
PHASE 1 ARCHAEOLOGICAL IMPACT ASSESSMENT

**WATER SUPPLY BACKLOG IN CHDM:
CLUSTER 2, PHASE 1, SCHEMES 27, 28 & 29,
COFIMVABA, EASTERN CAPE, SOUTH AFRICA**

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1) TERMS OF REFERENCE

Biotechnology & Environmental Specialist Consultancy (BESC) has been appointed as independent environmental consultant by Uhambiso Consult (Pty) Ltd on behalf of the proponent, the Chris Hani District Municipality (CHDM), to prepare the Environmental Impact Assessment (EIA) for the proposed *Water Supply Backlog in the CHDM: Cluster 2, Phase 1: Schemes 27, 28 & 29 Project*, to be located near Cofimvaba in the Eastern Cape province. ArchaeoMaps Archaeological Consultancy has been appointed by BESC to conduct the Phase 1 Archaeological Impact Assessment (AIA) as specialist sub-section to the EIA.

1.1) *Development Location, Details & Impact*

PURPOSE OF THE DEVELOPMENT: The proposed *Water Supply Backlog in the CHDM: Cluster 2, Phase 1: Schemes 27, 28 & 29 Project* aims to address the existing water crisis in the relevant area. Of the 82 villages located in the proposed development area 10 have no formal water supply while 72 villages have some form of water supply, but not complying with minimum RDP standards (BESC 2010).

PROJECT LOCALITY: The proposed *Water Supply Backlog in the CHDM: Cluster 2, Phase 1: Schemes 27, 28 & 29 Project* will incorporate the 82 villages situated approximately 20km north-west of Cofimvaba [1:50,000 map reference: 3127DC] (BESC 2010). For purposes of development the villages has been grouped into 3 schemes namely Scheme 27 (approximately 400ha), Scheme 28 (approximately 1,200ha) and Scheme 29 (approximately 1,300ha) approximating a roughly 2,900ha area.

PROJECT DETAILS: The proposed *Water Supply Backlog in the CHDM: Cluster 2, Phase 1: Schemes 27, 28 & 29 Project* will include the following activities (BESC 2010):

- Construction of pipelines approximately 15km in length with diameters between 50mm and 100mm;
- Installation and replacement of 100 standpipes;
- Rehabilitation of 6 borehole pumps, meters, mechanical and electrical equipment for boreholes;
- Repair of equipment and ancillary works to the existing infrastructure and equipment; and
- 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.

DEVELOPMENT IMPACT: Inferred development impact can thus 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: General locality of the CHDM project, Cofimvaba, Eastern Cape



Figure 2: General locality of Schemes 27, 28 & 29 of the CHDM project near Cofimvaba



Figure 3: 1:50,000 general locality plan - Water Supply Backlog CHDM (courtesy BESC)

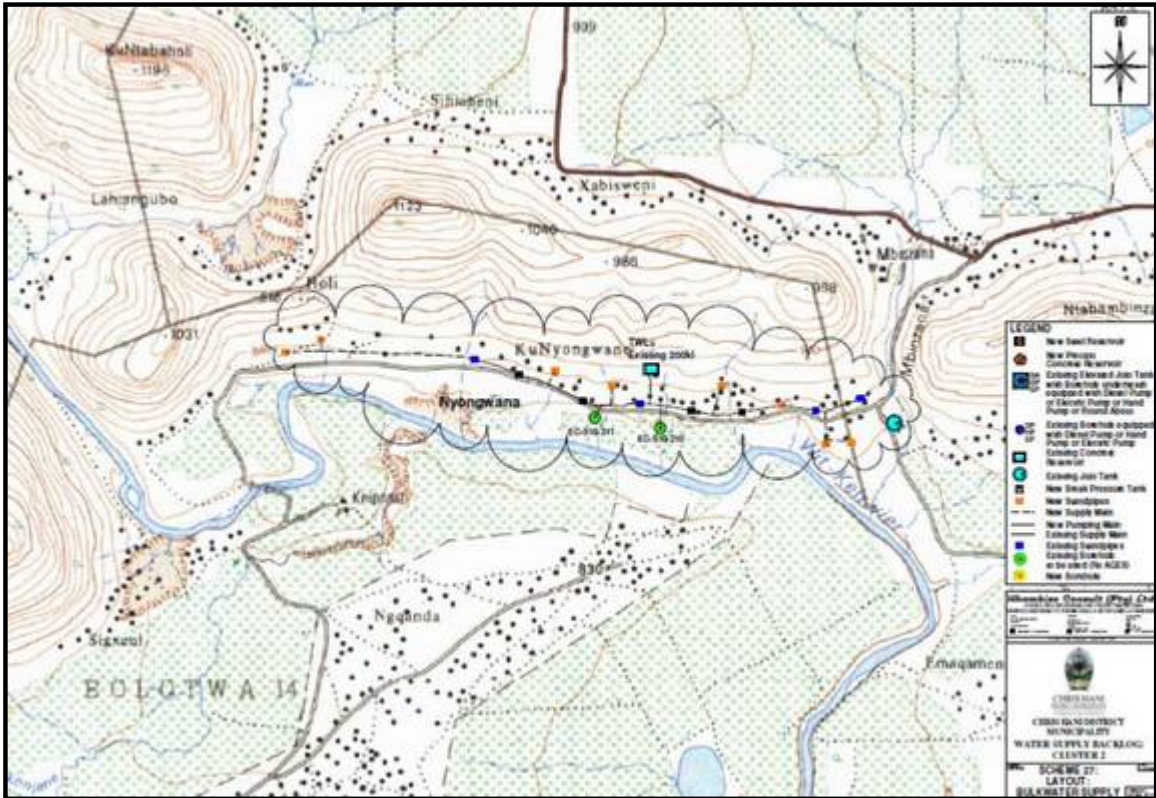


Figure 4: Water Supply Backlog CHDM – development particulars: Scheme 27

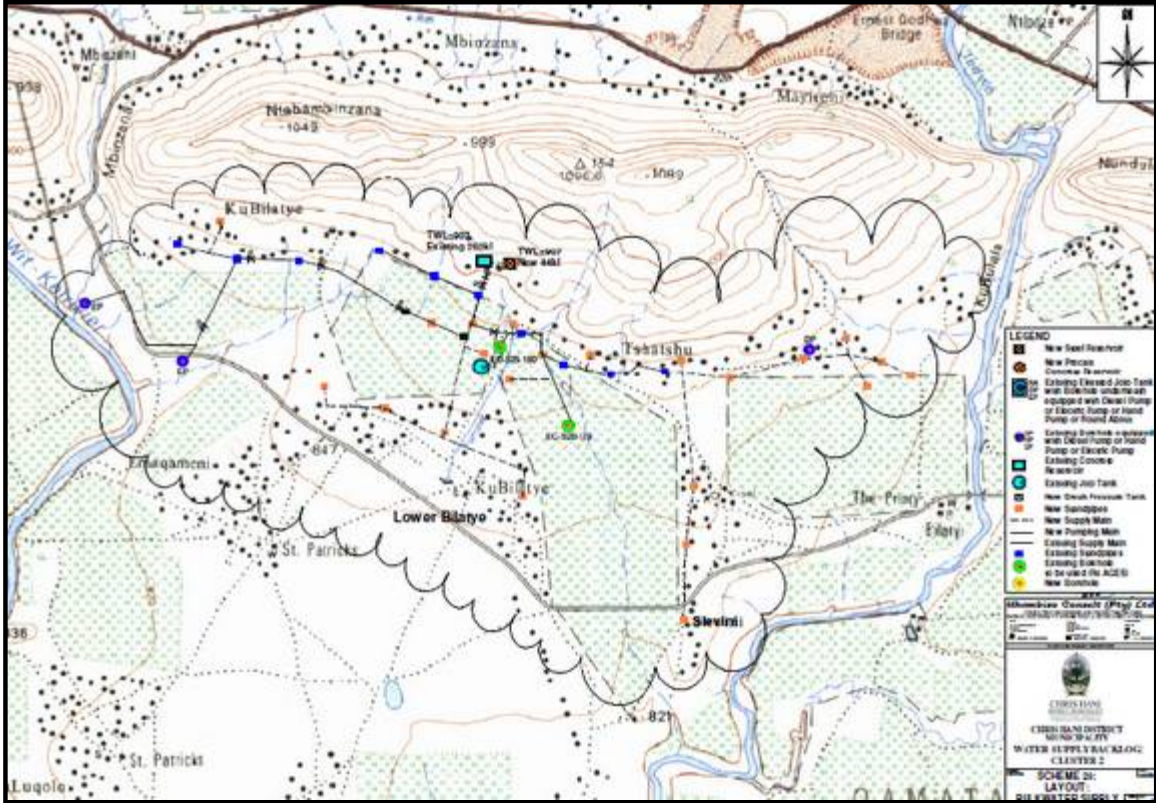


Figure 5: Water Supply Backlog CHDM – development particulars: Scheme 28

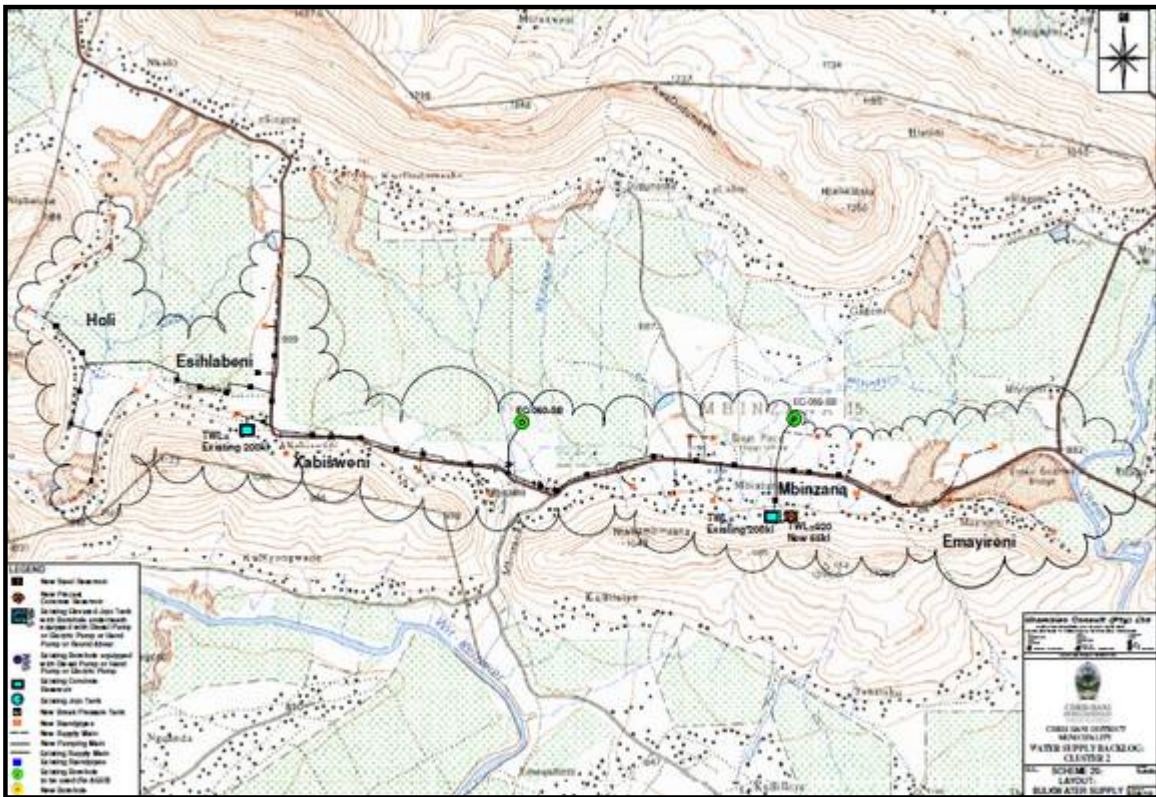


Figure 6: Water Supply Backlog CHDM – development particulars: Scheme 29

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' Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP) 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. Comments on potential socio-cultural aspects are included in section 2.5) Socio-cultural Consultation.

2.2) *Methodology*

The Phase 1 AIA was conducted over a 6 day period (2010-06-14 to 2010-06-19) by one archaeologist. The assessment was done by foot, LVD and off-road vehicle, 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

2.3) Coverage and Gap Analysis

The Phase 1 AIA was focused on the demarcated development areas as indicated in Figures 4-6. Large portions of the remainder of the greater development areas were characterized by fenced agricultural and live stock areas, prohibiting access thereto. However, large portions of the construction for the development are in place, and have been so since 2002, the majority of which are easily accessible via the main roads through the villages and smaller access roads therein. Additional construction required for the projects are again largely restricted to main access roads and smaller village tracks, often associated with less undulated parts of the landscape and were relatively easily accessible.

Visibility across the development area varied radically. Natural stone rich surface deposits may have hampered identification of weathered stone features. However a number of Iron Age sites were identified, highlighting the sensitivity of the general area with regards to recent Iron Age occupation. The low density of recorded Stone Age deposits may represent more extended sub-surface deposits and may also be indicative of the presence of sub-surface deposits along smaller streams being at present covered by thousands of years of deposits.

2.4) Phase 1 AIA Assessment findings

For purposes of this report the Phase 1 AIA findings are described in 3 sections according to proposed development, namely:

- Scheme 27;
- Scheme 28; and
- Scheme 29.



Figure 7: Phase 1 AIA assessment areas

2.4.1.) SCHEME 27



Figure 8: Scheme 27 - Phase 1 AIA findings

The proposed Scheme 27 development centers on the present day Nyongwana Village.

Eight (8) archaeological and cultural heritage resources, as defined and protected under the NHRA 1999, were identified during assessment of the Scheme 27 development area. The presence of resources are primarily ascribable to proximity of the Wit Kei River and surface stone rich deposits to the north thereof, largely north of the Scheme 27 access road, characterizing a much more undulated landscape.

Scattered Stone Age deposits typified areas of raw material outcrops alongside the Wit Kei River, while the majority of, inferred to be very recent Iron Age deposits, were located towards the north of the access road, distinctively in a landscape characterized by profound surface stone deposits, evidently exploited for purposes of settlement construction. The eastern part of the Scheme 27 development area is much more settled than the western part; and high contemporary settlement is directly associated with low archaeological site presence. The less cotemporary-settled western part of the Scheme 27 development area is in turn associated with high archaeological sensitivity. Cultural continuity of structure design and construction may account for this trait – earlier sites may have been destroyed or heavily impacted on during the course of material sourcing for present day 'kraal' (stock enclosure) structures. However, this is not a characteristic traditionally displayed by Xhosa people, who as a norm would prefer to settle next to remains of former habitation, as displayed in the close proximity between sites 4, 5, 6 and 7. Alternatively site distribution as recorded during the Phase 1 AIA may in fact represent simple preference in earlier times, perhaps also associated with less inhabitants and larger distances between homesteads, of settlement towards the west of the study site than towards the east.



Figure 9: The main road through Scheme 27 or Nyongwana Village – development is largely concentrated along the road reserve



Figure 10: General view of the area: stone walling is often found in direct association with more modern structures



Figure 11: Existing water infrastructure, with fenced fields in the background



Figure 12: General view of some village residences



Figure 13: Existing water related infrastructure



Figure 14: Existing water related infrastructure with a view of the village in the background

2.4.1.1) Site 27.1 - Grave Site (S31°55'56.9"; E27°17'31.6")

Site 27.1 comprises of 3 graves of approximately 2x2m each. Individual graves are stone outlined and filled with earth. Two of the graves have no headstones: the graves may thus well pre-date 60 years of age and may be formally protected under the NHRA 1999. A gravestone demarcated the headpiece of the northern most grave, implying a contemporary origin and cultural continuity of use of the site.

- **CONCLUSION AND RECOMMENDATIONS:**

Site 27.1 is ascribed a SAHRA *Medium Significance* and *Generally Protected B Field Rating*: The site should thus either be conserved or mitigated (exhumation and re-internment) prior to development. The proposed line route is planned north of the site locale, implying that the site will be conserved. Based on Xhosa cultural values and customs and current land-use, formal site conservation (permanent fencing) is not recommended. The developer may consider temporary conservation measures during the construction phase.



Figure 15: General view of Site 27.1



Figure 16: The northern most grave of Site 27.1, characterized by the headstone

2.4.1.2) Site 27.2 - Stone Age (S31°56'08.8"; E27°17'57.5")

Low density Stone Age deposits were identified along the banks of the Wit Kei River. Three of these 'occurrences' or features were recorded comprising Site 2, being 2a (S31°56'08.8"; E27°17'57.5"), 2b (S31°56'13.5"; E27°18'11.3") and 2c (S31°56'18.0"; E27°18'35.3"). All 3 recorded localities are associated with surface shale outcrops; both water and raw material resources are thus interpreted as important early draw cards to the banks of the river. However, local shale is of a general poor quality, reflecting on the low density of artifact ratios (artefacts: m²), with maximum densities recorded being 5:1. Deposits, based on typology and technology are primarily ascribed to the Middle Stone Age (MSA). However, later artefacts, typologically reminiscent of the Later Stone Age (LSA) also occurred at all identified features, implying both continuous landscape use but emphasizing the secondary context of the essentially lag deposit. Stone Age deposits are associated with the gentle slope of the riverbank; towards the east and especially in the vicinity of the pump station (marked with X at S31°56'20.1"; E27°19'41.2") where the river bank is characterized by much higher and steeper banks inspected sections proved culturally sterile. Inspected quarry sections immediately north east of the pump station also proved culturally sterile.

- **CONCLUSION AND RECOMMENDATIONS:**

The Site 27.2 features are ascribed a SAHRA *Low Significance* and *Generally Protected C Field Rating*: The features should be conserved or destroyed under a SAHRA APM Unit *Site Destruction Permit*. Proposed development will however not impact on any of the features, implying site conservation. Based on current land-use and community access to water no formal conservation (permanent fencing) is recommended.



Figure 17: Shale outcrops displaying low density Stone Age artefacts along the banks of the Wit Kei River



Figure 18: Stone Age artefacts samples from the Site 2 features



Figure 19: View of the existing pump station



Figure 20: Anthropically sterile sections of the Wit Kei River in the vicinity of the pump station

2.4.1.3) Site 27.3 - Grave Site (S31°56'03.2"; E27°17'57.8")

Site 27.3 comprises of 3 graves with dimensions of more or less 2x2m each. Graves are traditionally stone outlined and filled with earth. Earth fill is indicative of relative age; high rising earth fill indicates one recent burial while collapsed earth fill of the other 2 graves imply that these predate the recent burial and may in fact predate 60 years of age, meaning that they are formally protected under the NHRA 1999.

- **CONCLUSION AND RECOMMENDATIONS:**

Site 27.3 is ascribed a SAHRA *Medium Significance* and *Generally Protected B Field Rating*: The site should either be conserved or mitigated (exhumation and re-internment) prior to development. The proposed line route will run north of the site; the site will thus be conserved. Based on proximity to the road, Xhosa cultural values and customs and current land-use, formal site conservation (permanent fencing) is not recommended. The developer may consider temporary conservation measures during the construction phase.



Figure 21: General view of Site 27.3



Figure 22: View of the 3 graves of Site 27.3 with the recent high earth filled grave in the foreground

2.4.1.4) Site 27.4 - Iron Age (S31°56'01.9"; E27°18'01.1")

Iron Age stone walling of Site 27.4 dates to the Colonial Period, based on the presence of a combination of circular and rectangular structure remains at the approximate 90x90m site. About 8-9 stone walled features were identified in the general Site 4 area, in various states of decay and ranging from wall remains still standing to a level of about 1m while at other places simple hut foundation remains were all that is left of former habitation. Cultural overlay may be present at the site, but without further investigation it would be difficult to verify. In general however the majority of clearly identifiable circular features (at least 5) may indicate a slightly older age; rectangular features are very similar in design to those in contemporary use. No artefactual material was found in association with the site; the presence of surface decorated ceramic ware would have been particularly useful in site identification and temporal variation. To the north east of the site a seemingly quite contemporary grave (4G – S31°56'01.5"; E27°18'03.5") is situated in direct proximity to rectangular 'kraal' remains.

- **CONCLUSION AND RECOMMENDATIONS:**

Site 27.4 is ascribed a SAHRA *Medium Significance* and *Generally Protected B Field Rating*: The site should either be conserved or mitigated (sample excavation) prior to development. The proposed line route will cut through the general area from the road towards the north-west; the site may thus easily be conserved by taking heritage concerns into account when finalizing the line route. Based on Xhosa cultural values and customs and current land-use, formal site conservation (permanent fencing) is not recommended. The developer may consider temporary conservation measures during the construction phase.



Figure 23: Two circular stone features at Site 27.4



Figure 24: Foundation remains of a circular stone, most probably residential, structure



Figure 25: Remains of a heavily decayed circular stone feature



Figure 26: A quite recent grave (4G) in direct proximity to rectangular 'kraal' remains

2.4.1.5) Site 27.5 - Iron Age (S31°56'00.2"; E27°18'11.2")

The remains of at least 8 'kraal' structures were found comprising the Site 27.5 area, an area of approximately 200x90m in size. Some structures are circular and some rectangular in shape, implying an Iron Age traditional affiliation of the Colonial Period. Structures were found in various stages of decay; from foundation mounds, to foundation remains and erect walls in places up to approximately 1m. Cultural overlay is inferred; oral histories and further scientific excavation may shed light on practices on continuing use of sites. No artefacts were found in association with the site.

- **CONCLUSION AND RECOMMENDATIONS:**

Site 27.5 is ascribed a SAHRA *Medium Significance* and *Generally Protected B Field Rating*: The site should either be conserved or mitigated (sample excavation) prior to development. The site will be conserved by the development. Based on Xhosa cultural values and customs and current land-use, formal site conservation (permanent fencing) is not recommended. The developer may consider temporary conservation measures during the construction phase.



Figure 27: Close-up of circular foundation remains at Site 27.5



Figure 28: A circular stone 'kraal' structure at Site 27.5



Figure 29: One of the circular stone structures of Site 27.5; with the original entrance in the front



Figure 30: Remains of a rectangular structure comprising the Site 27.5 area



Figure 31: Foundation mounds towards the north eastern extremity of Site 27.5

2.4.1.6) Site 27.6 - Iron Age (S31°56'01.6"; E27°18'14.9")

Site 27.6 constitutes a relatively recent Colonial Period Iron Age homestead. A small cemetery is located (6G) at S31°55'59.1"; E27°18'14.3" towards the west of the site. Immediately east thereof remains of the original hut is still clearly visible in direct association with foundation mounds inferred to have been a small rectangular 'kraal' and towards the south of the hut a relatively large, well preserved rectangular 'kraal' is clearly visible. Very little artefacts were found on site, mainly comprising of rusted metal of household and farming nature. The site may well not pre-date 100 years, implying that it is not formally protected under the NHRA 1999; relative dating due to continuing cultural practices are extremely difficult. However, the site remains culturally an important heritage resource, for the very reason mentioned above.

- **CONCLUSION AND RECOMMENDATIONS:**

Site 27.6 is ascribed a SAHRA *Medium Significance* and *Generally Protected B Field Rating*: The site should either be conserved or mitigated (sample excavation) prior to development. Development will not impact on the site; the site will by implication be conserved. Again Xhosa cultural values and customs and current land-use does not warrant formal site conservation (permanent fencing). The developer may however consider temporary conservation measures during the construction phase.



Figure 32: The 6G cemetery at Site 27.6



Figure 33: Hut remains at Site 27.6



Figure 34: Foundation remains of a rectangular 'kraal' structure, also indication subsequent additions to the original structure



Figure 35: The well-preserved large rectangular 'kraal' structure to the south of the hut

2.4.1.7) Site 27.7 - Iron Age (S31°56'02.2"; E27°18'18.0")

Site 27.7 comprises of 3 stone walled rectangular 'kraals'. The structures may be of significant age. However, cultural continuity of Xhosa tradition greatly hampers relative dating particularly of sites without associated cultural artefacts. By implication the site may, or may not be formally protected under the NHRA 1999, but the site remains culturally significant.

- **CONCLUSION AND RECOMMENDATIONS:**

Site 27.7 is ascribed a SAHRA *Low Significance* and *Generally Protected C Field Rating*: The site should either be conserved or destroyed under a SAHRA APM Unit *Site Destruction Permit*. Development will not impact on the site; the site will by implication be conserved. Based on Xhosa cultural values and customs and current land-use, formal site conservation (permanent fencing) is not recommended. The developer may consider temporary conservation measures during the construction phase.



Figure 36: Stone wall remains at Site 27.7



Figure 37: Two joining rectangular structure remains at Site 27.7

2.4.1.8) Site 27.8 - Iron Age (S31°56'06.6"; E27°19'08.3")

Site 27.8 is situated immediately east of the water tank but with the development not having impacted on the site, neither does the gravel access road leading thereto. The site comprises of 6 relatively large, reasonably well preserved stock enclosures. No associated archaeological artefacts were found in the vicinity of the site. At present dating is impossible but the site is culturally assigned to the Iron Age, and with the majority of the 'kraal' structures being rectangular in shape they evidently belong to the Colonial Period and recent or continuous use thereof may well be inferred.

- **CONCLUSION AND RECOMMENDATIONS:**

Site 27.8 is ascribed a SAHRA *Low Significance* and *Generally Protected C Field Rating*: The site should either be conserved or destroyed under a SAHRA APM Unit *Site Destruction Permit*. Development upgrading in the vicinity of the site will not impact negatively thereon. Again Xhosa cultural values and customs and current land-use does not warrant formal site conservation (permanent fencing). The developer may however consider temporary conservation measures during the construction phase.



Figure 38: General view of Site 27.8



Figure 39: Close-up of some of the Site 27.8 structures

- *CONCLUSION AND RECOMMENDATIONS*

The majority of infrastructure to be included in the *Water Supply Backlog in the CHDM: Cluster 2, Phase 1: Scheme 27 Project* has already been installed, during a 2002 development. However, infrastructure are not operational, and as a matter of fact haven't been since installation; resulting in the dire reality that villagers are currently still reliable on fetching water on a daily basis from the Wit Kei River, either by hand or by tractor. The situation is greatly impacting on living standards of the villagers, especially also relating to their participation in the economic, primarily farming, sector. Additional infrastructural development (and related development impact), in order to comply with the current water development proposal will be limited to the western extremity of Nyongwana Village.

A total of 8 archaeological and cultural heritage resources were identified during assessment of the Scheme 27 development area. Phase 1 AIA assessment focused on areas of impact directly relating to the development proposal (see Figure 4) and the immediate vicinity; the assessment was not done to a level where private homesteads or extended family clusters of residences, their yards or the immediate vicinity surrounding these were included. Of the 8 identified resources 1 constitutes a Stone Age site (Site 27.2), 2 sites are grave sites (Sites 27.1 & 27.3) and 5 sites are Iron Age sites dating to the Colonial Period (Sites 27.4, 27.5, 27.6, 27.7, & 27.8). Of the identified Iron Age sites 2 contains grave site components (Sites 27.4 & 27.6).

- Stone Age deposits were found in association with raw material outcrops along the banks of the Wit Kei River. The proposed Water Supply Backlog Project in the CHDM will not impact on any of the identified locales where lithic artefacts were present; these deposits will by implication be conserved. Based on current land use it is not recommended that the sites, or rather Stone Age 'features' be formally conserved with fences and access gates.
- Two grave sites were identified in relative close proximity to the proposed development line route. Neither of the sites is directly threatened by the development. The presence of these sites do however have a further implication, namely that grave sites are not a static site type and more graves may well be present in direct proximity to homesteads. In addition the number of grave sites is expected to grow even within the little time lapsed from the time of assessment to the commencement date of the development.

It is recommended that the developer engages in consultation with landowners of Nyongwana Village to ensure that line routes will not impact on any graves and that set no-go areas are agreed to before the construction phase starts.

It is not recommended that the grave sites be formally fenced prior to development; current cultural practices should rather be respected. With reference thereto, should the developer consider temporary conservation measures by means of pole and plastic danger tape during the period of construction, this should first be verified with landowners of the village.

- Iron Age sites are concentrated along the northern border of the development area and in direct association with rich surface stone deposits that were evidently exploited for structure construction. Stone walling as a building tradition has a long Iron Age history. Identified Iron Age sites are all ascribed to the Colonial Period, based on a mix of circular and rectangular structure

features, a tradition that is continuing to the present day. At a number of the identified sites cultural continuity can also be inferred, but will need to be verified through oral histories and scientific research.

None of the Iron Age sites will be impacted on by the proposed Scheme 27 development. It is not recommended that the sites be formally conserved by means of fences and access gates; such development will impact on current land use, where the general site areas are often used as grazing fields for specifically sheep and goat. Direct ancestral ties between the sites and contemporary land owners is reasonably inferred and should the developer consider temporary conservation measures by means of pole and plastic danger tape, this should first be verified with landowners of the village.

WATER SUPPLY BACKLOG IN THE CHDM: CLUSTER 2, PHASE 1					
SCHEME 27					
MAP CODE	SITE	TYPE / PERIOD	DESCRIPTION	CO-ORDINATES	PRELIMINARY RECOMMENDATIONS
DEVELOPMENT AREA					
1	Site 27.1	Iron Age	Grave Site	S31°55'56.9"; E27°17'31.6"	<i>In-situ</i> conservation
2a	Site 27.2	Stone Age	MSA (LSA)	S31°56'08.8"; E27°17'57.5"	<i>In-situ</i> conservation
2b	Site 27.2	Stone Age	MSA (LSA)	S31°56'13.5"; E27°18'11.3"	<i>In-situ</i> conservation
2c	Site 27.2	Stone Age	MSA (LSA)	S31°56'18.0"; E27°18'35.3"	<i>In-situ</i> conservation
3	Site 27.3	Iron Age	Grave Site	S31°56'03.2"; E27°17'57.8"	<i>In-situ</i> conservation
4	Site 27.4	Iron Age	Settlement	S31°56'01.9"; E27°18'01.1"	<i>In-situ</i> conservation
4G	Site 27.4	Iron Age	Grave Site	S31°56'01.5"; E27°18'03.5"	<i>In-situ</i> conservation
5	Site 27.5	Iron Age	Settlement	S31°56'00.2"; E27°18'11.2"	<i>In-situ</i> conservation
6	Site 27.6	Iron Age	Settlement	S31°56'01.6"; E27°18'14.9"	<i>In-situ</i> conservation
6G	Site 27.6	Iron Age	Grave Site	S31°55'59.1"; E27°18'14.3"	<i>In-situ</i> conservation
7	Site 27.7	Iron Age	Settlement	S31°56'02.2"; E27°18'18.0"	<i>In-situ</i> conservation
8	Site 27.8	Iron Age	Settlement	S31°56'06.6"; E27°19'08.3"	<i>In-situ</i> conservation

Table 2: Scheme 27 - Phase 1 AIA assessment findings

2.4.2.) SCHEME 28

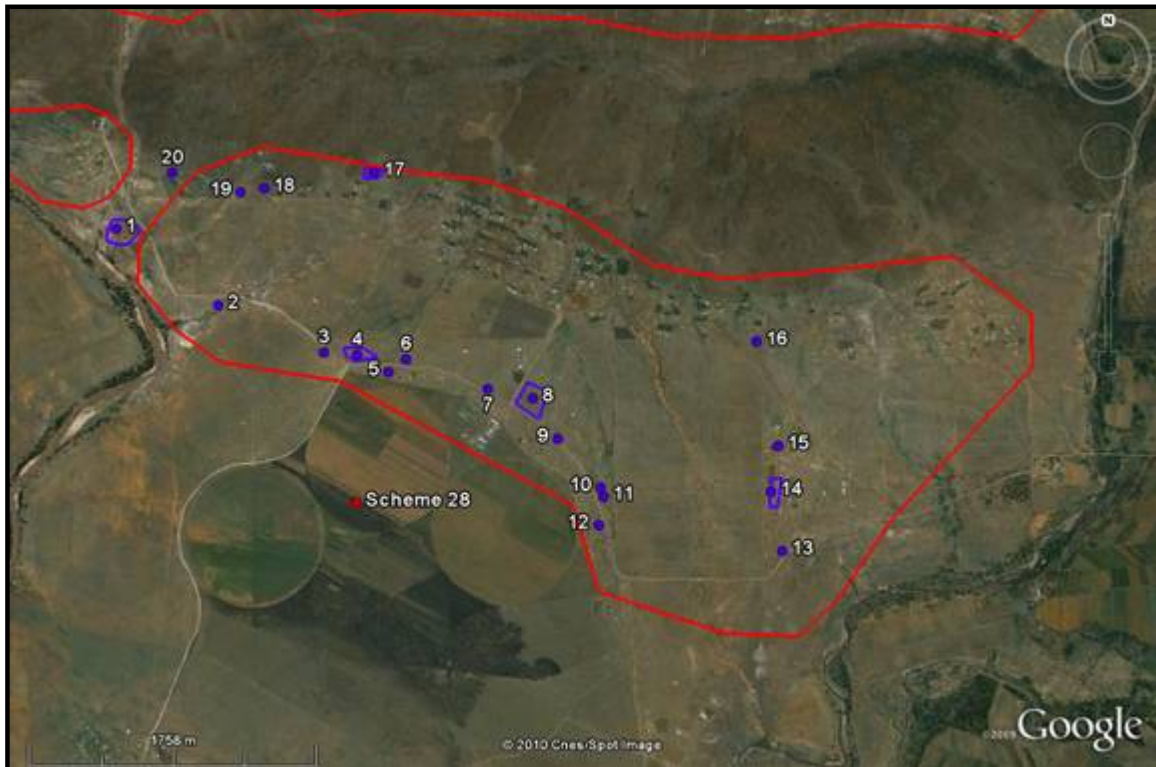


Figure 40: Scheme 28 - Phase 1 AIA findings

The proposed Scheme 28 development will focus on the supply of water to the villages of Lower Bilatye, more or less at the southern central part of the proposed development area, Slavini, towards the east, Tshatshu, towards the north-eastern part and Upper Bilatye, situated in the north-western part of the development area.

Twenty (20) archaeological and cultural heritage resources, as defined and protected under the NHRA 1999, or of contemporary cultural significance were identified during the assessment. Localities of resources are closely linked with natural resources on the landscape and former use thereof by populations. The Wit Kei River cross-cuts the development area in the western corner, while the Indwe flows to the east. A number of smaller tributaries of the Wit Kei cut through the greater Scheme 28 area.

Stone Age deposits were found primarily in the southern part of the development area and identified sites are described in the following section. In addition thereto stream erosion displaying sub-surface sections in the vicinity between Sites 28.1 and 28.2 revealed a compacted cultural member of approximately 50cm in depth at a level of more or less 80-100cm below the surface, indicating that substantial Stone Age deposits may well underlay large portions of the agricultural field but at a depth that they would not have been disturbed through technology currently used for farming. In addition the north-central part of the development area, comprising a large part of Tshatshu Village was characterized by a low density Stone Age 'feature'. Artefact ratios (artefacts: m²) recorded approximated 1:25. The low density presence of artefacts covered a particularly large portion of the site but surface artefacts seem to remain relatively stable, never amounting to a 'site' with the possibility of further investigation. Artefacts can loosely be ascribed to a Middle Stone Age (MSA) / macrolithic Later Stone Age (LSA) type, based on typology and

technology used. A little south of the village, in the banks of a tributary to the Wit Kei River a shallow Stone Age member of approximately 15cm in depth was identified at a level of approximately 20cm below the surface. The rich cultural layer is again inferred to represent quite substantial sub-surface deposits, but current farming technology did not seem to impact thereon to a level that artefacts were churned to the surface.

The low quantity of Iron Age sites with an archaeological significance was quite limited, 1 to the north and 1 to the south of the development area. This is ascribed largely to distance from necessary water sources in the past. Stone remains an important building material in the area and many contemporary stock enclosures closely resemble archaeological remains, a feat ascribed to continuing tradition in the general area.

The primary heritage resource recorded in the Scheme 28 development area was grave or cemetery sites, interpreted as directly relating to the contemporary population and in the case of the large cemetery at Lower Bilatye, also in conjunction with the former Emaqameni Village, prior to relocation of villagers for purposes of the spill point farming development.



Figure 41: Evidence of rich Stone Age deposits underlying current agricultural fields at a depth of more than 1m in the southern part of the development area



Figure 42: A rich Stone Age layer identified at a depth of 20cm below the present day surface towards the northern central part of the development area. Deposits are not impacted on by current farming activities



Figure 43: General view over the central part of the development area



Figure 44: View of the proposed line route development through Slavini Village



Figure 45: General view of the eastern part of Tshatshu Village



Figure 46: Existing infrastructure in the vicinity of Tshatshu Village and Upper Bilatye



Figure 47: General view of Upper Bilatye



Figure 48: Existing water infrastructure at the western part of Tshatshu Village

2.4.2.1) Site 28.1 - Stone Age / Iron Age (S31°56'32.0"; E27°20'10.1")

Site 28.1 represents a perfect example of cultural overlay across the recorded approximate 200x160m site: Rich Stone Age deposits on the banks of the Wit Kei River are overlain by a complex of ruined Iron Age stone wall remains.

Stone Age deposits are largely representative of the later Middle Stone Age (MSA) with a definite component of the macrolithic Later Stone Age (LSA). Artefact ratios (artefacts: m²) varied greatly, ranging from 12:1 to ≤5:1 with the highest ratios recorded at the top of the hill and decreasing in quantity towards lower slopes. The site represents a typical knapping site with high representation of cores and knapping *debris* in direct association with some MSA flake and blade *fossiles directeurs*. Retouch and use-wear were evident on a number of lithics.

Iron Age remains are present in the form of foundation remnants of a number of clustered units of circular dwellings. At the top of the hill 2 clusters of 4-5 circular units each were identified with a quite extended cluster at the lower slopes of the hill represented by at least 7 circular structure ruins. Circular foundations approximated 3m in diameter. No associated Iron Age artefacts, specifically ceramic, were identified in association with the site, making particular *facies* assignation impossible. Later period earthenware at the site may represent extended use of the site, but is not interpreted as an indicator of site origin. The site is however inferred to be of quite significant age, based on the absence of any rectangular structure remains, usually associated with post-Colonial period Western influence on indigenous traditions. The site may thus well pre-date 100 years of age – easily being the oldest recorded site identified during assessment of the total development area, including the Schemes 27, 28 and 29 areas.

Proximity of the site to the Wit Kei River remains important, both with regards to Stone Age and Iron Age deposits; in both cases reflecting use of the landscape and the natural resources it provided to past inhabitants.

To the immediate east of the site existing agricultural fields is inferred to have impacted specifically on Stone Age deposits, but fenced fields were not accessible and the degree to which existing development have impacted on the site could not be assessed. To the north of the site the 2002 construction of the water pipeline already impacted on the site. Basic Xhosa respect with regard former habitation is inferred to have avoided destruction of Iron Age relics.

The site is situated immediately west of the proposed development area and development will by implication not impact on the site.

- **CONCLUSION AND RECOMMENDATIONS:**

Site 28.1 is ascribed a SAHRA *Medium Significance* and *Generally Protected B Field Rating*: The site should either be conserved or mitigated (sample excavation) prior to development. The site is situated west of the proposed development area and will by implication not be impacted on. Based on Xhosa cultural values and customs and current land-use it is not recommended that the site be formally conserved (permanently fenced).



Figure 49: Fenced fields to the immediate east of Site 28.1



Figure 50: General view of Site 28.1



Figure 51: Circular structure remains on the lower slopes of the site



Figure 52: Close-up of one of the structure remains



Figure 53: *In situ* context of Stone Age artefacts in relation to Iron Age remnants at Site 28.1



Figure 54: A selection of Stone Age artefacts from Site 28.1

2.4.2.2) Site 28.2 - Stone Age (S31°56'47.7"; E27°20'35.1")

Site 28.2 comprises a low density Stone Age site most probably of Middle Stone Age (MSA) assignment, based on typology, technology and general artefact size. The site is located on a grass covered low rising hill, in close proximity to streambed, dry at the time of assessment. Inspection of streambed sections yielded no clear anthropic member. However, geological stratigraphy did display poor quality shale in the sections, and locally used baked shale may well have been sources locally. Artefact ratios (artefacts: m²) approximated 5:1, with a particularly low presence of micro *debitage*, inferred to represent post-depositional disturbance. The site may be related to recorded sub-surface cultural layers recorded in a nearby tributary to the Wit Kei River and may thus represent a surface occurrence of much wider sub-surface Stone Age deposits, inferred also to have significant sub-surface depth.

- **CONCLUSION AND RECOMMENDATIONS:**

The Site 22.2 is ascribed a SAHRA *Medium Significance* and *Generally Protected B Field Rating*: The site should either be conserved or mitigated (sample excavation) prior to development. The site is situated to the south of the development and will be conserved. Formal conservation (permanent fencing) of the site is not recommended due to general landscape use.



Figure 55: General view of Site 28.2



Figure 56: Selected Stone Age artefacts from Site 28.2

2.4.2.3) *Site 28.3 - Grave Site (S31°56'57.3"; E27°21'00.6")*

Site 28.3 comprises of 2 graves with dimensions of more or less 2x2m each. Graves are traditionally stone outlined and filled with earth. Based on the brick stone used the graves are assigned a contemporary origin, post-dating 60 years of age and by implication not formally protected under the NHRA 1999. The site however remains to be of cultural significance.

- **CONCLUSION AND RECOMMENDATIONS:**

Based on the recent date of Site 28.3 a SAHRA Site Significance rating is irrelevant. The site will be conserved by the development, with the current line route running north of the site. Formal conservation (permanent fencing) of the site is not recommended based on Xhosa cultural values and customs and inferred direct ancestral ties between the site and the population living in the direct vicinity thereof.



Figure 57: General view of Site 28.3

2.4.2.4) Site 28.4 - Iron Age (S31°56'57.8"; E27°21'08.6")

Site 28.6 is situated across an extensive approximately 200x70m area. The site constitutes an Iron Age homestead with residential remains located towards the west and central part thereof and stock enclosures or 'kraal' remains towards the east. Residential remains are characterized by mounds of building *debris* with circular foundation remains still visible at some places. Rectangular 'kraal' remains with dimensions of more or less 12x7m are identifiable by low standing stone walling while a circular cattle enclosure displayed an interesting shallow, approximately 15cm below the surface, koprolite member. The Iron Age site is dated to Colonial times based on the presence of rectangular structure remains but quite substantial time depth may well be inferred, obviously together with at least a degree of cultural overlay. The site may well represent an early settlement of either the village of Emaqameni (subsequently relocated for purposes of the spill point development) or Lower Bilatye. The site will not be impacted on by the development, which closely follows the existing road running south of the site.

- **CONCLUSION AND RECOMMENDATIONS:**

Site 28.4 is ascribed a SAHRA *Medium Significance* and *Generally Protected B Field Rating*: The site should either be conserved or mitigated (sample excavation) prior to development. Development will not impact on the site; the site will by implication be conserved. Again Xhosa cultural values and customs and current land-use does not warrant formal site conservation (permanent fencing). The developer may however consider temporary conservation measures during the construction phase.



Figure 58: Residential remains at Site 28.4



Figure 59: Foundation remains of a circular residential structure at Site 28.4



Figure 60: A clearly identifiable koprolite member at the circular stock enclosure



Figure 61: Stone walled remains of a large rectangular 'kraal' structure

2.4.2.5) Site 28.5 - Grave Site (S31°57'01.3"; E27°21'16.1")

The Site 28.5 area is divided into 2 with the 1st comprising a small grave area containing 5 relatively contemporary graves. Approximately 15m to the south-east thereof is an older grave site, containing 4 identifiable graves in direct proximity to a contemporary residence and by inference ancestrally related to the graves. The older component of the site is inferred to well pre-date 60 years of age, with graves by inference formally protected under the NHRA 1999. All of the graves constituting the younger component of the site are not necessarily older than 60 years. However all of the graves constitute cultural significant sites.

- **CONCLUSION AND RECOMMENDATIONS:**

Site 28.5 is ascribed a SAHRA *Medium Significance* and *Generally Protected B Field Rating*: The site should either be conserved or mitigated (exhumation and re-internment) prior to development. The existing line route runs north of the site; the site will thus be conserved. Based on proximity to the road, Xhosa cultural values and customs and current land-use, formal site conservation (permanent fencing) is not recommended. The developer may consider temporary conservation measures during the construction phase.



Figure 62: View of the younger component of Site 28.5



Figure 63: View of the older component of Site 28.5

2.4.2.6) Site 28.6 - Grave Site (S31°56'58.7"; E27°21'20.2")

Site 28.6 comprises of 4 identifiable graves. One of the graves is stone outlined with the earth infill having collapsed to the surface level, implying substantial age of the grave. The remaining 3 graves are interpreted as pre-dating the stone outlined graves. Original grave markers have been removed and the graves are primarily identifiable through a change in vegetation. Graves are interpreted as pre-dating 60 years of age and thus formally protected under the NHRA 1999.

- **CONCLUSION AND RECOMMENDATIONS:**

Site 28.6 is ascribed a SAHRA *Medium Significance* and *Generally Protected B Field Rating*: The site should either be conserved or mitigated (exhumation and re-internment) prior to development. The existing line route runs south of the site closely following the road alignment; the site will thus be conserved. Based on proximity to the road, Xhosa cultural values and customs and current land-use, formal site conservation (permanent fencing) is not recommended. The developer may consider temporary conservation measures during the construction phase.



Figure 64: General view of Site 28.6

2.4.2.7) Site 28.7 - Iron Age (S31°57'04.7"; E27°21'39.8")

Site 28.7 comprises of a fairly small, approximate 8x5m rectangular stock enclosure, or 'kraal' remains, identifiable only by means of its foundation stones. No associated artefacts were discovered in association with the structure. In addition 3 earth mounds indicate the localities of 3 associated graves. The graves are not typically stone outlined, but do have small, un-inscribed stone headstones. The site is inferred to be of very recent origin, most probably post-dating 60 years of age.

- **CONCLUSION AND RECOMMENDATIONS:**

Site 28.7 is inferred to post-date 60 years of age. A SAHRA Site Significance rating is thus irrelevant. However the site, particularly the graves are of cultural significance. The site will not be impacted on by the proposed development. Based on proximity to the road, Xhosa cultural values and customs and current land-use, formal site conservation (permanent fencing) is not recommended. The developer may consider temporary conservation measures during the construction phase.



Figure 65: General view of Site 28.7 with the graves in the foreground and the structure remains towards the background



Figure 66: Close-up of the Site 28.7 graves

2.4.2.8) Site 28.8 - Cemetery (S31°57'06.5"; E27°21'50.6")

The large Site 28.8 cemetery start just south of an old rectangular stock enclosure, typified only by its raised level and foundation wall remains and stretches south towards the access road. The cemetery is informally arranged with a number of graves, most probably reaching hundreds in number. Towards the central part of the cemetery graves are roughly aligned in rows, many of which seem to be of quite significant age. These graves are mostly identifiable only by slight rectangular changes in surface exposures demarcated in cases by headstones, some of which have headstones with inscriptions. Towards the outer perimeter of the site graves decrease in number and are more haphazardly arranged. Many of these graves may be more recent in origin and typically identifiable by stone outlines and raised earth in-fills. At least 1 grave comprises of a modern granite grave, individually fenced. The cemetery is interpreted to have served the now removed village of Emaqameni and Lower Bilatye, immediately surrounding it. The majority of the graves at the site is inferred to predate 60 years of age, implying overall formal protection of the site. A few odd graves were observed outside the demarcated perimeter of the site and seeming 'modern' burial practices may result in increasing graves situated more randomly in the general area. More graves may also be expected in direct proximity to contemporary homesteads.

Towards the south of the access road a number of mounds were observed. However inspection of the area indicated that these mounds are the result of low level earthworks rather than graves, providing a relatively clear demarcation of the southern periphery of the site.

- **CONCLUSION AND RECOMMENDATIONS:**

Site 28.8 is ascribed a SAHRA *Medium Significance* and *Generally Protected B Field Rating*: The site should either be conserved or mitigated (exhumation and re-internment) prior to development. The existing line route runs south of the site closely following the road alignment; the site will thus be conserved. Based on proximity to the road, Xhosa cultural values and customs and current land-use, formal site conservation (permanent fencing) is not recommended. The developer may consider temporary conservation measures during the construction phase.



Figure 67: View of the central part of the Site 28.8 cemetery



Figure 68: View of the northern part of the Site 28.8 cemetery with some graves located in the old rectangular stock enclosure



Figure 69: A very recent, modern grave at Site 28.8



Figure 70: Typical graves at Site 28.8, characterized by rectangular indentations and piled stone headstones

2.4.2.9) *Site 28.9 - Grave Site (S31°57'14.7"; E27°21'56.5")*

Site 28.9 comprises of 3 contemporary graves, all approximately 2x2m in size. The graves are typically stone outlined and earth filled. Dates of the graves are at present unknown but may well post-date 60 years of age implying that they are not formally protected under the NHRA 1999. The graves however remain of cultural significance. The site may well be situated on a former cattle enclosure, based on massive animal burrows in the immediate vicinity, indicative of former (anthropic) disturbance. Should this be the case ancestral ties to the area may predict that the site will expand in the future.

- **CONCLUSION AND RECOMMENDATIONS:**

The Site 28.9 graves are inferred to post-date 60 years of age. A SAHRA *Site Significance* rating is thus irrelevant. The site is however of cultural significance. The site is situated to the east of the proposed line route and will not be impacted on by development. Based on proximity to the road, Xhosa cultural values and customs and current land-use, formal site conservation (permanent fencing) is not recommended. The developer may consider temporary conservation measures during the construction phase.



Figure 71: General view of Site 28.9

2.4.2.10) Site 28.10 - Grave Site (S31°57'24.5"; E27°22'06.7")

Site 28.10 constitutes of 2 graves. Both are inferred to be fairly old, based on the fact that typical stone outlines are absent and earth mounds have collapsed to surface level. The graves may well pre-date 60 years of age and represent of the older graves in the general vicinity. A little to the north-east of the graves is a small complex of stone wall remains. The 3 rectangular 'kraal' structures comprising the complex are however inferred to rather relate to the contemporary dwelling immediately adjacent thereto than to the 2 graves.

- **CONCLUSION AND RECOMMENDATIONS:**

Site 28.10 is ascribed a SAHRA *Medium Significance* and *Generally Protected B Field Rating*: The site should either be conserved or mitigated (exhumation and re-internment) prior to development. The site is situated east of the planned line route and will not be impacted on by development. Again based on Xhosa cultural values and customs and current land-use, formal site conservation (permanent fencing) is not recommended. The developer may consider temporary conservation measures during the construction phase.



Figure 72: The 2 graves comprising Site 28.10



Figure 73: Stone walling located north-east of the graves are not inferred to be associated therewith

2.4.2.11) Site 28.11 - Grave Site (S31°57'26.3"; E27°22'07.4")

Site 28.11 comprises of 4 identifiable graves. Graves are stone outlined and earth filled with an inscribed headpiece attached to one. With reference to high rising earth mounds and the inscribed headpiece a relatively recent age may be inferred for the site. However without further community consultation it would be impossible to ascribe a date post-dating 60 years of age.

- **CONCLUSION AND RECOMMENDATIONS:**

Site 28.11 is ascribed a SAHRA *Medium Significance* and *Generally Protected B Field Rating*: The site should either be conserved or mitigated (exhumation and re-internment) prior to development. The site is situated north-east of the proposed line route and will be conserved by the development. Based on proximity to the road, Xhosa cultural values and customs and current land-use, formal site conservation (permanent fencing) is not recommended. The developer may consider temporary conservation measures during the construction phase.



Figure 74: General view of Site 28.11

2.4.2.12) Site 28.12 - Iron Age (S31°57'32.0"; E27°22'06.3")

Site 28.12 is typified by the remains of 2 circular stock enclosures; the 1st is characterized only by mound remains while a partial wall is visible at the other. Three (3) graves are located immediately adjacent to the still standing portion of the wall. Approximately 15m to the north-east thereof 4 additional graves are located in close proximity to one another. The graves are inferred to be culturally associated with the 'kraal' remains nearby. All graves are stone outlined and earth filled. Collapsed fill may represent relative age of the graves, but are in all well kept. Decaying grave-goods are indicative of ancestral associations with nearby populations.

- **CONCLUSION AND RECOMMENDATIONS:**

Site 28.12 is ascribed a SAHRA *Medium Significance* and *Generally Protected B Field Rating*: The site should either be conserved or mitigated (sample excavation and exhumation and re-internment of graves) prior to development. Development will not impact on the site; the proposed line route will run north of the site adjacent to the existing road alignment; site will by implication be conserved. Again Xhosa cultural values and customs and current land-use does not warrant formal site conservation (permanent fencing). The developer may however consider temporary conservation measures during the construction phase.



Figure 75: General view of Site 28.12



Figure 76: The 4 graves located north-east of the main site

2.4.2.13) Site 28.13 - Iron Age (S31°57'37.1"; E27°22'49.6")

Site 28.13 comprises of a large circular stock enclosure of approximately 12m in diameter. Low rising stone walls are still standing while slightly to the east of the site a pile of stone may be indicative of either a residential unit or a smaller associated 'kraal' structure. To the west of the site rectangular mound indications imply that the stock units were subsequently expanded by later type structures. Origin of the site may be quite old however cultural overlay, or the presence of a rectangular structure at the site, would assign a Colonial period date to the site. No associated artefacts were discovered in the vicinity of the site.

- **CONCLUSION AND RECOMMENDATIONS:**

Site 28.13 is ascribed a SAHRA *Medium Significance* and *Generally Protected B Field Rating*: The site should either be conserved or mitigated (sample excavation) prior to development. Development will not impact on the site; the site will by implication be conserved. Again Xhosa cultural values and customs and current land-use does not warrant formal site conservation (permanent fencing). The developer may however consider temporary conservation measures during the construction phase.



Figure 77: General view of Site 28.13



Figure 78: Rectangular structure indications to the west of the stock enclosure

2.4.2.14) Site 28.14 - Grave Site (S31°57'25.3"; E27°22'47.1")

Site 28.14 is situated in Slavini Village and constitutes an approximate 160x40m narrow strip containing a number of clusters of graves. Inferred dates of the graves varies quite radically based on basic maintenance thereof; while some are well kept with stone outlines, earth fills and grave-goods others have collapsed to surface level and are merely marked with some rough stones as headpieces. The density of graves in the area, demarcated by existing residential units, is expected to increase. The graves are situated to the east of the proposed line route that will run through Slavini Village.

- **CONCLUSION AND RECOMMENDATIONS:**

Site 28.14 is ascribed a SAHRA *Medium Significance* and *Generally Protected B Field Rating*: The site should either be conserved or mitigated (exhumation and re-internment) prior to development. The proposed line route will run towards the west of the site and the site will thus be conserved. Based on proximity to the road, Xhosa cultural values and customs and current land-use, formal site conservation (permanent fencing) is not recommended. The developer may consider temporary conservation measures during the construction phase.



Figure 79: General view of Site 28.14 from south to north



Figure 80: Selected graves from Site 28.14

2.4.2.15) Site 28.15 - Cemetery (S31°57'16.1"; E27°22'48.9")

The relatively small, informal, unfenced cemetery comprising Site 28.15 approximates 50x15m in extent and is situated on the northern perimeter of Slavini Village, on route to Tshatsu. Graves are informally arranged with a more contemporary section towards the south of the site, where graves are typically stone outlined and earth filled, some decorated with elaborate grave-goods. Older graves typify the northern portion of the cemetery; here rectangular indentations demarcate grave positions some with unmarked stone headstones. The older portion of the cemetery is well inferred to pre-date 60 years of age, implying that the majority of the site is formally protected under the NHRA 1999. The site is situated towards the west of the Slavini access road and despite close proximity to the proposed line route need not be impacted on by development.

- **CONCLUSION AND RECOMMENDATIONS:**

Site 28.15 is ascribed a SAHRA *Medium Significance* and *Generally Protected B Field Rating*: The site should either be conserved or mitigated (exhumation and re-internment) prior to development. The proposed line route will run towards the east of the site and the site will thus be conserved. Based on proximity to the road, Xhosa cultural values and customs and current land-use, formal site conservation (permanent fencing) is not recommended. The developer may consider temporary conservation measures during the construction phase.



Figure 81: View of the more contemporary portion of Site 28.15



Figure 82: The hardly distinguishable graves of the older portion of Site 28.15

2.4.2.16) Site 28.16 - Cemetery (S31°57'25.3"; E27°22'47.1")

Site 28.16 is situated in Tshatsu Village and stretches from north-east of the access road towards the northern ridges demarcating the development boundary. The large site is characterized by a number of informally arranged graves, in places following rough rows. Many graves, towards the central part of the area, are typified by stone outlines and earth filled. Towards the east of the area an older portion of the cemetery is characterized by much more difficult discernable graves, as a norm only identifiable by earth indentations and in places with the original headstones still aligned in rough rows. Origin of the cemetery pre-dates 60 years of age; the majority of the site is thus formally protected under the NHRA 1999, with the remainder thereof of contemporary cultural significance. The cemetery is inferred to serve Tshatsu and the more contemporary KuRulala village towards the east thereof.

- **CONCLUSION AND RECOMMENDATIONS:**

Site 28.16 is ascribed a SAHRA *Medium Significance* and *Generally Protected B Field Rating*: The site should either be conserved or mitigated (exhumation and re-internment) prior to development. The site will not be impacted on by the proposed development. Based on proximity to the road, Xhosa cultural values and customs and current land-use, formal site conservation (permanent fencing) is not recommended. The developer may consider temporary conservation measures during the construction phase.



Figure 83: The more contemporary portion of the Site 28.16 cemetery



Figure 84: Older graves at Site 28.16

2.4.2.17) Site 28.17 - Iron Age (S31°56'20.3"; E27°21'12.0")

Site 28.17 is inferred to constitute the original settlement which eventually led to the villages of Upper Bilatye and Tshatshu. The site was only briefly assessed, from a distance, due to a number of guard dogs on site. A complex of quite extensive circular stone walls represent stock enclosures and perhaps early residential remains to the north of the site, while the southern part of the site is characterized by the rectangular remains of stock enclosures. A small section with quite contemporary graves was easily visible towards the east of the site. It can reasonably be expected that older graves may well be present on site. The north-western part of the site is characterized by a series of more contemporary circular residential units, currently occupied. Language greatly hampered consultation, but a young girl present at the site confirmed that her family had been living at the site for a number of generations. Origin of the site evidently pre-dates 100 years of age, making the site quite significant with regards to early Xhosa settlement in the area. The site is situated well to the north of the proposed development line route and will not be negatively affected by development.

- **CONCLUSION AND RECOMMENDATIONS:**

Site 28.17 is ascribed a SAHRA *Medium Significance* and *Generally Protected B Field Rating*: The site should either be conserved or mitigated (sample excavation) prior to development. Development will not impact on the site. Again Xhosa cultural values and customs and current land-use does not warrant formal site conservation (permanent fencing). The developer may however consider temporary conservation measures during the construction phase.



Figure 85: General view of Site 28.17



Figure 86: Fairly recent graves towards the east of Site 28.17



Figure 87: Rectangular stock enclosures towards the south of Site 28.17



Figure 88: View of the original site proper, inferred to pre-date 100 years of age

2.4.2.18) Site 28.18 - Cemetery (S31°56'23.6"; E27°20'45.5")

Site 28.18 demarcates the position of a formally fenced cemetery in Upper Bilatye. Graves at the cemetery varies greatly in age with some inferred to well pre-date 60 years of age implying that the cemetery is formally protected under the NHRA 1999. Slightly towards the south-east of the site a confined fence with a tree may be indicative of an additional grave or locally significant heritage resource. However, no additional information on the feature could be obtained at the time of the assessment. The cemetery and the additional fenced feature are located north of the existing line route proposed for upgrade.

- **CONCLUSION AND RECOMMENDATIONS:**

Site 28.18 is ascribed a SAHRA *Medium Significance* and *Generally Protected B Field Rating*: The site is at present fenced, complying with basic SAHRA minimum standards for conservation.



Figure 89: The formally fenced cemetery, Site 28.18



Figure 90: The fenced feature located south-east of Site 28.18

2.4.2.19) Site 28.19 - Grave Site (S31°56'24.4"; E27°20'39.8")

Site 28.19 is situated on a slight rising hill immediately south of the Upper Bilatye access road. The site is characterized by 3-4 large circular stone outlines, of approximately 2.5x2.5m in size, demarcating the position of early graves. Graves are inferred to well pre-date 60 years of age, implying that they are formally protected under the NHRA 1999.

- **CONCLUSION AND RECOMMENDATIONS:**

Site 28.19 is ascribed a SAHRA *Medium Significance* and *Generally Protected B Field Rating*: The site should either be conserved or mitigated (exhumation and re-internment) prior to development. Existing water related infrastructure is situated north of the site; the site will thus be conserved by the proposed development. Based on proximity to the road, Xhosa cultural values and customs and current land-use, formal site conservation (permanent fencing) is not recommended. The developer may consider temporary conservation measures during the construction phase.



Figure 91: General view of Site 28.19



Figure 92: Close-up of one of the stone outlined graves

2.4.2.20) Site 28.20 - Iron Age (S31°56'20.4"; E27°20'23.2")

Site 28.20 is situated just east of the proposed development area demarcating the 'entrance' to Upper Bilatye Village. The site comprises of a circular stock enclosure at the village entrance with 3 large rectangular 'kraal' remains located to the south-west thereof. Walls of the circular structure is still standing though in a state of decay while the rectangular structures are represented only by foundation remains with very low rising walls in places. Origin of the site is at present unknown but reasonably dated to Colonial times. However a fairly recent date may well be applicable. The site will not be impacted on by the proposed development.

- **CONCLUSION AND RECOMMENDATIONS:**

Site 28.20 is ascribed a SAHRA *Medium Significance* and *Generally Protected B Field Rating*: The site should either be conserved or mitigated (sample excavation) prior to development. The site falls outside of the proposed development area and proposed upgrading of existing water infrastructure will not impact on the features. Again Xhosa cultural values and customs and current land-use does not warrant formal site conservation (permanent fencing). The developer may however consider temporary conservation measures during the construction phase.

(No photographic documentation.)

- *CONCLUSION AND RECOMMENDATIONS*

The majority of infrastructure to be included in the *Water Supply Backlog in the CHDM: Cluster 2, Phase 1: Scheme 28 Project* has been installed during the 2002 infrastructural development. Again, none of which are operational leading to the fact that water is still primarily sourced manually from nearby rivers including the Wit Kei River to the west of the development area and the Indwe River to the east. Additional infrastructural development (and related development impact) that will be included under the current development proposal will be restricted to the eastern part to serve the villages of Slavini and eastern Tshatshu.

Twenty (20) archaeological and cultural heritage resources were identified during assessment of the Scheme 28 development area. Phase 1 AIA assessment focused on areas of impact directly relating to the development proposal (see Figure 5) and the immediate vicinity; the assessment was not done to a level where private homesteads or extended family clusters of residences, their yards or the immediate vicinity surrounding these were included. Of the 20 identified resources 2 constitutes Stone Age sites (Sites 28.1 and 28.2), 7 sites are assigned to the Iron Age tradition, with the majority of these inferred to relate to Colonial times (Sites 28.1, 28.4, 28.7, 28.12, 28.13, 28.17 and 28.20), 2 of which have on-site grave localities (Sites 28.12 and 28.17). Twelve (12) sites are grave or cemetery sites, of archaeological or contemporary significance (Sites 28.3, 28.5, 28.6, 28.9, 28.10, 28.11, 28.14, 28.15, 28.16, 28.18 and 28.19).

- Identified Stone Age sites were discovered south of the southern access road of the Scheme 28 project area. Site 28.1 has been partially impacted on by existing infrastructure and the neighboring agricultural field. Aside from existing impact no further impact will occur during upgrading of the existing infrastructure in the areas.

Aside from the identified Stone Age sites 3 important Stone Age features have also been recorded:

- 1) Rich Stone Age deposits were discovered in an open eroded section of a small tributary to the Wit Kei River in the vicinity of site 28.1. Deposits constitute a densely packed archaeological layer of approximately 50cm in depth identified more than a meter below the present day surface. This sub-surface site is expected to extend across a quite large area underlying agricultural fields. Due to current farming technology used the deposits have not been impacted on.
- 2) Towards the central northern part of the Scheme 28 study site low density Stone Age artefacts were found across a large surface area in Tshatshu and Upper Bilatye Village. The extremely low density of artefacts, in large already impacted on by contemporary villages, does not warrant formal conservation. The presence of this low density 'feature' however remains important for purposes of recording, implying that more may well be recorded in future. In general low density features are important site indicators.
- 3) South of the low density 'feature' described above, in an exposed section of the stream running southwards towards the Wit Kei River another sub-surface site was identified. Exposed sections again yielded a densely packed anthropic member, approximately 15cm in width and situated more or less 20cm below the present day surface. The site, not visible on the surface of the adjacent fields, have not been impacted on by current farming activities; the fields are at present used for grazing.

- All identified grave and cemetery sites are located immediately adjacent to or in very close proximity to the existing or proposed line route. Again it needs to be emphasized that graves sites and cemetery boundaries, unless already formally fenced as is the case with Site 28.18, are not stationary heritage resources. None of the sites need to be directly impacted on. The number of grave sites and informal cemeteries may well increase within the time lapsed from the time of assessment to the commencement date of the development.

It is recommended that the developer engages in consultation with landowners of the various villages, and in particular with those of Lower Bilatye, to ensure that line routes will not impact on any graves and that set no-go areas are agreed to before the construction phase starts.

It is not recommended that the grave sites be formally fenced prior to development; current cultural practices should rather be respected. With reference thereto, should the developer consider temporary conservation measures by means of pole and plastic danger tape during the period of construction, this should first be verified with landowners of the village. Some sort of temporary demarcation is however recommended at the following sites: Sites 28.8, 28.14, 28.15 and 28.16.

- Iron Age sites are sparsely scattered and few in number compared particularly to the Scheme 27 development area, specifically taken development size into account. The low density of Iron Age sites may well be directly related to proximity to constant water sources. Identified Iron Age sites are all ascribed to the Colonial Period, based on a mix of circular and rectangular structure features, a tradition that is continuing to the present day. At most sites cultural continuity is reasonably inferred, but will need to be verified through oral histories and scientific research. Continuing tradition, specifically with regard to the use of stone as building material, is evident on the landscape where contemporary 'kraals' do characterize the landscape and modern economy.

None of the Iron Age sites will be impacted on by the proposed development. It is not recommended that the sites be formally conserved by means of fences and access gates; such development will impact on current land use, where the general site areas are often used as grazing fields or for settlement purposes. Direct ancestral ties between the sites and contemporary land owners have been established, specifically in the case of Site 28.17.

WATER SUPPLY BACKLOG IN THE CHDM: CLUSTER 2, PHASE 1

SCHEME 28

MAP CODE	SITE	TYPE / PERIOD	DESCRIPTION	CO-ORDINATES	PRELIMINARY RECOMMENDATIONS
DEVELOPMENT AREA					
1	Site 28.1	Stone Age / Iron Age	MSA / LSA Settlement	S31°56'32.0"; E27°20'10.1"	<i>In-situ</i> conservation
2	Site 28.2	Stone Age	MSA	S31°56'47.7"; E27°20'35.1"	<i>In-situ</i> conservation
3	Site 28.3	Iron Age	Grave Site	S31°56'57.3"; E27°21'00.6"	<i>In-situ</i> conservation
4	Site 28.4	Iron Age	Settlement	S31°56'57.8"; E27°21'08.6"	<i>In-situ</i> conservation
5	Site 28.5	Iron Age	Grave Site	S31°57'01.3"; E27°21'16.1"	<i>In-situ</i> conservation
6	Site 28.6	Iron Age	Grave Site	S31°56'58.7"; E27°21'20.2"	<i>In-situ</i> conservation
7	Site 28.7	Iron Age	Settlement	S31°57'04.7"; E27°21'39.8"	<i>In-situ</i> conservation
8	Site 28.8	Iron Age	Cemetery	S31°57'06.5"; E27°21'50.6"	<i>In-situ</i> conservation (Temporary fencing)
9	Site 28.9	Iron Age	Grave Site	S31°57'14.7"; E27°21'56.5"	<i>In-situ</i> conservation
10	Site 28.10	Iron Age	Grave Site	S31°57'24.5"; E27°22'06.7"	<i>In-situ</i> conservation
11	Site 28.11	Iron Age	Grave Site	S31°57'26.3"; E27°22'07.4"	<i>In-situ</i> conservation
12	Site 28.12	Iron Age	Settlement	S31°57'32.0"; E27°22'06.3"	<i>In-situ</i> conservation
13	Site 28.13	Iron Age	Settlement	S31°57'37.1"; E27°22'49.6"	<i>In-situ</i> conservation
14	Site 28.14	Iron Age	Grave Site	S31°57'25.3"; E27°22'47.1"	<i>In-situ</i> conservation (Temporary fencing)
15	Site 28.15	Iron Age	Cemetery	S31°57'16.1"; E27°22'48.9"	<i>In-situ</i> conservation (Temporary fencing)
16	Site 28.16	Iron Age	Cemetery	S31°56'55.0"; E27°22'44.0"	<i>In-situ</i> conservation (Temporary fencing)
17	Site 28.17	Iron Age	Settlement	S31°56'20.3"; E27°21'12.0"	<i>In-situ</i> conservation
18	Site 28.18	Iron Age	Cemetery	S31°56'23.6"; E27°20'45.5"	<i>In-situ</i> conservation
19	Site 28.19	Iron Age	Grave Site	S31°56'24.4"; E27°20'39.8"	<i>In-situ</i> conservation
20	Site 27.20	Iron Age	Settlement	S31°56'20.4"; E27°20'23.2"	<i>In-situ</i> conservation

Table 3: Scheme 28 - Phase 1 AIA assessment findings

2.4.3.) SCHEME 29



Figure 93: Scheme 27 - Phase 1 AIA findings

The Scheme 29 study site is focuses on the provision of prescribed RDP water supply infrastructure requirements to the villages of Holi, Eshlabeni, Kabisweni, Mbinzanqa and Emayireni.

Identified archaeological and cultural heritage resources were grouped into 5 sites. The low presence of resources can be ascribed to the focused assessment, concentrating on areas of proposed development in association with general cultural use of the landscape and its natural resources: In general only non-perennial rivers including the Duze and Mbizana Rivers will be utilized directly through the water scheme while banks of the perennial Indwe River proved anthropically sterile, particularly with reference to Stone Age deposits (at least for the small section intersecting the development area). Surface rich stone deposits, evidently utilized during the Iron Age, most possibly of Colonial times, are restricted to the southern-most perimeter of the study site.

Low density Stone Age deposits characterized the banks of both the Duze and the Mbizana Rivers, implying definite use of the, inferred to be much wetter palaeo-landscape at the time. The absence of lithic artefacts along the portion of the Indwe River intersecting the development area in the east is interpreted as localized data, and Stone Age deposits further along the river may well be expected. The low density of Iron Age sites, particularly in comparison with the Scheme 27 development area may be a reflection on proximity from more permanent water sources for Iron Age farming communities; reflected here as lower settlement evidence implying lower population numbers. Identified Iron Age sites are directly associated with cultural overlay and continuing Xhosa traditions with regard to indigenous inheritance law, building traditions and economic practice.



Figure 94: Existing water infrastructure in the vicinity of Esihlabeni Village



Figure 95: General view of the development area (from west to east)



Figure 96: Existing water infrastructure at Kabisweni Village



Figure 97: Stone, remaining an important building medium (Kabisweni Village)



Figure 98: Contemporary use of stone and mud-brick for building purposes at Mbinzanqa Village



Figure 99: General view from the south towards the north at Mbinzanqa Village

2.4.3.1) Site 29.1 - Stone Age (S31°54'09.9"; E27°18'41.9")

Low density Stone Age artefacts were discovered at a number of locales, in all cases related directly with rivers or at erosion gullies, associated with now dry river beds. Site 29.1a (S31°54'09.9"; E27°18'41.9") and Site 29.1b (S31°54'39.9"; E27°17'53.6") are both situated along the banks of the Duze River, with Site 29.1a approximately halfway between the villages of Esihlabeni (comprising part of the greater development area) and eSingeni (to the north of the development area); Site 29.1b followed the course of the Duze along the settlement of Holi. Towards the south thereof low density lithic artefacts were identified in a former tributary of the Duzi, now characterized by large erosion gullies at Site 29.1c (S31°55'02.1"; E27°18'21.3") within the village of Esihlabeni. Towards the middle of the Scheme 29 development area additional Stone Age deposits were discovered along the banks of the Mbizana River at Site 29.1d (S31°55'21.7"; E27°20'15.2"), midway between the villages of Kabisweni (to the west) and Mbinzanqa (to the east). No lithic material was identified along the banks of the Indwe River, or large associated erosion gullies cutting through the very eastern perimeter of the Scheme 29 study site.

Stone Age material identified was in all cases represented by very low concentrations of deposits. The highest artefact ratios (artefacts: m²) were recorded at Site 29.1a and Site 29.1d with ratios approximating on average 1:1 to 1-5:25, with even lower quantities recorded at Sites 29.1b and 29.1c. At Site 29.1c artefacts were found within large erosion sections, but sections did not yield a clear anthropic layer; again supporting the extremely low artefact quantities recorded that will make identification of a cultural member very difficult. Alternatively the very low number of lithic artefacts may be indicative of a primarily secondary context to the cultural material identified at the terrain. Extremely low artefact ratios recorded in effect does not qualify the locales as 'sites' but rather as low density Stone Age 'features'.

Lithic material identified, based on typological and technological characteristics, comprised primarily of a mixture of Middle Stone Age (MSA) and macrolithic Later Stone Age (LSA) artefacts. Raw material used included baked shale and granite.

- **CONCLUSION AND RECOMMENDATIONS:**

The low density Stone Age 'features' comprising Site 29.1 are ascribed a SAHRA *Low Significance* and *Generally Protected C Field Rating*: The features should either be conserved or destroyed. Upgrading may impact to a low degree on deposits along the Duze River (near the villages of Holi and Esihlabeni) while existing infrastructure did impact on deposits along the Mbizana River, in the vicinity of Site 1d. Existing development impact and inferred upgrading impact will however be very localized and taken into account the extremely low densities of recorded artefacts as well as the large areas covered by the 'features' it is recommended that development proceeds as applied for without the developer having to apply for a SAHRA APM Unit *Site Destruction Permit* prior to development.



Figure 100: A selection of artefacts from the Site 29.1 'features'



Figure 101: General view of the Site 29.1a Stone Age 'feature'



Figure 102: Erosion gullies at a now dry section of the Duzé



Figure 103: Exposed sections in excess of 2m at erosion gullies of the Duze River



Figure 104: Large erosion gullies of the Mbizana River



Figure 105: Exposed sections in the vicinity of Site 29.1d

2.4.3.2) Site 29.2 - Iron Age (S31°55'56.9"; E27°17'31.6")

Site 29.2 consists of the remains of 2 circular stock enclosures or 'kraals'. The site is situated within the village of Esihlabeni and is interpreted as either an early cattle 'outpost' or it may represent part of an early settlement. With the assessment not having been done to a level of inspection of individual homestead yards associated residential remains may well be present in the general vicinity. The archaeological remains are identifiable by raised platforms and foundation walls. The southern-most enclosure has prominent upright standing entrance stones and wooden gate posts are interpreted as a sign of continuous site usage. The exact date of the site is unknown; it may or may not pre-date 60 years of age. However, cultural continuity is confirmed, increasing the significance of the site.

- **CONCLUSION AND RECOMMENDATIONS:**

Site 29.2 is ascribed a SAHRA *Medium Significance* and *Generally Protected B Field Rating*: The site should either be conserved or mitigated (sample excavation) prior to development. Development will not impact on the site; the site will by implication be conserved. Xhosa cultural values and customs and current land-use does not warrant formal site conservation (permanent fencing). The developer may however consider temporary conservation measures during the construction phase.



Figure 106: General view of Site 29.2



Figure 107: Site 29.2 – with the original entrance to one structure clearly visible

2.4.3.3) Site 29.3 - Cemetery (S31°55'30.1"; E27°20'07.2")

The large formal Site 29.3 cemetery is situated in Kabisweni Village, but is also used by surrounding villages. The site is approximately 250x80m in extent containing a number of graves. Older graves are more than often characterized only by headstones while younger graves are typically stone outlined and earth filled. More modern graves have granite paraphernalia and some are individually fenced. Many of the graves are inferred to pre-date 60 years of age and are by implication formally protected under the NHRA 1999. The site is still in use, implying that the extent thereof can be expected to increase. The site is situated relatively close to existing water infrastructure, but with development not having impacted thereon. Upgrading of infrastructure by definition need not disturb the site.

- **CONCLUSION AND RECOMMENDATIONS:**

Site 29.3 is ascribed a SAHRA *Medium Significance* and *Generally Protected B Field Rating*: The site should thus either be conserved or mitigated (exhumation and re-internment) prior to development. In situ conservation is recommended: Upgrading of existing water infrastructure in the vicinity of the site need not impact on the site. Based on continuous use of the site by surrounding villages, formal site conservation (permanent fencing) should be negotiated with villagers. If not agreed by villagers at least temporary fencing of the site (pole with danger tape demarcations) should be put in place prior to commencement of work in the area to ensure that development do not impact on any of the graves.



Figure 108: Some of the older graves at Site 29.3



Figure 109: Younger graves at Site 29.3



Figure 110: Two graves at Site 29.3 with some older graves visible in the background



Figure 111: A clearly identifiable old and very modern grave at Site 29.3

2.4.3.4) Site 29.4 - Grave Site (S31°55'21.9"; E27°21'10.4")

Site 29.4 represents the locality of a single contemporary grave, inferred to post-date 60 years of age and by implication not formally protected under the NHRA 1999. The site however remains to be of high cultural sensitivity. The grave is characteristically stone outlined and earth filled. In addition it is formally fenced, but without an access gate; thus complying in part to the minimum conservation standards set by SAHRA.

- **CONCLUSION AND RECOMMENDATIONS:**

Site 29.4 post-dates 60 years of age and is not formally protected under the NHRA 1999: A SAHRA *Site Significance* rating is thus irrelevant. Development will however not impact on the site, formally conserved by means of a fence.



Figure 112: General view of the Site 29.4 grave



Figure 113: View of Site 29.4

2.4.3.5) Site 29.5 - Iron Age (S31°55'42.8"; E27°22'39.5")

Site 29.5 is identifiable by stone walled remains across a quite significant, approximate 350x150m area. A high degree of cultural overlay is evident. What seems to be former circular residential and stock enclosure remains and terracing are overlain by later to contemporary circular and rectangular stone walled foundations. The general site area was however devoid of associated temporal artefacts. A small area towards the east of the site may be representative of the former informal family cemetery area, typified by a few upright headstones. The present day infrastructure is characterized by 2 residential units and 2 rectangular stock enclosures, the property of Mr. Sihandane Ciki. Mr Ciki confirmed that he was born at the site, and so was his father, but was uncertain of the number of generations which his family had been living at the site and merely pointed out that 'for a long time before his father lived there'. From the number of stone ruins at the site quite substantial time depth can be reasonably be inferred. This is in addition supported by Mr. Ciki's comment of 'from a time when a lot less people lived in the valley' and the absence of similar high density sites in the general development area. The site represents a perfect example of cultural overlay where through traditional inheritance law the eldest son becomes heir to the original homestead property; in essence negatively affecting the archaeological significance of the site. The archaeological site is re-settled by the present day Ciki family and also the property of Mr. Cik (legal land owner). Aside from existing impact on the site by the Ciki family the site will not be further disturbed by the proposed development.

- **CONCLUSION AND RECOMMENDATIONS:**

Site 29.5 is ascribed a SAHRA *Medium Significance* and *Generally Protected B Field Rating*: The site should either be conserved or mitigated (sample excavation) prior to development. Aside from current impact thereon by the Ciki family the site will not be further disturbed by the proposed development. Xhosa cultural values and customs, particularly traditional inheritance law and current land-use do not warrant formal site conservation (permanent fencing). Negotiation with Mr. Ciki may address issues relating to temporary fencing of the southern-most border of Site 29.5 for purposes of safety during the construction phase of the development.



Figure 114: Contemporary infrastructure and stone walled remains of Site 29.5



Figure 115: Mr. Sihandane Ciki, his wife and a family friend



Figure 116: View of extensive stone walled remains comprising the extent of Site 29.5



Figure 117: Evident cultural overlay at Site 29.5

- *CONCLUSION AND RECOMMENDATIONS*

Key infrastructure of the *Water Supply Backlog in the CHDM: Cluster 2, Phase 1: Scheme 29 Project* has already been installed during 2002. Again the larger part thereof is not operational as yet, excluding a number of rain water tanks and a pump station located more or less centrally within the development area approximately midway between the villages of Kabisweni and Mbinzanqa. New infrastructural development will be limited to the approximate eastern quadrant of the study site and towards the west at Holi Village. Residents are at present reliant on a water system based on the pump station, limited rain water tank resources and a tractor and bucket system which carts water from the Wit Kei River.

A total of 5 archaeological and cultural heritage resources were identified during assessment of the Scheme 29 study site. Phase 1 AIA assessment focused on areas of impact directly relating to the development proposal (see Figure 6) and the immediate vicinity. Of the 5 identified resources 1 constitutes a Stone Age site (Site 29.1), 2 sites are grave sites (Sites 29.3 & 29.4) and 2 sites are Iron Age sites dating to the Colonial Period (Sites 29.2 & 29.5). Site 29.5 also contains a small family cemetery / grave site.

- Four (4) low density Stone Age 'features' were discovered within or in direct proximity to the development area, restricted to the banks of the Duze and Mbizana Rivers and erosion gullies associated therewith. Considering low artefact ratios and the extremely large 'feature' extents it is recommended that development proceeds as applied for and that the developer need not apply for destruction permits in locales where upgrading or development may impact on the deposits (Sites 29.1b and 29.1d) Based on current land use it is not recommended that the sites, or Stone Age 'features' be formally conserved with fences and access gates.
- Two grave sites were identified in relative close proximity to the proposed development line route. It is recommended that temporary conservation measures be negotiated with villagers prior to construction in the vicinity of Site 29.3. Site 29.4 is at present formally fenced but located at such a distance from the proposed line route that development will not impact on the site.

In addition it is recommended that the developer engages in consultation with landowners of all the villages involved to ensure that line routes will not impact on any graves and that set no-go areas are agreed to before the construction phase starts. This recommendation then again based on the fact that grave sites and cemetery demarcations are not stationary heritage resources.

- Located Iron Age sites are both situated along the southern perimeter of the Scheme 29 development area where rich surface stone deposits were exploited for structure construction. Site 29.2 is inferred to be of relatively recent origin while Site 29.5 may well have an origin of pre-Colonial times. Neither of the sites will be impacted on by the proposed CHDM water supply development project. It is not recommended that the sites be formally conserved by means of fences and access gates. Formal conservation measures will impact on current land use, particularly in the case of Site 29.5 where the contemporary Ciki residence is within tradition situated on the archaeological site.

WATER SUPPLY BACKLOG IN THE CHDM: CLUSTER 2, PHASE 1

SCHEME 29

MAP CODE	SITE	TYPE / PERIOD	DESCRIPTION	CO-ORDINATES	PRELIMINARY RECOMMENDATIONS
DEVELOPMENT AREA					
1a	Site 29.1	Stone Age	MSA (LSA)	S31°54'09.9"; E27°18'41.9"	<i>In-situ</i> conservation
1b	Site 29.1	Stone Age	MSA (LSA)	S31°54'39.9"; E27°17'53.6"	<i>In-situ</i> conservation
1c	Site 29.1	Stone Age	MSA (LSA)	S31°55'02.1"; E27°18'21.3"	<i>In-situ</i> conservation
1d	Site 29.1	Stone Age	MSA (LSA)	S31°55'21.7"; E27°20'15.2"	<i>In-situ</i> conservation
2	Site 29.2	Iron Age	Settlement	S31°55'06.8"; E27°18'04.7"	<i>In-situ</i> conservation
3	Site 29.3	Iron Age	Cemetery	S31°55'30.1"; E27°20'07.2"	<i>In-situ</i> conservation / Temporary fencing
4	Site 29.4	Iron Age	Grave Site	S31°55'21.9"; E27°21'10.4"	<i>In-situ</i> conservation
5	Site 29.5	Iron Age	Settlement	S31°55'42.8"; E27°22'39.5"	<i>In-situ</i> conservation

Table 4: Scheme 29 - Phase 1 AIA assessment findings

2.5) *Socio-Cultural Consultation*

Socio-cultural consultation was done very informally at the time of the field assessment and included conversation rather than investigation of findings with villagers encountered on route. The following summarizes a few observations specifically relating to sites identified and the current proposed project:

- Villagers across the total of the development area, including Scheme 27, Scheme 28 and Scheme 29, were not aware of Stone Age deposits in the area. When explained their knowledge incorporated the concept of the San / Bushmen, but not to a level where artefacts were related to ancestral population or hominid types.
- During assessment of the Scheme 27 area, an informant pointed out that the Iron Age stone walls were not theirs but belonged to people who lived there before the trust was formed and who returned to Ciskei. This is interpreted as an 'untrue' statement, reflecting the villagers' emphasis on the extreme need of the people for running water and that in effect this project could not be stopped in favor of conservation of the sites. It thus also reflects a general lack of understanding of the process and the concept that heritage (or other environmental concerns) and development should be a symbiotic relationship. Recent graves associated with stone walling in the Scheme 27 area is interpreted as a clear indication of cultural continuity, confirmed in the Scheme 28 area at Site 28.17 and in the Scheme 29 study site at Site 29.5.
- Overall villagers were helpful in assisting with information regarding the project, eager to point out exact line routings, engage in conversation about the 2002 project and general problems relating to water at the time (and other infrastructural needs such as electricity).
- Discussion with regards to graves received positive attention and the idea that an agreement has to be reached between the proposed development, and that this development will in time reach its capacity and will need to be upgraded again, and the locality of graves and other resources, was very positively received.
- The original notion that formal conservation or fencing of heritage resources would impact negatively on the standard of living and landscape use was supported by the local community members consulted. They confirmed that it would impact on livestock management and particularly in the Scheme 27 area on available space for livestock management.
- No intangible heritage sites were pointed out, aside from the appeasement of ancestors, in the immediate vicinity. The total of the landscape can however be described as a cultural landscape, but conservation thereof based on cultural continuity would impact negatively on the livelihoods of the people.
- In general the people had a very good knowledge of their own history. Graves of former kings, important tribesmen and places of battle were easily recalled and could often be associated with a particular place, but with these not situated within the immediate area.

3) CONCLUSION AND RECOMMENDATIONS

Thirty three (33) archaeological and cultural heritage sites, as defined and protected under the NHRA 1999, or comprising to standards of contemporary significance, were identified during assessment of the *Water Supply Backlog in the CHDM: Cluster 2, Phase 1: Schemes 27, 28 & 29 Project*, to be located near Cofimvaba in the Eastern Cape province. The majority of infrastructure relating to the project has already been installed during a 2002 project, but has not been operational to date resulting in the dismal situation with regards to basic water services in the area. The current proposed project will be based on upgrading existing infrastructure and ensuring operation thereof. In addition slight extensions to already installed infrastructure will complement the project to serve a few more households. At Scheme 27 this will be restricted to the very western extremity of the project area and at Scheme 28 and Scheme 29 new installations will be limited to the eastern parts of the development area. In conclusion, the current proposed project will be an extremely low impact project: The most challenging part thereof being correct legal procedures of application to avoid repetition of outcomes of the 2002 development.

Of the 33 archaeological and cultural heritage sites identified 8 are situated in the Scheme 27 area, 20 in the Scheme 28 area and 5 within Scheme 29. Identified sites comprise of a few Stone Age sites but with the majority of the resources being Iron Age sites, dated to the Colonial Period. Graves, of Historical and contemporary nature are an important resource of significant cultural sensitivity and the numerous grave and cemetery sites will be the most challenging resource type to manage in order to ensure safe development as well as management and maintenance of the project after installation.

None of the identified resources need to be negatively impacted on by the proposed development. It is recommended that the proposed *Water Supply Backlog in the CHDM: Cluster 2, Phase 1: Schemes 27, 28 & 29 Project*, to be located near Cofimvaba in the Eastern Cape province proceeds as applied for provided the developer complies with the following recommendations:

- Graves and cemetery boundaries are not stationary heritage resources. The number of particularly grave sites may well increase from the time of the assessment to the starting date of the development. In addition boundaries of informal cemeteries may well expand. It is recommended that an agreement be reached between the Chris Hani District Municipality (CHDM), or the developer on behalf of the CHDM and trust members or landowners in which development 'buffers' be agreed on to ensure management and maintenance of the infrastructure can continue in time without these being 'overlain' with heritage resources. Such an agreement will also facilitate future *in situ* upgrading of infrastructure once capacity is reached. It is recommended that the proposed agreement addresses all of the development areas, Scheme 27, Scheme 28 and Scheme 29, but with particular emphasis on Lower Bilatye Village (central southern part of Scheme 28).
- It is however recommended that temporary fencing for the following sites be negotiated during the construction phase: Sites 28.8, 28.14, 28.15, 28.16 and 29.3.
- Particular care should be taken during upgrading activities in the general area of Site 28.1 where the 2002 development impacted on Stone Age deposits and further deposits are known to be present approximately 1m below the surface.
- Formal fencing of heritage resources is not recommended. Fencing will impact on current land use, radically reducing areas for live stock grazing, access to fields etc. In addition thereto AIA findings emphasized cultural continuity across the landscape between archaeological resources

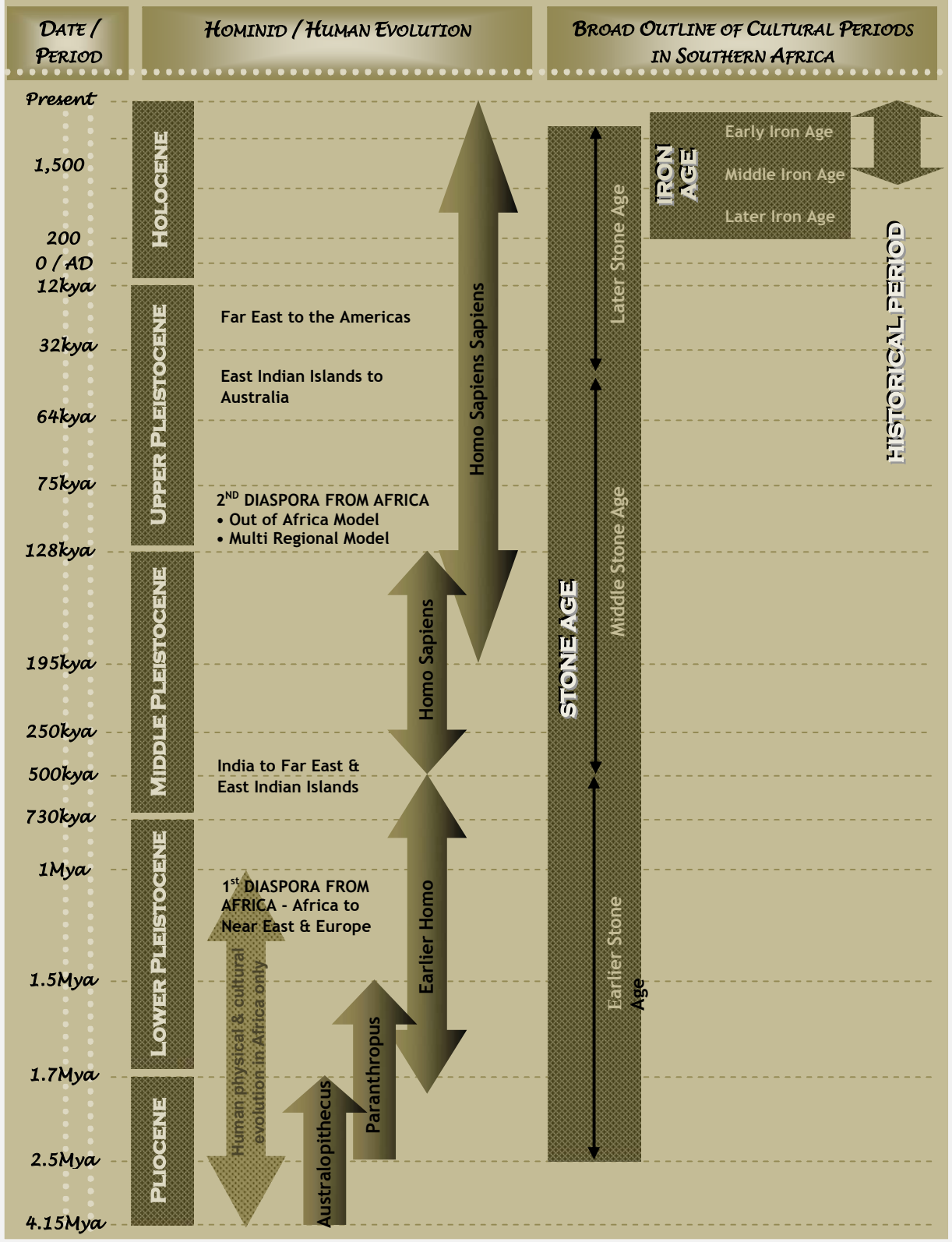
and contemporary populations and Xhosa cultural values, customs and traditions should be respected.

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 / ASAPA accredited CRM archaeologist.

4) REFERENCES CITED

1. BESC. 2010. *Background Information Document. Water Supply Backlog in CHDM Cluster 2, Phase 1: Schemes 27, 28 and 29. Chris Hani District Municipality (CHDM)*. Unpublished Report.
2. South African Government. (No. 107) of 1998. *National Environmental Management 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.

SCHEMATIC OUTLINE OF THE PRE-HISTORIC AND HISTORIC PERIODS



NATIONAL HERITAGE RESOURCES ACT (No 25 OF 1999)

DEFINITIONS

Section 2

In this Act, unless the context requires otherwise:

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

NATIONAL ESTATE

Section 3

- 1) For the purposes of this Act, those heritage resources of South Africa which are of cultural significance or other special value for the present community and for future generations must be considered part of the national estate and fall within the sphere of operations of heritage resources authorities.
- 2) Without limiting the generality of subsection 1), the national estate may include –
 - a) places, buildings, structures and equipment of cultural significance;
 - b) places to which oral traditions are attached or which are associated with living heritage;
 - c) historical settlements and townscapes;
 - d) landscapes and natural features of cultural significance;
 - e) geological sites of scientific or cultural importance
 - f) archaeological and palaeontological sites;
 - g) graves and burial grounds, including –
 - i. ancestral graves;
 - ii. royal graves and graves of traditional leaders;
 - iii. graves of victims of conflict
 - iv. graves of individuals designated by the Minister by notice in the Gazette;
 - v. historical graves and cemeteries; and
 - vi. other human remains which are not covered in terms of the Human Tissue Act, 1983 (Act No 65 of 1983)
 - h) sites of significance relating to the history of slavery in South Africa;
 - i) movable objects, including –
 - i. objects recovered from the soil or waters of South Africa, including archaeological and palaeontological objects and material, meteorites and rare geological specimens;
 - ii. objects to which oral traditions are attached or which are associated with living heritage;
 - iii. ethnographic art and objects;
 - iv. military objects;
 - v. objects of decorative or fine art;
 - vi. objects of scientific or technological interest; and
 - vii. books, records, documents, photographic positives and negatives, graphic, film or video material or sound recordings, excluding those that are public records as defined in section 1 xiv) of the National Archives of South Africa Act, 1996 (Act No 43 of 1996).

STRUCTURES

Section 34

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

ARCHAEOLOGY, PALAEOLOGY AND METEORITES

Section 35

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

BURIAL GROUNDS AND GRAVES

Section 36

- 3) No person may, without a permit issued by SAHRA or a provincial heritage resources authority –
 - a) destroy, damage, alter, exhume or remove from its original position or otherwise disturb the grave of a victim of conflict, or any burial ground or part thereof which contains such graves;
 - b) destroy, damage, alter, exhume, remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority; or
 - c) bring onto or use at a burial ground or grave referred to in paragraph a) or b) any excavation equipment, or any equipment which assists in the detection or recovery of metals.
- 4) SAHRA or a provincial heritage resources authority may not issue a permit for the destruction of any burial ground or grave referred to in subsection 3a) unless it is satisfied that the applicant has made satisfactory arrangements for the exhumation and re-interment of the contents of such graves, at the cost of the applicant and in accordance with any regulations made by the responsible heritage resources authority.
- 5) SAHRA or a provincial heritage resources authority may not issue a permit for any activity under subsection 3b) unless it is satisfied that the applicant has, in accordance with regulations made by the responsible heritage resources authority –
 - a) made a concerted effort to contact and consult communities and individuals who by tradition have an interest in such grave or burial ground; and
 - b) reached agreements with such communities and individuals regarding the future of such grave or burial ground.
- 6) Subject to the provision of any other law, any person who in the course of development or any other activity discovers the location of a grave, the existence of which was previously unknown, must immediately cease such activity and report the discovery to the responsible heritage resources authority which must, in co-operation with the South African Police Service and in accordance with regulations of the responsible heritage resources authority –
 - a) carry out an investigation for the purpose of obtaining information on whether or not such grave is protected in terms of this Act or is of significance to any community; and
 - b) if such grave is protected or is of significance, assist any person who or community which is a direct descendant to make arrangements for the exhumation and re-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.