
PHASE 1 ARCHAEOLOGICAL IMPACT ASSESSMENT

**WATER SUPPLY BACKLOG IN CHDM:
CLUSTER 2, PHASE 2, REGIONAL SCHEME 4,
(NEAR COFIMVABA), EASTERN CAPE, SOUTH AFRICA**

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1) TERMS OF REFERENCE

Biotechnology and Environmental Specialist Consultancy (BESC) has been appointed as independent environmental consultant by Uhambiso Consult (Pty) Ltd on behalf of the project proponent, the Chris Hani District Municipality (CHDM), to prepare the Basic Assessment Report and the Environmental Management Plan Report for the proposed *Water Supply Backlog in the CHDM: Cluster 2, Phase 2, Regional Scheme 4 Project*. ArchaeoMaps Archaeological Consultancy has been appointed by BESC to conduct the Phase 1 Archaeological Impact Assessment (AIA) as specialist sub-section to the Basic Assessment Report.

1.1) *Development Location, Details & Impact*

The proposed *Water Supply Backlog in the CHDM: Cluster 2, Phase 2, Regional Scheme 4 Project* is situated approximately 40km north-west of Cofimvaba in the Eastern Cape. The project in essence comprises an expansion of the proposed *Water Supply Backlog in CHDM: Cluster 2, Phase 2, Schemes 27, 28 and 29* project, the archaeological and heritage concerns of which have been addressed in the report '*Phase 1 Archaeological Impact Assessment - Water Supply Backlog in CHDM: Cluster 2, Phase 2, Schemes 27, 28 and 29, Cofimvaba, Eastern Cape, South Africa*', Van Ryneveld, 2010. The developer is intending to expand the abovementioned development with approximately 20km; being 10km north and south of the already assessed areas respectively in order to supply water to the greater Regional Scheme 4 area.

Development details are by implication similar to that described in Van Ryneveld (2010) and BESC (2010) being:

1. Construction of pipelines with diameters between 50mm and 100mm;
2. Installation and replacement of standpipes;
3. Rehabilitation of borehole pumps, meters, mechanical and electrical equipment for boreholes;
4. Repair of equipment and ancillary works to the existing infrastructure and equipment; and
5. Minor earthworks such as the construction of berms and gabions.

By nature of the project development will be centered along existing infrastructure not only for the construction phase thereof but also for purposes of usage, management and maintenance.

Inferred development impact can be described as localized but total; implying the loss of all surface and sub-surface heritage resources in demarcated areas of development impact and the immediate surrounds.



Figure 1: Locality of Cofimvaba, Eastern Cape



Figure 2: Proposed Regional Scheme 4 expansion (white) in relation to the already proposed Schemes 27, 28 and 29 CHDM development (red)



Figure 3: Close-up of the proposed Regional Scheme 4 expansion (white) in relation to the already proposed Schemes 27, 28 and 29 CHDM development (red)

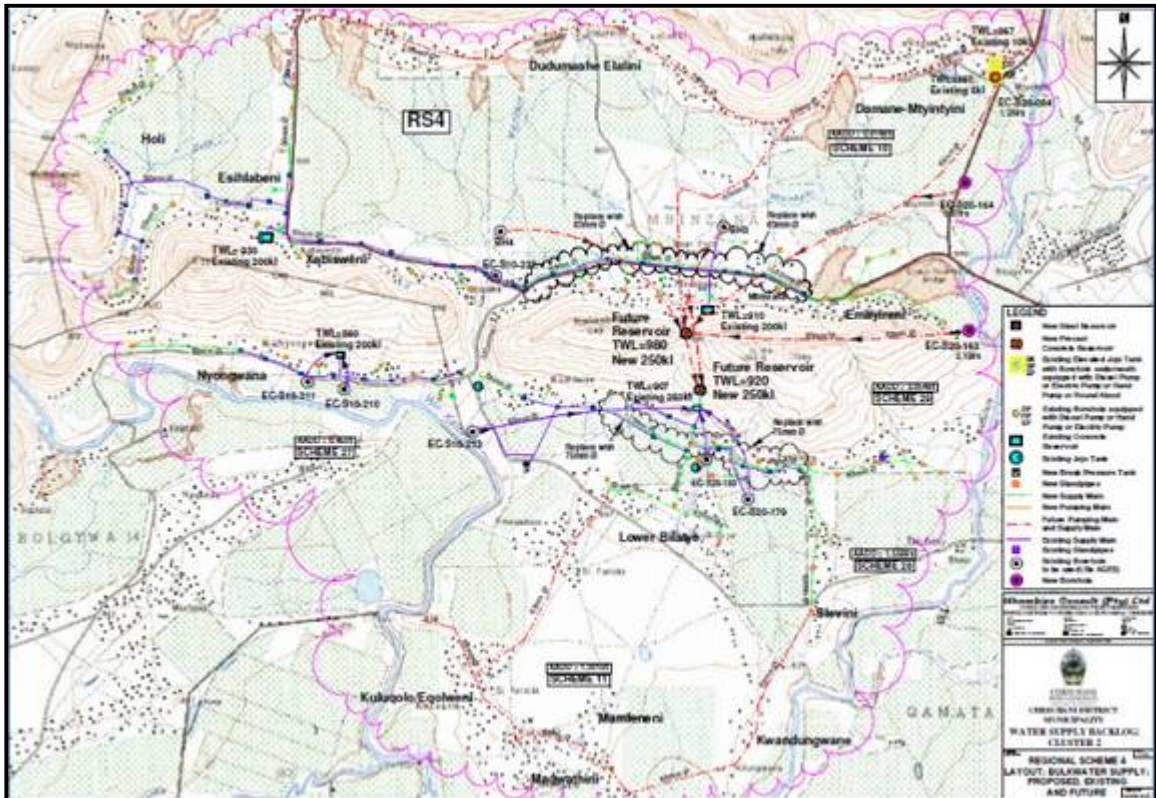


Figure 4: View of the greater Regional Scheme 4 development design, including Schemes 27, 28 and 29

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 comprises one of three parts of the Heritage Impact Assessment (HIA) for purposes of development compliance to requirements set out in the NHRA 1999, being:

- 1) The Palaeontological Impact Assessment (PIA);
- 2) The Archaeological Impact Assessment (AIA); and
- 3) The Socio-cultural Impact Assessment (SCIA).

The Phase 1 AIA was requested as specialist sub-section to the HIA for the developments' Basic Assessment Report and Environmental Management Plan (EMP) Report in compliance with requirements of the National Environmental Management Act, No 107 of 1998 (NEMA 1998), the NEMA 2nd Amendment Act, No 62 of 2008 (NEMA 2008) and the NEMA Regulations (2006), 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.
- No socio-cultural consultation was conducted with the aim to identify intangible heritage resources or sites of cultural significance associated with oral histories.

2.2) *Methodology & Assessor Accreditation*

The Phase 1 AIA was conducted over a 3 day period (2010-09-01 to 2010-09-03) by one archaeologist, with an additional site visit on 2010-10-02. The assessment was done by foot and LVD, 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.

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.

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

2.3) Coverage and Gap Analysis

The Phase 1 AIA aimed to cover the total of the proposed 20km line route development including the 10km comprising the Southern Development intended to address water supply to the villages of Kuluqolo Eqolweni, Maqwathini and Kwandungwane and the Northern Development which will supply water to the villages of Dudumashe Elalini and Damane-Mtyintyini.

Assessment was hampered by social constraints in the Southern development area, along a portion of the Kwandungwane development alignment.

2.4) Phase 1 AIA Assessment findings

A total of 20 archaeological and cultural heritage resources or type sites, as defined and protected under the NHRA 1999, were identified during the course of the Phase 1 AIA for the proposed *Water Supply Backlog in the CHDM: Cluster 2, Phase 2, Regional Scheme 4 Project*. All identified resources are situated along the Southern Development alignment. Findings of the report, with a focus on heritage resources towards the south in association with the Wit Kei River, being a permanent water source, do correspond with identified heritage site localities of the general terrain as reported on in Van Ryneveld (2010).

Identified heritage resources are classed in the following categories:

1. *Grave sites and Cemeteries:* Grave Sites and cemeteries constitute the primary identified resource type, including either individual type sites or as component parts of Iron Age sites.
2. *Historical Period Tradition Resources:* Historical Period sites were particularly scant across the study site comprising exclusively of farm fence posts. In addition to Historical Period resources identified during the assessment the most prominent known Historical Period site, situated in proximity to the greater development area constitutes the Mtyintyini Anglican Church, believed to have been constructed in 1938 and situated at S31°55'00.4"; E27°23'48.7" east of the greater Regional Scheme 4 study site.
3. *Iron Age:* Iron Age sites, of inferred archaeological age (older than 100 year) were located along the Southern Development alignment. Site recordings were limited to sites no longer in use by the local community; not negating the possibility that some contemporary homesteads, may within traditional custom, have been erected on ancestral homestead localities. Along the Northern Development local

consultation indicated a fairly recent occupation of the area; ascribed in part to particularly limited water both during the recent past and the present interpreted as having resulted in cultural preference to habitation closer to water sources.

4. *Stone Age*: Stone Age deposits were discovered across the study sites: Throughout the Southern development study site Middle Stone Age (MSA) was often found in association with rocky outcrops as well as the floodplain of the Wit Kei River. More than often MSA deposits were overlain by later period Iron Age occupation. Along the Northern development alignment the particular low presence of Stone Age artefacts are ascribed to the immediate geology, with raw material types not suitable for knapping purposes.

For purposes of EIA compliance the Phase 1 AIA focused on sites or resources that will be impacted on by development or which are situated in close proximity to proposed development alignment routes. With reference thereto the current development design can be described as particularly 'safe'. However, assessment highlighted the devastating reality that current impact, particularly on Iron Age and Stone Age sites are the primary result of the local communities, specifically with reference to the Southern development study site. Here Iron Age sites are negatively impacted on by community members removing old stone walling to construct contemporary homesteads, both residences and stock enclosures. In addition a number of informal roads and tracks cross-cuts Iron Age sites. Landowner and residency rights have also resulted in informal settlement patterns where heritage concerns are not taken into account prior to impact, increasing population numbers and development will continue to impact on heritage resources. In conclusion, the local community, not formal development, can at present be identified as the primary negative impact on heritage resources.



Figure 5: Phase 1 AIA assessment findings

2.4.1) Southern Development: Kuluqolo-Eqolweni, Maqwathini & Kwandungwane

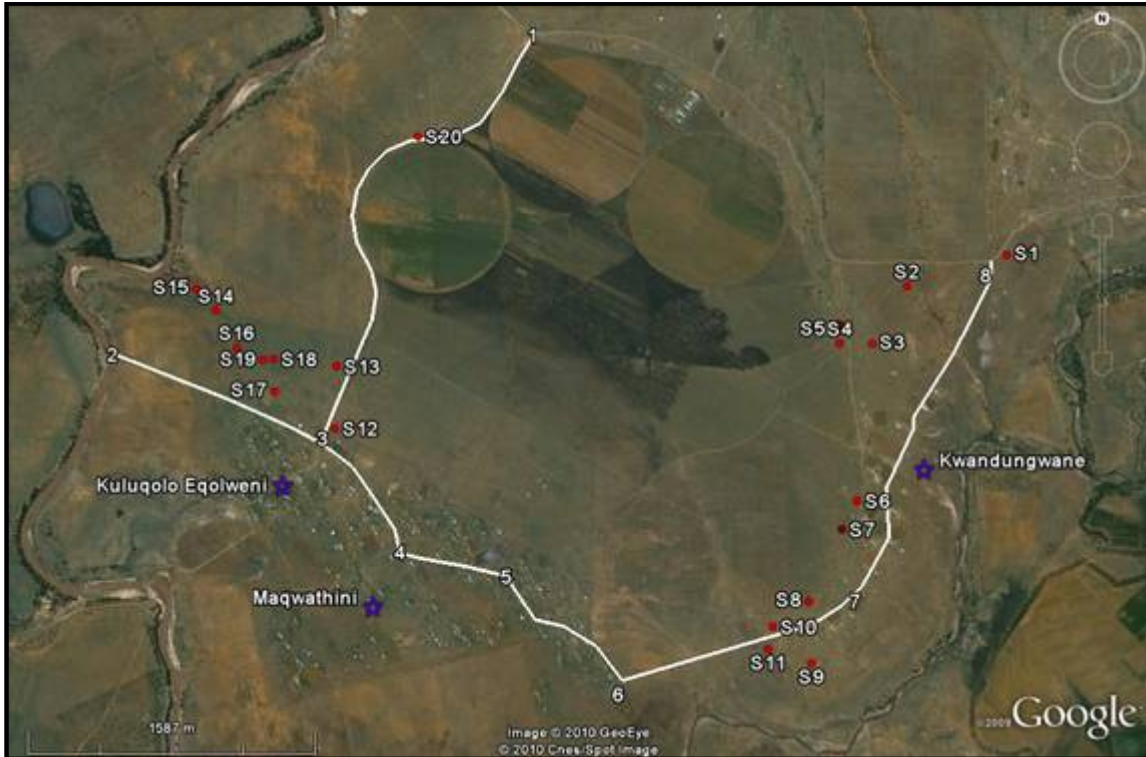


Figure 6: The Southern Development study site

The southern portion of the proposed Regional Scheme 4 development alignment comprises of approximately 10km aimed to provide water to the villages of Kuluqolo Eqolweni, Maqwathini and Kwandungwane. A total of 20 archaeological and cultural heritage resources were located along the proposed alignment route or in close proximity thereto. Visibility proved to be good across the assessment area. However, assessment was hampered in Kwandungwane Village by a group of women. An attempt was made to re-assess the line route portion south of the confluence with the Indwe River towards Maqwathini on 2010-11-02; encountering similar problems assessment was abandoned. Women were persistent on being paid for access or being employed. Assessment thus concentrated on the line route slightly west of the proposed alignment – similar type heritage resources may well be expected along the actual alignment, but being focused along a more settled area, less significant older Iron Age remains in association with more recent graves and cemetery sites can reasonably be inferred.

The 20 identified sites comprises of grave sites and cemeteries being the primary heritage resource followed by Iron Age remains and to a much lesser extent Stone Age deposits, restricted to areas characterized by rocky outcrops. Informal consultation with local villagers indicated a preference for burial in informal cemeteries, implying that burial places are not formally fenced and often in non-formalized areas as indicated in the scatter of small clusters of graves across the general area north-west of the proposed alignment route at Kuluqolo Eqolweni village. The Phase 1 AIA assessment proved evidence that local village development, including informal residential and agricultural development, are the primary factor of negative impact on Iron Age remains, building stones are removed from Iron Age sites for modern construction purposes and a number of informal roads and tracks traverse recorded sites. The observation is in contradiction with the general concern for ancestral sites often found amongst indigenous communities and observed in assessed villages just north of the Southern Development study site (Van

Ryneveld 2010). In conclusion, at present proposed formalized development will have much less of an impact on legally protected heritage resources than everyday life of inferred direct descendants of the resources.

Access roads and proposed development alignment routes are fairly well defined throughout the villages and settlement areas. The proposed alignment will traverse areas of virgin land, situated between the villages of Kwandungwane and Maqwathini and again north from Maqwathini towards the agricultural spill-point development.



Figure 7: View of the proposed line route development between the contemporary agricultural development and the villages of Kuluqolo Eqlweni and Maqwathini



Figure 8: The proposed alignment route through Maqwathini Village



Figure 9: View of the proposed development alignment between Kwandungwane Village in the east and Maqwathini Village in the west



Figure 10: View of the proposed development alignment through Kundungwane Village



Figure 11: The proposed development alignment route through the Indwe River gorge

2.4.1.1) SITE 1 – Graves / Iron Age / Stone Age – S31°57'41.4"; E27°22'49.2"

Site 1 [S1] (S31°57'41.4"; E27°22'49.2") comprises of a fairly large terrain focusing on the area east of the access road and proposed alignment route but cross cutting the road with limited site features situated west of the access road. Approximately 30-35 graves were found scattered in clusters of 3-6 across the site locale. Graves were limited to the area east of the access road, and south to as far as the contemporary homestead. Many clusters of graves were found in close proximity to remains of Iron Age stock enclosures, characterized primarily by a change in vegetation with many of the stones of the original walling inferred to have been removed for burial purposes. Remains of at least 4 fairly large stock enclosures were discovered, varying in size but with an average of approximately 7-10m in diameter. In addition stone foundations of at least 3 smaller features, with diameters of approximately 3m are inferred to represent hut localities. Iron Age homestead features (stock enclosures and huts) are restricted to the area east of the access road and north of the contemporary homestead. Towards the west of the access road clear agricultural features were identified, where lands have been cleaned for ploughing and planting purposes. The Iron Age site perimeter is in the east demarcated by a rocky ridge after which landscape gradient drops quite radically. The ridge provided raw material for Stone Age knapping. Lithic artefacts are ascribed to the later Middle Stone Age (MSA), based primarily on artefact size and typology. Surface artefact ratios (artefacts: m²) varied quite radically, ranging from approximately 1:1 to 7:1, with the highest ratios observed in the scraped road surface, implying that the Stone Age member may well be fairly well conserved bellow the present surface. Stone Age artefacts continued towards the west of the access road in agricultural clearing dumps, but numbers radically decreased towards the Indwe River with no clear anthropic layer identified in exposed river bed sections indicating that the raw material outcrops rather than water during palaeolithic times may well have been the major draw card to the site.

- RECOMMENDATIONS:** *Site 1 [S1] comprises of a heritage site as defined and protected under the NHRA 1999. The site is ascribed a SAHRA MEDIUM SIGNIFICANCE and a GENERALLY PROTECTED B FIELD RATING. The site cross cuts the current road and by implication the proposed development alignment. Development will however not impact on any identified graves or Iron Age features. Development will have a low impact on identified Stone Age deposits; however considering restricted development impact in association with the extent of the Stone Age member it is recommended that development proceeds as applied for without the developer having to apply for a SAHRA Site Destruction Permit.*



Figure 12: Remains of an Iron Age stock enclosure with a cluster of graves to the south thereof



Figure 13: The ridge demarcating the eastern perimeter of the Iron Age site and contemporary grave localities and providing raw material for Stone Age knapping



Figure 14: Foundation remains of a hut wall



Figure 15: A selection of lithic artefacts from the Site 1 locality

2.4.1.2) SITE 2 – Historical Period Fence Post – S31°57'47.2"; E27°22'27.4"

Site 2 [S2] (S31°57'47.2"; E27°22'27.4") demarcates the locality of a Historical Period fence post with fence mounds running perpendicular to the Indwe River east of the site.

- **RECOMMENDATIONS:** *Site 2 [S2] constitutes a heritage site as defined and protected under the NHRA 1999. The site is ascribed a SAHRA LOW SIGNIFICANCE and a GENERALLY PROTECTED C FIELD RATING. The site is situated approximately 400m west of the proposed development alignment and will not be impacted on: The site will be conserved in situ.*



Figure 16: The Site 2 Historical Period fence post with associated fence mounds still clearly visible

2.4.1.3) SITE 3 – Iron Age – S31°57'57.8"; E27°22'19.6"

Site 3 [S3] (S31°57'57.8"; E27°22'19.6") comprises of a large circular Iron Age stock enclosure, with an approximate dimension of 15m in diameter. Remains of the original stone walling is still present on site, but are rather decayed. No additional site features were found in direct association with the stock enclosure, but the stone walled remains may well have formed part of the Site 4 remains, providing for a very wide spread Iron Age homestead. Stone wall remains towards the east of Site 3 located at S31°57'59.5; E27°22'25.5" may well represent a smaller associated enclosure or alternatively the feature may be linked to more contemporary occupation.

- **RECOMMENDATIONS:** *Site 3 [S3] comprises of a heritage site as defined and protected under the NHRA 1999. The site is ascribed a SAHRA MEDIUM SIGNIFICANCE and a GENERALLY PROTECTED B FIELD RATING. Site 3 is situated approximately 300m from the proposed alignment route and will not be impacted on by development: The site will be conserved in situ.*



Figure 17: General view of Site 3



Figure 18: Remains of the original stone stock enclosure walls

2.4.1.4) SITE 4 – Graves / Iron Age – S31°57'57.7"; E27°22'12.6"

The Site 4 [S4] (S31°57'57.7"; E27°22'12.6") remains comprises of 2 components; 2 graves, both stone outlined and earth filled are situated towards the north west of circular stock enclosure remains. Stone outlines of the graves are well maintained, while earth fills have settled, implying significant time depth but maintenance to the graves. The Site 3 Iron Age site proper is characterized by the circular stock enclosure remains immediately adjoining the graves. Remains of the stone walls are still in place, but quite decayed. A later road track runs across the stock enclosure remains implying that the site may well have no relation to contemporary villagers aside from the fact that stones have been used for burial practices. The general area is characterized by homestead remains, typified by changes in vegetation that may indicate additional enclosure structure localities and a few mounds that may suggest residential structures. Clear evidence of cultural overlay, easily discernable by more recent rectangular stock enclosures, pits and rectangular surface mounds makes original site layout and assignation of features that may be associated with inferred origin of the site difficult.

- **RECOMMENDATIONS:** *Site 4 [S4] constitutes a heritage site as defined and protected under the NHRA 1999. The site is ascribed a SAHRA MEDIUM SIGNIFICANCE and a GENERALLY PROTECTED B FIELD RATING. The site is situated approximately 350m west of the proposed alignment route and will not be impacted on by development: The site will be conserved in situ.*



Figure 19: The 2 graves at Site 4



Figure 20: Remains of the Iron Age enclosure impacted on by an old road cross cutting the feature

2.4.1.5) SITE 5 – Graves – S31°57'54.2"; E27°22'12.6"

Site 5 [S5] (S31°57'54.2"; E27°22'12.6") comprises of a small informal cemetery or burial place constituting 2 fairly recent graves. Both graves are inferred to have been originally demarcated by stone outlines and earth fills; grave markers have in the interim decayed to such an extent that no stone outlines are present at one grave. Moderately large upright stones may represent original headstones.

- **RECOMMENDATIONS:** *Site 5 [S5] comprises of a heritage site as defined and protected under the NHRA 1999. The site is ascribed a SAHRA MEDIUM SIGNIFICANCE and a GENERALLY PROTECTED B FIELD RATING. The site is situated approximately 600m west of the proposed development alignment and will not be impacted on. It is recommended that the site be conserved in situ.*



Figure 21: General view of Site 5

2.4.1.6) SITE 6 – Iron Age – S31°58'26.3"; E27°22'15.9"

Site 6 [S6] (S31°58'26.3"; E27°22'15.9") is characterized by the circular remains of a stock enclosure, with stone walls partially still in place. The remains are situated in close proximity to a contemporary residence. Associated vegetation changes, inferred to indicate the localities of additional stock enclosures (one with clearly identifiable grain storage pits therein) continues towards the residence to the north west of the site. Additional mounds may imply original positions of huts. The contemporary residence and associated brick making activities may well have already impacted on portions of the site. The site is located approximately 150m west of the proposed line route; despite current impact the proposed development will not result in additional impact on the site.

- **RECOMMENDATIONS:** *Site 6 [S6] comprises of a heritage site as defined and protected under the NHRA 1999. The site is ascribed a SAHRA MEDIUM SIGNIFICANCE and a GENERALLY PROTECTED B FIELD RATING. Site 6 is situated approximately 150m west of the alignment route and will not be impacted on by development: The site will be conserved in situ, despite current impact by the contemporary residence.*



Figure 22: View of the Site 6 stock enclosure remains, with the nearby contemporary residence in the background



Figure 23: Vegetation changes and mound remains in close proximity to the contemporary residence is inferred to indicate the localities of associated site features

2.4.1.7) SITE 7 – Graves / Iron Age – S31°58'31.4"; E27°22'12.4"

Site 7 [S7] (S31°58'31.4"; E27°22'12.4") demarcates the locality of 2 graves, identified by stone outlines situated immediately adjacent to the remains of a circular stock enclosure with stone walls still partially standing. The general site terrain is associated with a more recent rectangular stock enclosure.

- **RECOMMENDATIONS:** *Site 7 [S7] constitutes mprises of a heritage site as defined and protected under the NHRA 1999. The site is ascribed a SAHRA MEDIUM SIGNIFICANCE and a GENERALLY PROTECTED B FIELD RATING. The site will not be impacted on by the proposed development and will be conserved in situ.*



Figure 24: The Site 7 graves associated with a circular stock enclosure



Figure 25: View of the S7 circular stock enclosure to the right and a more recent rectangular enclosure to the left

2.4.1.8) SITE 8 – Graves / Iron Age / Stone Age – S31°58'44.3"; E27°22'05.2"

Site 8 [S8] (S31°58'44.3"; E27°22'05.2") comprises the general area located north-east of the proposed line route, with average dimensions measuring 300x300m in extent.

The site constitutes a fairly large Iron Age site comprising of at least 4 circular stock enclosure remains with average sizes varying in diameter from 7-10m. While walls at some enclosures are still partially in-tact, others have been totally removed, perhaps for later use of the stones itself, being for burial or later period stock enclosures. In addition the remains of 7 huts could be identified, primarily by mound but also by stone foundation remains.

The site is also associated with at least 4 burial areas being located thereon, with the number of graves counting varying from 5 to 12 to approximately 20. Graves are traditionally stone outlined and earth filled, but at least 1 grave has a modern gravestone. Older graves at burial places are in cases fairly deteriorated. In addition an old, or perhaps the original site cemetery, is situated towards the western portion of the site – here vaguely discernable stone outlines and perhaps a headstone may be indicative of the site component.

Towards the western portion of the site, characterized by a low gradient stone outcrops, typological Middle Stone Age (MSA) artefacts were discovered strewn across the general area. Artefact ratios (artefacts: m²) were in general quite low approximating 2:1. The outcrops run in a rough north-west to south-east direction; towards the general Site 9 terrain with artefacts increasing in quantity towards Site 9 with proximity to the Indwe River. Stone Age artefacts at Site 8 were most discernable within the scraped access road, implying that better contexts may be present in situ context.

- **RECOMMENDATIONS:** *Site 8 [S8] comprises of a heritage site as defined and protected under the NHRA 1999. The site is ascribed a SAHRA MEDIUM SIGNIFICANCE and a GENERALLY PROTECTED B FIELD RATING. The Stone Age component of the site cross-cuts the proposed alignment route while Iron Age and grave sites are confined to the north-west of the access road and development alignment.*
 - *In order to ensure that development do not impact on Iron Age features or grave sites it is recommended that the line route development be situated east and south of the existing access road in the vicinity of Site 8.*
 - *Development will have a low impact on identified Stone Age deposits; however considering the low artefact ratio recorded at the site in conjunction with site extent of the Stone Age member it is recommended that development proceeds as applied for without the developer having to apply for a SAHRA Site Destruction Permit.*



Figure 26: One of the informal cemeteries located at Site 8



Figure 27: An informal cemetery located in close proximity to an old circular stock enclosure



Figure 28: Close-up of the abovementioned burial place, also containing a modern grave



Figure 29: The 3rd identified burial place at Site 8



Figure 30: Remains towards the west of Site 8 may well be indicative of the original site cemetery



Figure 31: Iron Age homestead remains, primarily discernable by a change in vegetation



Figure 32: An Iron Age stock enclosure with remains of grain pits therein



Figure 33: In situ Stone Age artefacts towards the west of the site



Figure 34: Stone Age artefacts were most discernable in the scraped road surface

2.4.1.9) SITE 9 – Iron Age / Stone Age – S31°58'55.3"; E27°22'05.6"

Site 9 [S9] (S31°58'55.3"; E27°22'05.6") is situated south east of the proposed development alignment. The site comprises of an Iron Age homestead with at least 4 identifiable circular stock enclosure remains and approximately 6-7 hut remains in possible association with middens. Stone walling on 1 stock enclosure is still fairly well preserved. In addition to the stock enclosure remains, demarcated by partially standing stone walls, the remainder of the area is characterized by Iron Age remains only identifiable by changes in the vegetation and stone foundations. Towards the east of the site a rectangular stone stock enclosure may be an explanation for the absence of stone on the remainder of the site. The Iron Age site overlies Stone Age deposits. The Site 8 stone outcrops reported on continues towards the general Site 9 terrain and provided raw material for Stone Age knapping. Stone Age artefacts are ascribed to the later Middle Stone Age (MSA), based on artefact size and typology, with flake, scraper and blade like types dominating the collection, albeit not of high technological quality. Surface artefact ratios (artefacts: m²) varied quite radically, ranging from approximately 1:1 to 7:1, with the highest ratios again observed in the scraped road surface; implying that the Stone Age member may well be fairly well conserved bellow the present surface. The Stone Age member may well prove to be a general landscape feature across the vicinity of the plains around the Indwe riverbed.

- **RECOMMENDATIONS:** *Site 9 [S9] comprises of a heritage site as defined and protected under the NHRA 1999. The site is ascribed a SAHRA MEDIUM SIGNIFICANCE and a GENERALLY PROTECTED B FIELD RATING. The site is situated approximately 200m south of the proposed development alignment and will not be impacted on; the site will be conserved in situ.*



Figure 35: Iron Age site features at Site 9



Figure 36: Iron Age site features devoid of original stone walling in the foreground with a modern rectangular stone stock enclosure in the background



Figure 37: Iron Age site features



Figure 38: Stone Age artefacts from the Site 9 locality

2.4.1.10) SITE 10 – Historical Period Fence Post – S31°58'48.8"; E27°21'57.5"

Site 10 [S10] (S31°58'48.8"; E27°21'57.5") demarcates the locality of a Historical Period fence post with fence mounds still visible in the immediate vicinity of the site.

- **RECOMMENDATIONS:** *Site 10 [S10] comprises of a heritage site as defined and protected under the NHRA 1999. The site is ascribed a SAHRA LOW SIGNIFICANCE and a GENERALLY PROTECTED C FIELD RATING. The site is situated approximately 50m north of the proposed development alignment and will not be impacted on: The site will be conserved in situ.*



Figure 39: View of Site 10

2.4.1.11) SITE 11 – Grave – S31°58'52.8"; E27°21'56.5"

Site 11 [S11] (S31°58'52.8"; E27°21'56.5") comprises of a single grave situated approximately 60m south of the proposed development alignment. The site is characterized by a stone outline and earth-fill with a stone cover.

- **RECOMMENDATIONS:** *Site 11 [S11] comprises of a heritage site as defined and protected under the NHRA 1999. The site is ascribed a SAHRA MEDIUM SIGNIFICANCE and a GENERALLY PROTECTED B FIELD RATING. The site is situated approximately 60m south of the proposed development alignment and will not be impacted on. The site will be conserved in situ.*



Figure 40: View of Site 11

2.4.1.12) SITE 12 – Memorial – S31°58'13.2"; E27°20'23.8"

The Site 12 [S12] (S31°58'13.2"; E27°20'23.8") locality represents a formal memorial erected in memory of prominent headmen and leaders, including those who fought in the struggle, of the greater Maqwathini Village area. The memorial was unveiled in 2000 as a joint venture between the Premier of the Eastern Cape and the Eastern Cape Department of Sport, Recreation, Arts and Culture. The site is formally fenced with an access gate and well maintained.

- **RECOMMENDATIONS:** *Site 12 [S12] comprises of a formally declared heritage site / memorial erected in 2000 as a joint venture between the Premier of the Eastern Cape and the Department of Sport, Recreation, Arts and Culture. The site is ascribed a SAHRA HIGH LOCAL SIGNIFICANCE and a GRADE 3B FIELD RATING. The site is situated approximately 15m from the proposed development alignment. In addition the site is formally fenced with an access gate, complying with SAHRA Minimum Site Conservation Standards. Development will not impact on the site.*



Figure 41: The Site 12 formally conserved heritage memorial

2.4.1.13) SITE 13 – Graves – S31°58'01.9"; E27°20'24.0"

Site 13 [S13] (S31°58'01.9"; E27°20'24.0") comprises of approximately 18 graves situated in linear alignment more or less 70m from the proposed development line route. Graves are characterized by a variety of grave demarcation types including a single modern grave, with the remainder of the graves either identified by clearly visible or decayed grave outlines and earth fills, some with headstones while others may originally have had head and footstones. Graves towards the east of the site may be older than the western portion of the site, based on the deteriorated state of the graves.

- **RECOMMENDATIONS:** *Site 13 [S13] comprises of a heritage site as defined and protected under the NHRA 1999. The site is ascribed a SAHRA MEDIUM SIGNIFICANCE and a GENERALLY PROTECTED B FIELD RATING. The site is situated more or less 70m west of the proposed development alignment and will not be impacted on. It is recommended that the site be conserved in situ.*



Figure 42: View of Site S13 with some of the eastern heavily deteriorated graves in the foreground

2.4.1.14) SITE 14 – Cemetery – S31°57'51.7"; E27°19'57.7"

Site 14 [S14] (S31°57'51.7"; E27°19'57.7") comprises of a formally fenced cemetery, containing approximately 12 discernable graves with grave demarcations varying from modern gravestones to stone outlined and earth filled graves. Older graves may be present with demarcations limited to settled stone outlines or simple stones, but access to the cemetery prohibited further description of the site.

- **RECOMMENDATIONS:** *Site 14 [S14] comprises of a heritage site as defined and protected under the NHRA 1999. The site is ascribed a SAHRA MEDIUM SIGNIFICANCE and a GENERALLY PROTECTED B FIELD RATING. The site is situated more than 400m from the development alignment with conservation measures complying directly with SAHRA Minimum Site Conservation Standards. The site will not be impacted on by development.*



Figure 43: The Site 14 formal cemetery

2.4.1.15) SITE 15 – Graves / Iron Age / Stone Age – S31°57'51.7"; E27°19'57.7"

Site 15 [S15] (S31°57'51.7"; E27°19'57.7") constitutes an informal cemetery of burial site comprising of approximately 30 graves. Graves are characterized by typical stone outlines and earth-filled types, some inferred to be of quite recent origin although older graves where the earth-fill have already settled and now present as a mere stone outline is also present. In addition a number of graves are only identifiable by still standing head and footstones; these graves are inferred to represent the original graves associated with Iron Age remains as a norm concentrated on the steep slopes of the ridge immediately adjoining the Wit Kei River. The Iron Age proper of Site 8 is easily identifiable by 7 quite large circular stock enclosure remains, varying in size from approximately 7-13m in diameter. Stone walls are fairly well preserved, clearly demarcating enclosures. Smaller circular mound remains represent original hut localities, counting 13+ in number. Stock enclosures seem to be primarily located along the steep slopes of the hill while residential remains were found scattered among the enclosure remains, both along the slopes and the foothills of the slope.

Iron Age remains at Site 8 overly Stone Age deposits. It is inferred that the rocky outcrops having been used by Iron Age inhabitants provided suitable raw material for knapping. In general however artefact ratios (artefacts: m²) proved to be extremely low. The low presence of Stone Age artefacts is ascribed to post depositional site processes; the lack of Iron Age artefacts on site may well be interpreted through sedimental overlay, explaining the low surface presence of stone tools. Identified lithic artefacts seem to be of Middle Stone Age (MSA) assignation, evidently with the majority of the deposit in situ context. Stone Age artefacts were also found along the floodplain to the south of the Site 8 locale and roughly throughout the general area that will be traversed by the proposed pipeline. Artefact ratios across the floodplain were however particularly low and with scraped agricultural impact on the plain not exposing a rough cultural member it is inferred that the presence of artefacts can primarily be ascribed to hillwash, with the rocky outcrops comprising the Stone Age site proper.

- RECOMMENDATIONS:** *Site 15 [S15] comprises of a heritage site as defined and protected under the NHRA 1999. The site is ascribed a SAHRA MEDIUM SIGNIFICANCE and a GENERALLY PROTECTED B FIELD RATING. The site proper is situated more than 500m from the development alignment and will not be impacted on. Development will have a low impact on Stone Age artefacts across the plain south of the site; artefacts discovered at the plain is inferred to be in secondary context, a result of post-depositional processes and hill-wash. It is recommended that development across the plain south of Site 8 proceeds as applied for without the developer having to apply for a SAHRA Site Destruction Permit.*



Figure 44: General view of Site 15 with the Site 14 cemetery in the foreground



Figure 45: Circular stock enclosure remains at Site 15 - 1



Figure 46: Circular stock enclosure remains at Site 15 - 2



Figure 47: Circular stock enclosure remains at Site 15



Figure 48: A residential mound with a roof beam still visible



Figure 49: Residential stone foundations indicating a hut with courtyard structure



Figure 50: View of the burial area at Site 15 with a selection of recent graves in the foreground



Figure 51: Recent graves at Site 15



Figure 52: Older graves, inferred to be directly associated with occupation at Site 15 is characterized only by head and footstones

2.4.1.16) SITE 16 – Graves – S31°57'58.8"; E27°20'02.3"

Site 17 [S17] (S31°57'58.8"; E27°20'02.3") comprises of an informal cemetery or group of approximately 15 graves grouped into 2 groups. The 1st cluster of graves, comprising of approximately 9 graves are situated to the south of the remains of a stock enclosure. The stock enclosure is characterized only by a change in vegetation, with a road running through the site feature. The 9 graves seem to all have been stone outlined and earth filled, some with remains of head and footstones. Stones used for burial may well have been sources from the stock enclosure. Slightly to the north-west of the stock enclosure and 1st cluster of graves a 2nd cluster of 6 graves is compiled in linear alignment. Graves are inferred to all have been originally stone outlined and earth filled with at least headstones, but in places remains of both head and footstones can still be discerned. Grave stone demarcations were quite deteriorated at the time of the assessment and it seems as if some stones were deliberately removed, probably to be reused.

- RECOMMENDATIONS:** *Site 16 [S16] comprises of a heritage site as defined and protected under the NHRA 1999. The site is ascribed a SAHRA MEDIUM SIGNIFICANCE and a GENERALLY PROTECTED B FIELD RATING. The site is situated approximately 270m from the proposed development alignment and will not be impacted on. It is recommended that the site be conserved in situ.*



Figure 53: Stock enclosure remains with the 1st cluster of the Site 16 graves located to the south thereof



Figure 54: View of the 2nd cluster of the Site 16 graves

2.4.1.17) SITE 17 – Graves – S31°58'06.5"; E27°20'10.7"

Site 17 [S17] (S31°58'06.5"; E27°20'10.7") constitutes a small informal burial area comprising of 4 graves. The graves were originally all stone outlines and earth filled. Stone outlines have deteriorated, but evidence of head and footstones are still present.

- **RECOMMENDATIONS:** *Site 17 [S17] comprises of a heritage site as defined and protected under the NHRA 1999. The site is ascribed a SAHRA MEDIUM SIGNIFICANCE and a GENERALLY PROTECTED B FIELD RATING. The site is situated approximately 150m from the proposed development alignment and will not be impacted on. It is recommended that the site be conserved in situ.*



Figure 55: General view of Site 17

2.4.1.18) SITE 18 – Graves – S31°58'01.4"; E27°20'10.4"

Site 18 [S18] (S31°58'01.4"; E27°20'10.4") comprises of an informal cemetery or group of 4 graves, located on the plain north of Kuluqolo Eqolweni. Evidence remains that some of the graves were stone outlined and earth filled but stone outlines have deteriorated radically. At least 1 grave is demarcated only by an earth pile.

- **RECOMMENDATIONS:** *Site 18 [S18] comprises of a heritage site as defined and protected under the NHRA 1999. The site is ascribed a SAHRA MEDIUM SIGNIFICANCE and a GENERALLY PROTECTED B FIELD RATING. The site is situated approximately 270m from proposed development alignment routes and will not be impacted on. It is recommended that the site be conserved in situ.*



Figure 56: View of the Site 18 graves

2.4.1.19) SITE 19 – Graves – S31°58'00.7"; E27°20'08.1"

Site 19 [S19] (S31°58'00.7"; E27°20'08.1") comprises of an informal cemetery or group of 7 graves in linear alignment situated on the plain north of Kuluqolo Eqolweni. Graves comprise both of stone outlined and earth filled as well as simple earth piles graves.

- **RECOMMENDATIONS:** *Site 19 [S19] comprises of a heritage site as defined and protected under the NHRA 1999. The site is ascribed a SAHRA MEDIUM SIGNIFICANCE and a GENERALLY PROTECTED B FIELD RATING. The site is situated more than 270m from proposed development alignment routes and will not be impacted on. It is recommended that the site be conserved in situ.*



Figure 57: View of the Site 19 graves

2.4.1.20) SITE 20 – Grave – S31°57'19.3"; E27°20'41.1"

Site 20 [S20] (S31°57'19.3"; E27°20'41.1") comprises of a single grave situated immediately north-west of the agricultural spill-point development. The site is located more or less 7m from the current road alignment. The grave is stone outlined and earth filled and at present not formally fenced.

- **RECOMMENDATIONS:** *Site 20 [S20] comprises of a heritage site as defined and protected under the NHRA 1999. The site is ascribed a SAHRA MEDIUM SIGNIFICANCE and a GENERALLY PROTECTED B FIELD RATING. Development, restricted to the road reserve, will not impact on the site but proximity of the site does call for caution. The developer may consider formal or temporary conservation measures in order to ensure the safety of the site. Conservation measures should be negotiated with the local community prior to implementation. Should conservation measures not be approved by the community, the site should be demarcated as a sensitive area and 'no-go' zone for contractors.*
 - *Formal conservation (formal fencing of the grave with an access gate)*
 - *Temporary conservation (temporary demarcation by means of danger tape during the construction phase).*



Figure 58: View of the Site 20 grave

2.4.2) Northern Development: Dudumashe Elalini & Damane-Mtyintyini



Figure 59: The Northern Development study site

The proposed Northern Development comprises of an approximate 10km linear alignment route focused on serving the villages of Dudumashe Elalini and Damane-Mtyintyini. Both villages are characterized by fairly low impact settlement at the core of the villages, decreasing in intensity towards the perimeter thereof and often typified by sparsely spread homesteads along the remainder of the line route. Roads and road reserves were very well defined throughout the villages but large erosion gullies, separating villages, settlements and access roads thereto characterized the development area at intervals and providing for the only areas where the proposed alignment will impact on virgin land.

No archaeological or cultural heritage resources as defined and protected under the NHRA 1999 were identified during the Phase 1 AIA. The lack of archaeological resources is ascribed to the inferred recent origin of the villages, settlement pattern and cultural practice. According to local villagers (Nconcedo Ramba and Yoliswa Nxaikisi) both villages are of quite recent origin, it was recalled that their grandparents lived in the villages (implying a maximum 3rd generation settlement), but no older ancestral sites could be pointed out. In addition it was explained that graves of ancestors are situated within the homestead yards and that each new generation would either renovate or restore older residences or build a new hut / house in close proximity within the original homestead yard. The practice was further closely related to the severe lack of water in the area; each family receives only 20 liters of water per day for household and other uses, making building a particularly expensive exercise since all additional water has to be bought.

The decrease in archaeological and heritage sites in direct association with distance from the Wit Kei River has already been noted (Van Ryneveld 2010) while the large Mbizana erosion gullies, intersecting the villages of

Dudumashe Elalini and Damane-Mtyintyini, are evidence of the area having been dry for a considerable period of time.

A very low density of Stone Age artefacts was discovered at intervals along the line route. The low presence of Stone Age activity on the palaeolandscape is ascribed both to the immediate geology as well as the inferred use of natural resources; if the Mbizana River was already fairly dry or drier than the Wit Kei River at during Stone Age times the general area may not have been preferable for habitation purposes. Exposed river bed sections proved unanimously anthropically sterile.



Figure 60: General view of the development area at Dudumashe Elalini



Figure 61: Anthropic sterile sections of the Mbizana riverbed at Dudumashe Elalini



Figure 62: Existing water infrastructure at the proposed Northern Development study site



Figure 63: View of the proposed alignment route at Damane-Mtyintyini



Figure 64: Fairly well defined road reserves at portions of Damane-Mtyintyini

3) CONCLUSION AND RECOMMENDATIONS

With reference to cultural heritage compliance as per the requirements of the NHRA 1999 it is recommended that the proposed *Water Supply Backlog in the CHDM: Cluster 2, Phase 2, Regional Scheme 4 Project*, near Cofimvaba in the Eastern Cape proceeds as applied for provided the developer complies with the following requirements:

The Regional Scheme 4 development comprises of an additional 20km development alignment to the already proposed *Water Supply Backlog in the CHDM: Cluster 2, Phase 2, Schemes 27, 28 and 29 Project*. The Regional Scheme 4 development is subdivided into a Southern Development and a Northern Development study site. A total of 20 archaeological and cultural heritage resources, as defined and protected under the NHRA 1999 were identified during the Phase 1 AIA. All identified resources are located along the Southern development alignment. The majority of the identified resources will be conserved in situ by the development based on proximity of the sites to the alignment route.

- Site 20, comprising of a single grave is located within the proposed development buffer. The site should be conserved, either formally or informally. Conservation of the site should be pre-negotiated with the local community. Local practice and consultation indicated a clear preference that contemporary burial sites are not formally fenced.
- Site 8 comprising of fairly extensive Iron Age remains with a number of both old and contemporary informal cemeteries intersecting the archaeological remains is situated in close proximity to the proposed development alignment route. It is recommended that the alignment route in the vicinity of Site 8 be prioritized east and south of the current access road.
- The proposed development will impact on identified Stone Age resources in the vicinity of Site 1, Site 8 and Site 15. Limited impact of the proposed development in association with site extent does not warrant mitigation prior to development. It is recommended that development in these areas proceed without the developer having to apply for SAHRA Site Destruction Permits prior to development.

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.

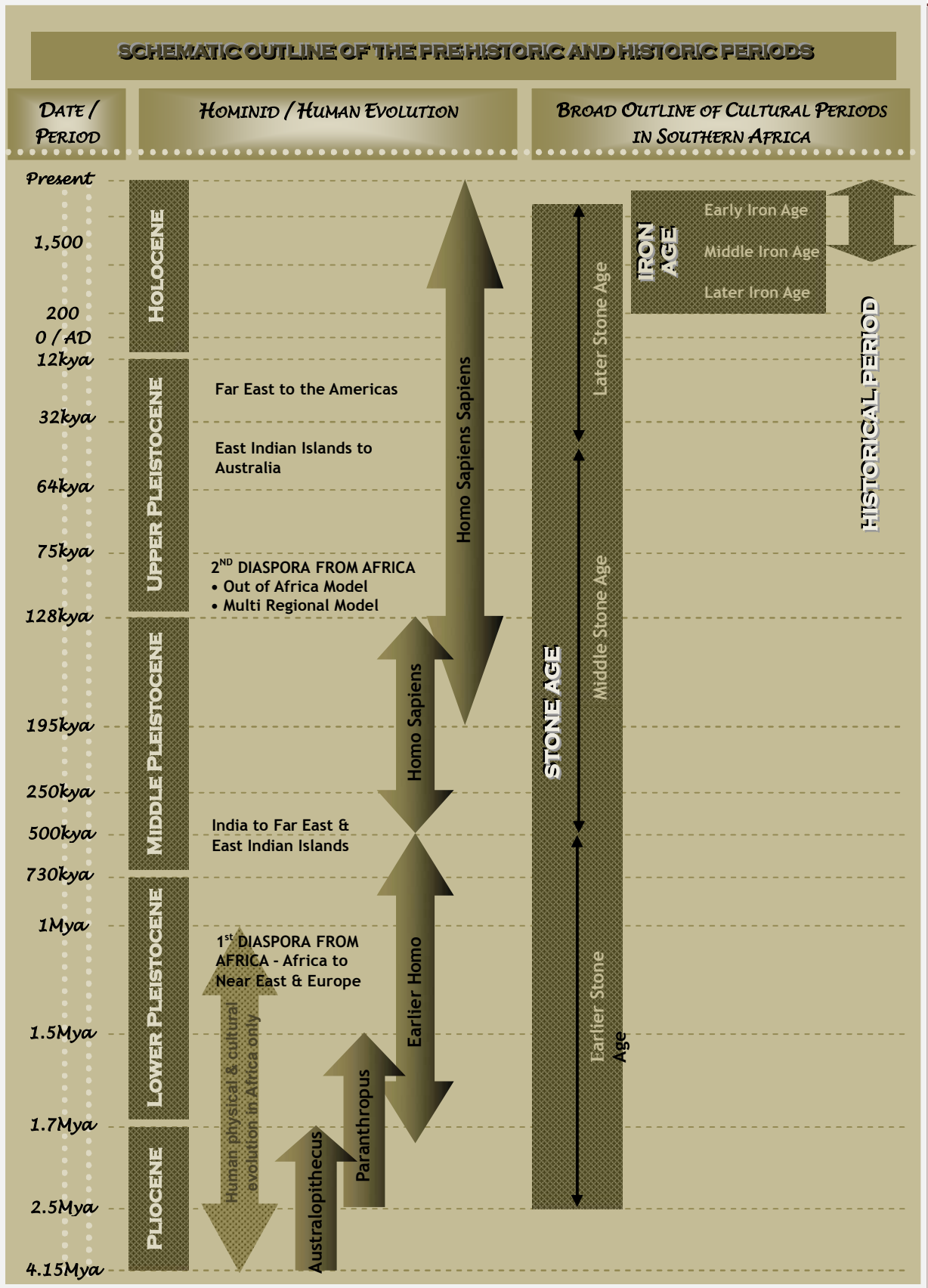
All reported heritage sites should be assessed (on-site assessment / site inspection); after a SAHRA Site Significance assignment has been assigned recommendations regarding the future of the site can be made and may include conservation, site monitoring or Phase 2 archaeological mitigation.

CHDM WATER SUPPLY – REGIONAL SCHEME 4					
SOUTHERN DEVELOPMENT: KULUQOLO EQOLWENI, MAQWATHINI & KWANDUNGWANE NORTHERN DEVELOPMENT: DUDUMASHE ELALINI & DAMANE-MTYINTYINI					
MAP CODE	SITE	TYPE / PERIOD	DESCRIPTION	CO-ORDINATES	PRELIMINARY RECOMMENDATIONS
DEVELOPMENT AREA					
1	-	-	-	S31°57'00.4"; E27°21'06.1"	N/A
2	-	-	-	S31°57'59.9"; E27°19'36.9"	N/A
3	-	-	-	S31°58'15.2"; E27°20'21.1"	N/A
4	-	-	-	S31°58'35.7"; E27°20'38.0"	N/A
5	-	-	-	S31°58'40.1"; E27°21'00.8"	N/A
6	-	-	-	S31°58'58.7"; E27°21'25.8"	N/A
7	-	-	-	S31°58'42.1"; E27°22'16.4"	N/A
8	-	-	-	S31°57'42.9"; E27°22'45.7"	N/A
9	-	-	-	S31°53'44.5"; E27°18'47.2"	N/A
10	-	-	-	S31°54'06.0"; E27°19'40.9"	N/A
11	-	-	-	S31°53'55.0"; E27°20'47.0"	N/A
12	-	-	-	S31°53'55.6"; E27°21'14.8"	N/A
13	-	-	-	S31°54'33.3"; E27°22'17.8"	N/A
14	-	-	-	S31°54'11.8"; E27°23'09.1"	N/A
15	-	-	-	S31°54'07.6"; E27°24'24.4"	N/A
HERITAGE SITES					
S1	Site 1	Contemporary Iron Age Stone Age	Graves Homestead Knapping	S31°57'41.4"; E27°22'49.2"	<i>In situ conservation (Low impact on Stone Age deposits)</i>
S2	Site 2	Historical	Fence posts	S31°57'47.2"; E27°22'27.4"	<i>In situ conservation</i>
S3	Site 3	Iron Age	Homestead	S31°57'57.8"; E27°22'19.6"	<i>In situ conservation</i>
S4	Site 4	Contemporary Iron Age	Graves Homestead	S31°57'57.7"; E27°22'12.6"	<i>In situ conservation</i>
S5	Site 5	Contemporary	Graves	S31°57'54.2"; E27°22'12.6"	<i>In situ conservation</i>
S6	Site 6	Iron Age	Homestead	S31°58'26.3"; E27°22'15.9"	<i>In situ conservation</i>
S7	Site 7	Contemporary Iron Age	Graves Homestead	S31°58'31.4"; E27°22'12.4"	<i>In situ conservation</i>
S8	Site 8	Contemporary Iron Age Stone Age	Graves Homestead Knapping	S31°58'44.3"; E27°22'05.2"	<i>In situ conservation - Development alignment towards east and south of existing road (Low impact on Stone Age deposits)</i>
S9	Site 9	Iron Age Stone Age	Homestead Knapping	S31°58'55.3"; E27°22'05.6"	<i>In situ conservation</i>
S10	Site 10	Historical	Fence posts	S31°58'48.8"; E27°21'57.5"	<i>In situ conservation</i>
S11	Site 11	Contemporary	Graves	S31°58'52.8"; E27°21'56.5"	<i>In situ conservation</i>
S12	Site 12	Contemporary	Memorial	S31°58'13.2"; E27°20'23.8"	<i>In situ conservation</i>
S13	Site 13	Contemporary	Graves	S31°58'01.9"; E27°20'24.0"	<i>In situ conservation</i>
S14	Site 14	Contemporary	Cemetery	S31°57'51.7"; E27°19'57.7"	<i>In situ conservation</i>
S15	Site 15	Contemporary Iron Age Stone Age	Graves Homestead Knapping	S31°57'51.7"; E27°19'57.7"	<i>In situ conservation (Low impact on Stone Age deposits)</i>
S16	Site 16	Contemporary	Graves	S31°57'58.8"; E27°20'02.3"	<i>In situ conservation</i>
S17	Site 17	Contemporary	Graves	S31°58'06.5"; E27°20'10.7"	<i>In situ conservation</i>
S18	Site 18	Contemporary	Graves	S31°58'01.4"; E27°20'10.4"	<i>In situ conservation (No additional conservation measures required)</i>
S19	Site 19	Contemporary	Graves	S31°58'00.7"; E27°20'08.1"	<i>In situ conservation</i>
S20	Site 20	Contemporary	Graves	S31°57'19.3"; E27°20'41.1"	<i>Formal / Temporary / In situ conservation</i>

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

4) REFERENCES CITED

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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. Van Ryneveld, K. 2010. *Water Supply backlog in CHDM: Cluster 2, Phase 1, Schemes 27, 28 & 29, Cofimvaba, Eastern Cape, South Africa*. Unpublished report.



**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.
- 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.