have been removed. The school yard is fenced, incorporating also a few newer structures, but the fence is not well kept.

**RECOMMENDATIONS:** Site BRME1 may well pre-date 60 years of age, implying that the site may be formally protected under the NHRA 1999. The site is at present fenced (though the fence is not well kept). The site is situated approximately 130m upslope from the proposed line route development. The *Bulk Rising Main East, Ngcobo Cluster 6* project will not impact on the site. *In situ* conservation (conservation as is, without the developer having to comply with additional conservation measures) is recommended.



**Figure 14:** General view of Site BRME1

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2.4.2) Site BRME2 - Contemporary Period Stock Enclosure (S31°29'16.7"; E28°15'24.9")

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Site BRME2 is situated more or less 100m east of the proposed line route. The site is characterized by a fairly flattish, approximate 2.5m in diameter circular shaped stone overhang. The bottom of the overhang is filled in with a stacked stone wall to create the enclosure. Enclosure remains comprised of typical white ashy dung deposits and more recent dung remains signaling use of the site as a stock enclosure most probably used by young boy herders to keep sheep / goat lambs. The site can fairly confidently be dated as younger than 100 years, implying that the site is not formally protected under the NHRA 1999, but does constitute a contemporary cultural heritage site and supporting the general observation of fairly recent occupation of the plateau terrain.

**RECOMMENDATIONS:** Site BRME2 post-dates 100 years of age, implying that the site is not formally protected under the NHRA 1999. The site however comprises of a contemporary cultural heritage site, most probably still periodically in use. The site is situated approximately 100m east of the proposed development line route and, supported by fairly steep topography, will not be impacted on by the development. *In situ* conservation (conservation as is, without the developer having to comply with additional conservation measures) is recommended.



Figure 15: View of Site BRME2

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2.4.3) Site BRME3 - Contemporary Period Stock Enclosure (S31°29'22.1"; E28°15'26.0")

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Site BRME3 is situated approximately 180m east of the proposed line route study site. The site is easily identifiable by a fairly large overhang. The cave-like inside of the shelter remains open with stone walling restricted to a rough circular shape, measuring approximately 1.5-2m in diameter, constructed against the southern entrance wall of the shelter. Shelter floor deposits comprised only of fine grained soil, washed in during rainy weather, while deposits inside the circular shaped wall structure yielded fairly recent livestock dung. No artefactual remains were found in association with the stone stacked walls. The site is again relatively dated as post-dating 100 years of age: The site is not formally protected under the NHRA 1999, but does constitute a contemporary cultural heritage site.

**RECOMMENDATIONS:** Site BRME3 post-dates 100 years of age; the site is not formally protected under the NHRA 1999, but does constitute a contemporary cultural heritage site, perhaps still periodically in use. The site is situated approximately 180m east of the proposed development alignment amidst the rocky outcrops running east of the line route. The site will not be impacted on by development, based on both proximity from the proposed line route and more specifically on landscape gradient. *In situ* conservation (conservation as is, without the developer having to comply with additional conservation measures) is recommended.



**Figure 16:** General view of Site BRME3



**Figure 17:** Close-up of the stone wall remains at Site BRME3



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2.4.4) Site BRME4 - Contemporary Period Stock Enclosure (S31°29'27.5"; E28°15'26.2")

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Site BRME4 is characterized by a small wall of no more than 0.8m in width covering a crevice in the natural stone outcrops to create a cave-like enclosure of approximately 3x5m. The floor of the cave-like enclosure is covered with silty washed-in material, ashy white dung deposits and more recent dung, indicating fairly recent use of the site. No residential or artefact remains were found in association with the site; inferred to have been solely used for stock keeping purposes. The site is situated approximately 220m east of the proposed line route. The site can reasonably be inferred to post-date 100 years of age, thus not formally protected under the NHRA 1999. The site does constitute a contemporary cultural heritage site.

**RECOMMENDATIONS:** Site BRME4 post-dates 100 years of age; the site is not formally protected under the NHRA 1999. The site constitutes a contemporary cultural heritage site, most probably still periodically in use. The site is situated more or less 220m east of the proposed development alignment and will not be impacted on. *In situ* conservation (conservation as is, without the developer having to comply with additional conservation measures) is recommended.



**Figure 18:** General view of Site BRME4

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2.4.5) Site BRME5 - Contemporary Period Stock Enclosure (S31°29'28.9"; E28°15'26.5")

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The Site BRME5 enclosure is again mainly formed by natural stone, creating a cave-like stock enclosure. Small built-up walls cover crevices to cover entrances. Built-up walls are extremely limited, but serving to enclose a cave-like interior of about 3 roughly defined areas that can be used for stock keeping. Shelter floor deposits comprised only of fine grained soil, washed in during rainy weather, together with fairly recent livestock dung. No artefactual remains were found in association with the site. The site is relatively dated as younger than 100 years and is evidently still periodically in use. Site BRME5 is not formally protected under the NHRA 1999 and represents a contemporary cultural heritage site.

**RECOMMENDATIONS:** Site BRME5 post-dates 100 years of age; the site is not formally protected under the NHRA 1999. The site represents a contemporary cultural heritage site evidently still periodically in use. The site is situated approximately 240m from the proposed development alignment and will not be impacted on. *In situ* conservation (conservation as is, without the developer having to comply with additional conservation measures) is recommended.



**Figure 19:** General view of Site BRME5



**Figure 20:** View of the cave-like enclosure interior, with dung deposits on the floor of the enclosure

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2.4.6) Site BRME6 - Contemporary Period Stock Enclosure (S31°29'29.2"; E28°15'26.7")

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Site BRME6 is situated approximately 240m from the proposed development alignment. The site is identified by low rising stone walls covering the entrance to a naturally formed shelter in the rocky outcrops. Stone walls cover not only the entrance to the shelter and though more limited is also present inside the shelter to create a closed-off 'chamber'. Floor deposits comprise of silty washed-in material, ashy white dung deposits and more recent dung, indicative of the use of the shelter for smaller livestock keeping, most probably goat. Again no indicators of residential or artefact remains were found. The site can fairly confidently be dated as post-dating 100 years of age, implying that the site is not formally protected under the NHRA 1999. The site does represent a contemporary cultural heritage site.

**RECOMMENDATIONS:** Site BRME6 post-dates 100 years of age; the site is not formally protected under the NHRA 1999. The site constitutes a contemporary cultural heritage site, still in periodic use. The site is situated approximately 240m east of the proposed development alignment amidst the natural stony outcrops running east of the site. The site will not be impacted on by the development. It is recommended that the site be conserved *in situ* (conservation as is, without the developer having to comply with additional conservation measures).



**Figure 21:** General view of Site BRME6



**Figure 22:** View from Site BRME6 over a portion of the study site in the valley below

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2.4.7) Site BRME7 - Contemporary Period Stock Enclosure (S31°29'31.1"; E28°15'27.1")

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The Site BRME7 locality is characterized by a shelter overhang enclosed by a rough approximate 4-6m in length, low rising stone stacked wall to create a rough circular shaped livestock 'kraal'. Feature floor assemblages comprised of white ashy deposits indicative of decayed dung as well as more recent dung deposits, implying that the site may well have been used in the not too distant past. The site is situated approximately 250m east of the proposed development line route. The site can reasonably be relatively dated as post-dating 100 years of age; the site is by implication not formally protected under the NHRA 1999 and constitutes a contemporary cultural heritage site.

**RECOMMENDATIONS:** Site BRME7 post-dates 100 years of age; the site is not formally protected under the NHRA 1999. The site constitutes a contemporary cultural heritage site, most possibly still in periodic use. The site is located more or less 250m east of the proposed development alignment amidst the rocky outcrops running east thereof. The site will not be impacted on by the development. *In situ* conservation (conservation as is, without the developer having to comply with additional conservation measures) is recommended.



Figure 23: General view of the Site BRME7 overhang and shelter



Figure 24: Close-up of Site BRME7

### 3) CONCLUSION AND RECOMMENDATIONS

With reference to cultural heritage compliance as per the requirements of the NHRA 1999 it is recommended that the proposed *Bulk Rising Main East, Ngcobo Cluster 6* project, to be situated near Ngcobo in the Eastern Cape proceeds as applied for provided the developer complies with the following requirements:

Seven (7) archaeological and cultural heritage sites (Sites BRME1-BRME7) were identified during the Phase 1 AIA of the proposed project:

- Site BRME1 comprises of a Colonial / Contemporary Period Structure. The exact date of the structure (school) is unknown; the site may however pre-date 60 years of age, implying that the site may well be formally protected under the NHRA 1999. The site is at present fenced with an access gate, thus complying with SAHRA Minimum Site Conservation Standards. No additional conservation measures on behalf of the developer are required prior to development.
- Sites BRME2-BRME7 are all classified as Contemporary Cultural Heritage Sites (livestock enclosures). Sites are reasonably inferred to post-date 100 years of age; the sites are by implication not formally protected under the NHRA 1999. The sites are all located roughly between 100-250m east of the proposed development alignment, all situated along a rocky ridge that runs east of the proposed study site. Despite the fact that these sites are not formally protected under the NHRA 1999 it is recommended that the sites be conserved *in situ* (conservation as is without the developer having to comply with additional conservation requirements prior to development).

BULK RISING MAIN EAST, NGCOBO CLUSTER 6					
CHRIS HANI DISTRICT MUNICIPALITY, EASTERN CAPE					
MAP CODE	SITE	TYPE / PERIOD	DESCRIPTION	CO-ORDINATES	PRELIMINARY RECOMMENDATIONS
<b>Development Co-ordinates</b>					
GAP	Gqaga AP	-	-	S31°27'02.6"; E28°13'00.8"	N/A
BP1	BP1	-	-	S31°26'59.0"; E28°13'33.9"	N/A
BP2	BP2	-	-	S31°29'33.7"; E28°15'17.2"	N/A
CR1	CR1	-	-	S31°30'15.4"; E28°15'17.2"	N/A
1	-	-	-	S31°27'02.9"; E28°12'59.8"	N/A
2	-	-	-	S31°27'02.0"; E28°12'59.0"	N/A
3	-	-	-	S31°26'59.3"; E28°12'59.5"	N/A
4	-	-	-	S31°26'57.3"; E28°13'01.2"	N/A
5	-	-	-	S31°27'02.1"; E28°13'18.1"	N/A
6	-	-	-	S31°27'05.1"; E28°13'20.7"	N/A
7	-	-	-	S31°27'05.9"; E28°13'22.1"	N/A
8	-	-	-	S31°27'05.9"; E28°13'24.4"	N/A
9	-	-	-	S31°27'03.5"; E28°13'25.0"	N/A
10	-	-	-	S31°27'01.8"; E28°13'26.9"	N/A
11	-	-	-	S31°27'00.7"; E28°13'45.4"	N/A
12	-	-	-	S31°27'08.5"; E28°13'48.6"	N/A
13	-	-	-	S31°27'14.2"; E28°13'46.2"	N/A
14	-	-	-	S31°27'19.9"; E28°13'41.3"	N/A
15	-	-	-	S31°27'29.1"; E28°13'41.3"	N/A
16	-	-	-	S31°27'35.0"; E28°13'48.4"	N/A
17	-	-	-	S31°27'38.9"; E28°14'12.6"	N/A
18	-	-	-	S31°27'41.6"; E28°14'15.6"	N/A

19	-	-	-	S31°27'45.5"; E28°14'18.9"	N/A
20	-	-	-	S31°27'48.1"; E28°14'23.3"	N/A
21	-	-	-	S31°27'51.8"; E28°14'26.8"	N/A
22	-	-	-	S31°27'53.5"; E28°14'29.4"	N/A
23	-	-	-	S31°27'54.1"; E28°14'31.6"	N/A
24	-	-	-	S31°27'53.0"; E28°14'36.8"	N/A
25	-	-	-	S31°27'53.2"; E28°14'39.2"	N/A
26	-	-	-	S31°27'55.2"; E28°14'44.4"	N/A
27	-	-	-	S31°28'00.7"; E28°15'01.5"	N/A
28	-	-	-	S31°28'02.3"; E28°15'07.5"	N/A
29	-	-	-	S31°28'03.1"; E28°15'15.0"	N/A
30	-	-	-	S31°28'01.8"; E28°15'18.2"	N/A
31	-	-	-	S31°28'01.1"; E28°15'21.3"	N/A
32	-	-	-	S31°28'02.7"; E28°15'28.4"	N/A
33	-	-	-	S31°28'03.1"; E28°15'31.7"	N/A
34	-	-	-	S31°28'05.2"; E28°15'31.2"	N/A
35	-	-	-	S31°28'12.7"; E28°15'32.0"	N/A
36	-	-	-	S31°28'18.3"; E28°15'31.7"	N/A
37	-	-	-	S31°28'22.7"; E28°15'32.1"	N/A
38	-	-	-	S31°28'26.2"; E28°15'33.0"	N/A
39	-	-	-	S31°28'33.1"; E28°15'33.4"	N/A
40	-	-	-	S31°28'37.1"; E28°15'35.1"	N/A
41	-	-	-	S31°28'39.2"; E28°15'37.1"	N/A
42	-	-	-	S31°28'46.5"; E28°15'39.6"	N/A
43	-	-	-	S31°28'48.7"; E28°15'41.4"	N/A
44	-	-	-	S31°28'50.6"; E28°15'41.4"	N/A
45	-	-	-	S31°28'52.2"; E28°15'39.9"	N/A
46	-	-	-	S31°28'53.4"; E28°15'38.0"	N/A
47	-	-	-	S31°28'56.8"; E28°15'36.6"	N/A
48	-	-	-	S31°29'04.9"; E28°15'30.3"	N/A
49	-	-	-	S31°29'09.7"; E28°15'25.0"	N/A
50	-	-	-	S31°29'15.3"; E28°15'21.2"	N/A
51	-	-	-	S31°29'22.4"; E28°15'18.5"	N/A
52	-	-	-	S31°29'29.5"; E28°15'17.4"	N/A
53	-	-	-	S31°29'39.0"; E28°15'21.8"	N/A
54	-	-	-	S31°29'43.8"; E28°15'23.8"	N/A
55	-	-	-	S31°29'49.2"; E28°15'25.0"	N/A
56	-	-	-	S31°29'55.3"; E28°15'24.7"	N/A
57	-	-	-	S31°30'00.6"; E28°15'25.4"	N/A
58	-	-	-	S31°30'03.8"; E28°15'27.8"	N/A
59	-	-	-	S31°30'07.0"; E28°15'31.0"	N/A
60	-	-	-	S31°30'09.4"; E28°15'29.8"	N/A
61	-	-	-	S31°30'11.8"; E28°15'25.5"	N/A

**Archaeological and Cultural Heritage Sites**

BRME1	BRME1	Colonial / Contemporary	Structure (School)	S31°27'02.8"; E28°12'55.2"	<i>In situ conservation (Conservation measures already in place)</i>
BRME2	BRME2	Iron Age / Contemporary	Stock enclosure	S31°29'16.7"; E28°15'24.9"	<i>In situ conservation</i>
BRME3	BRME3	Iron Age / Contemporary	Stock enclosure	S31°29'22.1"; E28°15'26.0"	<i>In situ conservation</i>
BRME4	BRME4	Iron Age / Contemporary	Stock enclosure	S31°29'27.5"; E28°15'26.2"	<i>In situ conservation</i>
BRME5	BRME5	Iron Age / Contemporary	Stock enclosure	S31°29'28.9"; E28°15'26.5"	<i>In situ conservation</i>
BRME6	BRME6	Iron Age / Contemporary	Stock enclosure	S31°29'29.2"; E28°15'26.7"	<i>In situ conservation</i>
BRME7	BRME7	Iron Age / Contemporary	Stock enclosure	S31°29'31.1"; E28°15'27.1"	<i>In situ conservation</i>

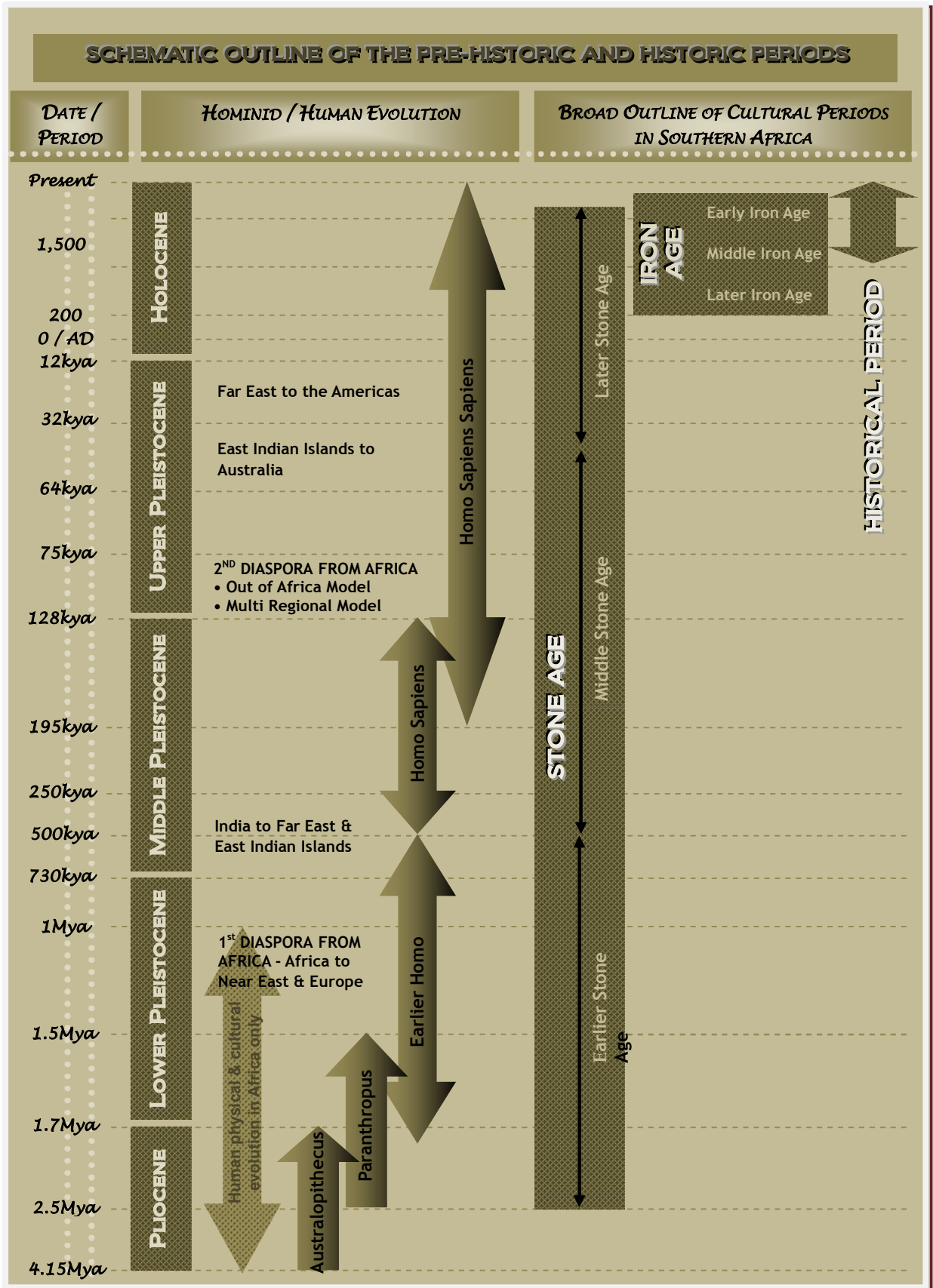
**Table 2:** Development and Phase 1 AIA assessment findings – co-ordinate details

**NOTE:** Should any archaeological or cultural heritage resources as defined and protected by the NHRA 1999 and not reported on in this report be identified during the course of development the developer should immediately cease operation in the vicinity of the find and report the site to SAHRA / an ASAPA accredited CRM archaeologist.

#### 4) REFERENCES CITED

1. South African Government. (No. 107) of 1998. *National Environmental Management Act*.
2. South African Government. (No. 28) of 2002. *Minerals and Petroleum Resources Development Act*.
3. South African Government. (No. 62) of 2008. *National Environmental Management Second Amendment Act*.
4. South African Government. (No. 25) of 1999. *National Heritage Resources Act*.
5. South African Heritage Resources Agency. 2007. *Minimum standards for the archaeological and heritage components of impact assessments*. Unpublished guidelines.
6. Stemele Bosch Africa (SBA) / Sinakho Consulting. 2011. *Preliminary Design Report – Chris Hani District Municipality – Bulk Rising Main East, Bulk Water Supply Backlog: Ngcobo Cluster 6*. Unpublished report.





# 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.
- xiii. *"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.
- xxi. *"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 m<sup>2</sup> 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 m<sup>2</sup> 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.