
PHASE 1 ARCHAEOLOGICAL IMPACT ASSESSMENT

**XONXA BULK AND RETICULATION WATER SUPPLY SCHEME
(CHDM CLUSTER 2 – RS1, RS2 AND RS6),
NEAR QUEESTOWN, EASTERN CAPE, SOUTH AFRICA**

DATE: 2013-09-27



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SPECIALIST DECLARATION OF INTEREST

I, Karen van Ryneveld (Company – ArchaeoMaps; Qualification – MSc Archaeology), declare that:

- I am suitably qualified and accredited to act as independent specialist in this application;
- I do not have any financial or personal interest in the application, its' proponent or any subsidiaries, aside from fair remuneration for specialist services rendered; and
- That work conducted has been done in an objective manner – and that any circumstances that may have compromised objectivity have been reported on transparently.



SIGNATURE –

DATE – 2013-09-27

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EXECUTIVE SUMMARY

TERMS OF REFERENCE –

Fieldwork has been appointed by Uhambiso Consulting Engineers on behalf of the project proponent, the CHDM, to undertake the legally required application process for EA for the proposed *Xonxa Bulk and Reticulation Water Supply Scheme (CHDM Cluster 2 – RS1, RS2 and RS6)* project in the Emalahleni and Intsika Yetu Local Municipalities, near Queenstown in the Eastern Cape. The project includes the construction of new boreholes and the upgrading of existing ones, the construction of bulk (40km) and reticulation (122km) water supply lines and village standpipes to RDP standards, the construction of pump stations, break pressure tanks, concrete and steel reservoirs and pump stations. ArchaeoMaps was appointed by Fieldwork to conduct the Phase 1 AIA for the project.

THE PHASE 1 ARCHAEOLOGICAL IMPACT ASSESSMENT –

PROJECT AREA: Xonxa dam area, approximately 25km north-east of Queenstown in the Emalahleni and Intsika Yetu Local Municipal areas of the CHDM, Eastern Cape [1:50,000 map ref – 3127CC and 3127CD].

COVERAGE & GAP ANALYSIS: Pre-feasibility and field assessment (areas excluded from field assessment as described in the relevant *Field Assessment* sections).

FIELD METHODOLOGY: Eight day field assessment; GPS co-ordinates – Garmin Oregon 550; Photographic documentation – Pentax K20D. Site significance assessment – SAHRA 2007 system.

SUMMARY: (See table on next page)

RECOMMENDATIONS –

With reference to archaeological and cultural heritage compliance, as per the requirements of the NHRA 1999, it is recommended that the proposed *Xonxa Bulk and Reticulation Water Supply Scheme (CHDM Cluster 2 – RS1, RS2 and RS6)* project, near Queenstown, Eastern Cape, proceeds as applied for provided the developer comply with requirements as summarized in the following table.

SUMMARY:

Map Code	Site	Co-ordinates	Recommendations
Xonxa, Egcbhala and Rwantsana			
Site X1	Grave – Cont. Period	S31°50'53.2"; E27°03'35.4"	Permanent conservation measures in place
Site X2	Homestead – Late Iron Age	S31°51'57.3"; E27°03'33.3"	Permanent sign-posting
Site X3	Cemetery – Cont. Period / Late Iron Age	S31°52'09.7"; E27°03'36.6"	Permanent sign-posting
Site X4	Hut – Late Iron Age	S31°52'15.0"; E27°03'38.4"	Permanent sign-posting
Site X5	Cemetery & Livestock Enclosure – Cont. Period / Late Iron Age	S31°52'14.7"; E27°03'40.2"	Permanent sign-posting
Site X6	Livestock Enclosure – Late Iron Age	S31°52'18.0"; E27°03'41.7"	Permanent sign-posting
Site X7	Hut & Livestock Enclosure – Late Iron Age	S31°52'19.1"; E27°03'47.0"	Permanent sign-posting
Site X8	Cemetery & Homestead – Cont. Period / Late Iron Age	S31°52'16.4"; E27°03'50.7"	Permanent sign-posting
Site X9	Hut & Livestock Enclosure – Late Iron Age	S31°52'17.5"; E27°03'53.7"	Permanent sign-posting
Site X10	Cemetery – Cont. Period / Late Iron Age	S31°50'42.7"; E27°05'04.0"	Permanent sign-posting Permanent conservation measures in place
Site X11	Cemetery & Homestead – Cont. Period / Late Iron Age	S31°50'37.4"; E27°05'30.9"	Permanent sign-posting
Site X12	Cemetery – Cont. Period / Late Iron Age	S31°49'59.2"; E27°05'47.3"	Permanent sign-posting
Site X13	Cemetery & Livestock Enclosure – Cont. Period / Late Iron Age	S31°50'26.7"; E27°04'10.1"	Permanent sign-posting
Site X14	Cemetery & Livestock Enclosure – Cont. Period / Late Iron Age	S31°50'29.8"; E27°04'01.8"	Permanent sign-posting
Esikhwankqeni, Bhoko, Mnangweni, Qithi, Ngxabani, Mzantsi and Mntla			
Site X15	Livestock Enclosure – Late Iron Age	S31°48'31.1"; E27°13'55.8"	Temporary conservation & Permanent sign-posting
Site X16	Cemetery & Homestead – Cont. Period / Late Iron Age	S31°50'32.9"; E27°14'24.9"	Temporary conservation & Permanent sign-posting
Site X17	Cemetery – Cont. Period / Late Iron Age	S31°50'47.6"; E27°14'06.4"	Temporary conservation & Permanent sign-posting
Site X18	Cemetery & Livestock Enclosures – Cont. Period / Late Iron Age	S31°50'50.2"; E27°14'02.9"	Temporary conservation & Permanent sign-posting
Site X19	Grave – Cont. Period / Late Iron Age	S31°50'53.8"; E27°13'41.0"	Formal conservation or Relocation to be consulted with the community
Site X20	Homestead – Cont. Period	S31°49'43.6"; E27°13'45.8"	Temporary conservation & Permanent sign-posting
Site X21	Grave – Cont. Period / Late Iron Age	S31°52'07.8"; E27°11'36.2"	Temporary conservation & Permanent sign-posting
Nqiningana, Mphathulo, Tsolokazi, Makhikhi, Emaqwatini and Emazimeni			
Site X22	Hut – Late Iron Age	S31°54'33.7"; E27°07'10.5"	Temporary conservation & Permanent sign-posting
Site X23	Cemetery – Cont. Period / Late Iron Age	S31°55'12.7"; E27°08'46.0"	Repair of existing permanent fence & Permanent sign-posting
Site X24	Grave – Cont. Period / Late Iron Age	S31°54'32.1"; E27°11'52.5"	Temporary conservation & Permanent sign-posting
Site X25	Cemetery – Cont. Period / Late Iron Age	S31°54'38.8"; E27°12'54.4"	Temporary conservation & Permanent sign-posting
Site X26	Cemetery & Livestock Enclosure – Cont. Period / Late Iron Age	S31°54'43.9"; E27°13'26.6"	Temporary conservation & Permanent sign-posting
Site X27	Cemetery – Cont. Period / Late Iron Age	S31°54'57.2"; E27°13'25.3"	Temporary conservation & Permanent sign-posting
Site X28	Cemetery – Cont. Period / Late Iron Age	S31°53'56.4"; E27°14'18.8"	Temporary conservation & Permanent sign-posting
Site X29	Cemetery – Cont. Period / Late Iron Age	S31°53'58.3"; E27°14'24.9"	Temporary conservation & Permanent sign-posting
Site X30	Livestock Enclosures – Late Iron Age	S31°53'58.2"; E27°14'21.2"	Temporary conservation & Permanent sign-posting
Matshaba, Nkolweni and Dlakavu			
Site X31	Cemetery- Cont. Period / Late Iron Age	S31°57'41.0"; E27°17'07.3"	Temporary conservation & Permanent sign-

			posting
Site X32	Cemetery – Cont. Period / Late Iron Age	S31°58'39.8"; E27°16'25.8"	Temporary conservation & Permanent sign-posting
Site X33	Cemetery – Cont. Period / Late Iron Age	S31°58'38.1"; E27°16'21.9"	Temporary conservation & Permanent sign – posting
Site X34	Cemetery & Livestock Enclosure – Cont. Period / Late Iron Age	S31°57'56.2"; E27°15'57.8"	Temporary conservation & Permanent sign – posting
Site X35	Graves / Cemeteries – Cont. Period /Late Iron Age	S31°57'51.7"; E27°16'05.3"	Temporary conservation & Permanent sign-posting
Site X36	Livestock Enclosures - Late Iron Age	S31°58'27.9"; E27°15'46.8"	Temporary conservation & Permanent sign-posting
Site X37	Cemetery – Cont. Period / Late Iron Age	S31°58'17.5"; E27°15'46.8"	Temporary conservation & Permanent sign-posting
Site X38	Grave – Cont. Period / Late Iron Age	S31°58'03.1"; E27°15'31.9"	Temporary conservation & Permanent sign-posting
Site X39	Homestead – Late Iron Age-	S31°57'57.2"; E27°15'18.1"	Temporary conservation & Permanent sign-posting
Site X40	Cemeteries – Cont. Period / Late Iron Age	S31°57'55.2"; E27°15'18.5"	Temporary conservation & Permanent sign-posting
Site X41	Cemetery – Cont. Period / Late Iron Age	S31°58'07.2"; E27°15'22.4"	Temporary conservation & Permanent sign-posting
Site X42	Livestock Enclosure – Late Iron Age	S31°58'11.0"; E27°15'15.9"	Temporary conservation & Permanent sign-posting
Site X43	Cemetery & Livestock Enclosure – Cont. Period / Late Iron Age	S31°58'07.5"; E27°15'12.7"	Temporary conservation & Permanent sign-posting
Site X44	Cemetery & Homestead – Cont. Period / Late Iron Age	S31°58'10.9"; E27°15'07.4"	Temporary conservation & Permanent sign-posting
Site X45	Livestock Enclosure – Late Iron Age	S31°58'07.4"; E27°14'48.7"	Temporary conservation & Permanent sign-posting
Site X46	Cemetery – Cont. Period / Late Iron Age	S31°58'25.0"; E27°14'17.4"	Temporary conservation & Permanent sign-posting
Site X47	Cemetery Cont. Period / Late Iron Age	S31°58'13.1"; E27°14'04.8"	Permanent sign- posting Permanent conservation measures in place
Site X48	Cemetery – Cont. Period / Late Iron Age	S31°58'16.5"; E27°14'05.1"	Temporary conservation & Permanent sign-posting
Site X49	Cemeteries & Homestead – Cont. Period / Late Iron Age	S31°57'53.3"; E27°14'20.0"	Temporary conservation & Permanent sign-posting Realignment to the west of the site
Site X50	Cemetery & Livestock Enclosure – Cont. Period / Late Iron Age	S31°58'17.3"; E27°13'00.1"	Temporary conservation & Permanent sign-posting
Site X51	Cemeteries & Homestead – Cont. Period / Late Iron Age	S31°58'24.1"; E27°12'55.7"	Temporary conservation & Permanent sign-posting
Site X52	Livestock Enclosure - Late Iron Age	S31°58'29.0"; E27°12'53.7"	Temporary conservation & Permanent sign-posting
Site X53	Homestead – Late Iron Age	S31°58'29.6"; E27°12'51.1"	Temporary conservation & Permanent sign-posting
Site X54	Homestead – Late Iron Age	S31°58'31.2"; E27°12'48.3"	Temporary conservation & Permanent sign-posting
Site X55	Homestead – Late Iron Age	S31°58'30.8"; E27°12'44.1"	Temporary conservation & Permanent sign-posting
Site X56	Livestock Enclosure – Late Iron Age	S31°58'25.1"; E27°12'46.7"	Temporary conservation & Permanent sign-posting
<i>Siqabeni, Lalini, Lokishini, Manzabethu and Qaqeni</i>			
Site X57	Homestead – Late Iron Age	S31°59'06.2"; E27°11'16.4"	Temporary conservation & Permanent sign-posting
Site X58	Cemetery – Cont. Period / Late Iron Age	S31°59'01.3"; E27°11'12.4"	Temporary conservation & Permanent sign-posting
Site X59	Cemetery – Cont. Period / Late Iron Age	S31°59'11.5"; E27°11'06.3"	Temporary conservation & Permanent sign-posting
Site X60	Cemetery – Cont. Period / Late Iron Age	S31°59'07.9"; E27°11'07.7"	Temporary conservation & Permanent sign-posting
Site X61	Cemetery – Cont. Period / Late Iron Age	S31°58'30.7"; E27°10'44.3"	Temporary conservation & Permanent sign-posting

Site X62	Cemetery – Cont. Period / Late Iron Age	S31°57'34.0"; E27°09'16.8"	Temporary conservation & Permanent sign-posting
Site X63	Hut – Late Iron Age	S31°57'36.8"; E27°09'13.4"	Temporary conservation & Permanent sign-posting
Site X64	Homestead – Late Iron Age	S31°57'40.2"; E27°09'14.7"	Temporary conservation & Permanent sign-posting Realignment to either east or west of site
Site X65	Livestock Enclosure – Late Iron Age	S31°57'47.1"; E27°09'24.6"	Temporary conservation & Permanent sign-posting
Site X66	Homestead - Late Iron Age	S31°57'49.8"; E27°09'25.8"	Temporary conservation & Permanent sign-posting
Site X67	Cemetery – Cont. Period / Late Iron Age	S31°57'40.6"; E27°08'12.7"	Temporary conservation & Permanent sign-posting
Site X68	Cemetery – Cont. Period / Late Iron Age	S31°57'38.6"; E27°08'12.1"	Temporary conservation & Permanent sign-posting
Site X69	Cemetery – Cont. Period / Late Iron Age	S31°57'27.5"; E27°07'56.1"	Temporary conservation & Permanent sign-posting
Site X70	Cemetery – Cont. Period / Late Iron Age	S31°57'37.4"; E27°07'47.2"	Temporary conservation & Permanent sign-posting
Site X71	Cemetery – Cont. Period / Late Iron Age	S31°57'34.1"; E27°07'50.1"	Temporary conservation & Permanent sign-posting
Site X72	Grave – Cont. Period / Late Iron Age	S31°57'31.1"; E27°07'49.2"	Permanent sign-posting Permanent conservation measures in place
Site X73	Cemetery – Cont. Period / Late Iron Age	S31°57'29.8"; E27°07'42.7"	Temporary conservation & Permanent sign-posting
Site X74	Cemetery – Cont. Period / Late Iron Age	S31°57'17.2"; E27°07'45.3"	Temporary conservation & Permanent sign-posting
Site X75	Cemetery – Cont. Period / Late Iron Age	S31°57'21.3"; E27°07'52.9"	Temporary conservation & Permanent sign-posting
Site X76	Grave – Cont. Period / Late Iron Age	S31°57'17.8"; E27°07'51.0"	Temporary conservation & Permanent sign-posting
Site X77	Cemetery & Livestock Enclosure – Cont. Period / Late Iron Age	S31°57'17.5"; E27°07'55.7"	Temporary conservation & Permanent sign-posting
Site X78	Cemetery – Cont. Period / Late Iron Age	S31°57'15.7"; E27°07'56.6"	Temporary conservation & Permanent sign-posting
Site X79	Grave – Cont. Period / Late Iron Age	S31°57'27.1"; E27°07'59.8"	Temporary conservation & Permanent sign-posting
Site X80	Cemetery – Cont. Period / Late Iron Age	S31°57'37.8"; E27°07'59.1"	Temporary conservation & Permanent sign-posting
Site X81	Livestock Enclosures – Late Iron Age	S31°57'17.6"; E27°08'57.6"	Temporary conservation & Permanent sign-posting
Site X82	Cemetery – Cont. Period / Late Iron Age	S31°56'54.3"; E27°09'01.1"	Permanent sign-posting Permanent conservation measures in place
Site X83	Cemetery & Livestock Enclosures – Cont. Period / Late Iron Age	S31°56'50.8"; E27°09'06.4"	Temporary conservation & Permanent sign-posting
Site X84	Homestead – Late Iron Age	S31°56'45.9"; E27°09'04.3"	Temporary conservation & Permanent sign-posting
Site X85	Cemetery & Homestead – Cont. Period / Late Iron Age	S31°56'38.9"; E27°09'17.4"	Temporary conservation & Permanent sign-posting
Site X86	Cemeteries & Homestead – Cont. Period / Late Iron Age	S31°56'28.4"; E27°08'24.8"	Temporary conservation & Permanent sign-posting
Site X87	Cemetery – Cont. Period / Late Iron Age	S31°56'228"; E27°08'27.4"	Temporary conservation & Permanent sign-posting
Site X88	Cemetery – Cont. Period / Late Iron Age	S31°56'01.1"; E27°08'34.1"	Permanent sign-posting Permanent conservation measures in place
Site X89	Cemetery – Cont. Period / Late Iron Age	S31°55'56.9"; E27°09'04.6"	Temporary conservation & Permanent sign-posting
Site X90	Grave – Cont. Period / Late Iron Age	S31°56'00.6"; E27°09'09.5"	Temporary conservation & Permanent sign-posting
Site X91	Cemetery & Homestead – Cont. Period / Late Iron Age	S31°56'05.0"; E27°09'21.0"	Permanent sign-posting Permanent conservation measures in place
Community request to extent the line route to disabled household of Siyalelo Pato (S31°57'28.1"; E27°07'52.3")			
Intentional obstruction of specialist archaeological and heritage assessment by Insika Yetu officer Mlami Limani and Lokishini village community leader(s)			

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1) TERMS OF REFERENCE

Fieldwork has been appointed by Uhambiso Consulting Engineers on behalf of the project proponent, the Chris Hani District Municipality (CHDM), to undertake the legally required application process for Environmental Authorization (EA) for the proposed *Xonxa Bulk and Reticulation Water Supply Scheme (CHDM Cluster 2 – RS1, RS2 and RS6)* project in the Emalahleni and Intsika Yetu Local Municipalities, near Queenstown in the Eastern Cape. The project includes the construction of new boreholes and the upgrading of existing ones, the construction of bulk (40km) and reticulation (122km) water supply lines and village standpipes to RDP standards, the construction of pump stations, break pressure tanks, concrete and steel reservoirs and pump stations.

ArchaeoMaps was appointed by Fieldwork to conduct the Phase 1 Archaeological Impact Assessment (AIA) for the proposed *Xonxa Bulk and Reticulation Water Supply Scheme (CHDM Cluster 2 – RS1, RS2 and RS6)* project.

❖ Development Location, Details and Impact

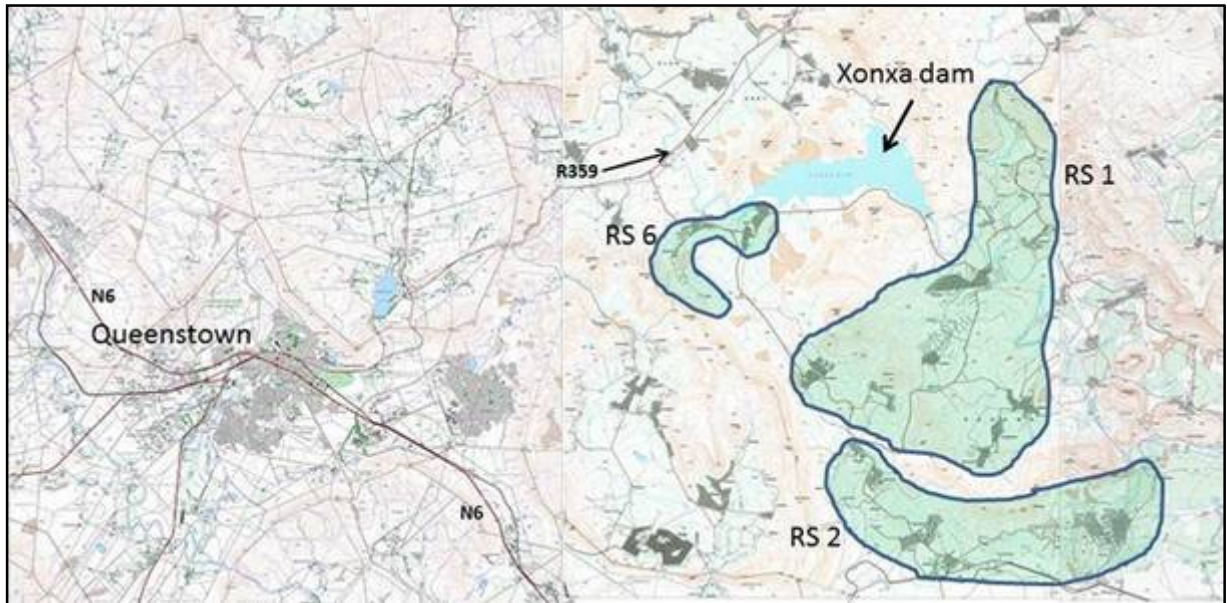
The *Xonxa Bulk and Reticulation Water Supply Scheme (CHDM Cluster 2 – RS1, RS2 and RS6)* project centres around Xonxa dam, approximately 25km to the north-east of Queenstown and falls within the Emalahleni and Intsika Yethu Local Municipal areas, both falling under the Chris Hani District Municipality (CHDM) [1:50,000 map ref: 3127CC and 3127CD]. The project comprises of 3 parts:

- Regional Scheme 1 (RS1) to the east and south of Xonxa Dam;
- Regional Scheme 2 (RS2) to the south of Xonxa Dam; and
- Regional Scheme 6 (RS6; originally part of RS2) to the south west of Xonxa Dam.

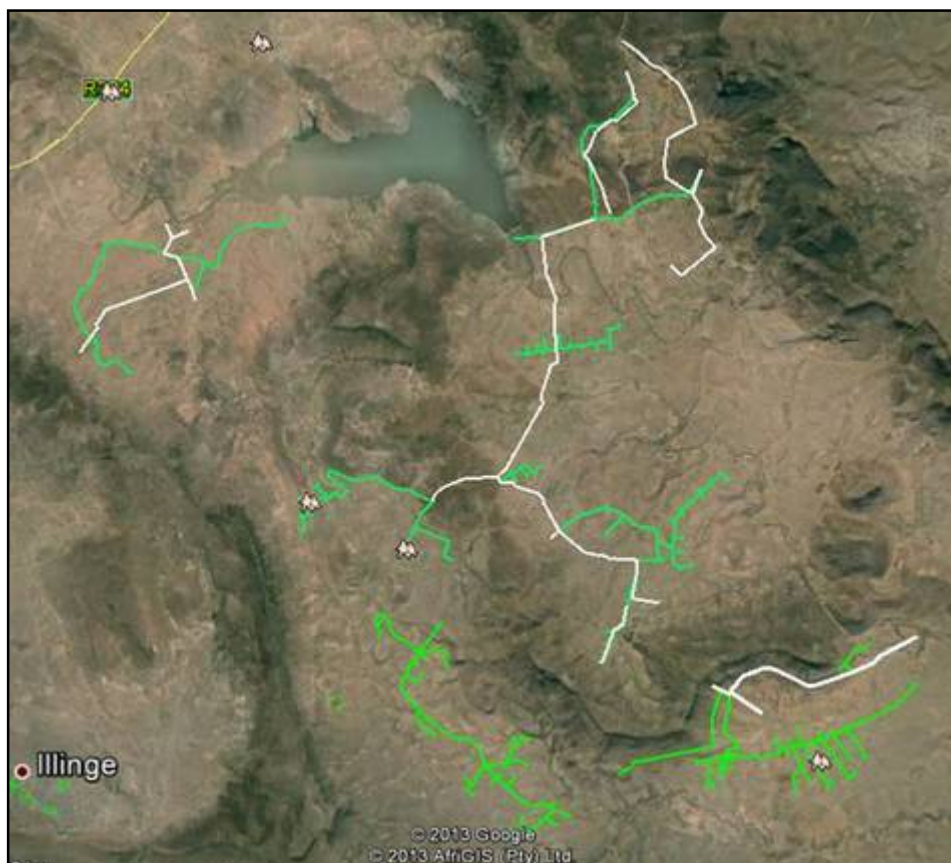
(The development of RS6 and a water supply to the Jiphuta-Makhikhi village complex in RS1 are considered to be priorities) (Fieldwork 2013).

The purpose of the project is to construct bulk and reticulation water supply infrastructure for 4,158 households in 32 villages in Wards 1 and 6 of the Emalahleni Local Municipality and Ward 5 of the Intsika Yethu Local Municipality. The Wards consist entirely of rural communities and almost the entire population relies on informal sources of water, resulting in frequent health problems. The objective of the proposed *Xonxa Bulk and Reticulation Water Supply Scheme (CHDM Cluster 2 – RS1, RS2 and RS6)* project is to deliver to these communities a free, safe and basic water supply, aligned with RDP standards (Fieldwork 2013).

The project design includes the construction of new boreholes and the upgrading of existing ones, the construction of bulk (40km) and reticulation (122km) water supply lines and village standpipes to RDP standards, the construction of pump stations, break pressure tanks, concrete and steel reservoirs and pump stations (Fieldwork 2013).



Map 1: General view of the Xonxa Bulk and Reticulation Water Supply Scheme (CHDM Cluster 2 – RS1, RS2 and RS6) project area clearly indicating the RS1, RS2 and RS6 areas (Fieldwork 2013)



Map 2: The proposed Xonxa Bulk and Reticulation Water Supply Scheme (CHDM Cluster 2 – RS1, RS2 and RS6) study site, with green lines indicating reticulation lines and white lines indicating bulk water lines (courtesy Fieldwork)

2) THE PHASE 1 ARCHAEOLOGICAL IMPACT ASSESSMENT

❖ Archaeological Legislative Compliance

The Phase 1 Archaeological Impact Assessment (AIA) for the *Xonxa Bulk and Reticulation Water Supply Scheme (CHDM Cluster 2 – RS1, RS2 and RS6)* project, near Queenstown, Eastern Cape, was done for purposes of compliance to the South African Heritage Resources Agency's (SAHRA) requirements in terms of the National Heritage Resources Act, No 25 of 1999 (NHRA 1999), with specific reference to Sections 34-38.

The Phase 1 AIA was requested as specialist sub-section with findings and recommendations thereof to be included in the Environmental Impact Assessment (EIA) and Environmental Management Plan (EMPr) of the development, in compliance with requirements of the National Environmental Management Act, No 107 of 1998 (NEMA 1998) and associated Regulations (2010) and the NHRA 1999.

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 basic cultural landscapes or viewsapes as defined and protected by the NHRA 1999, that may be affected by the proposed development.

This report comprises of a Phase 1 AIA, including a basic pre-feasibility study and field assessment only.

❖ Methodology and Gap Analysis

The Phase 1 AIA includes a basic pre-feasibility study and field assessment:

- The pre-feasibility assessment is based on the Appendix 1 introductory archaeological literature. In addition the SAHRA 2009 Mapping Project Database and the SAHRA Built Environment Database on Declared Provincial Heritage Sites (buildings older than 60 years) of the Eastern Cape were consulted. The study excludes consultation of the Albany Museum, the SAHRA accredited Data Recording Centre (DRC) for the Eastern Cape region's database.
- The field assessment was done on over an 8 day period, with assessment assisted by Thabisa Fikizolo. The assessment was done by foot and off-road vehicle and limited to a Phase 1 surface survey. GPS co-ordinates were taken with a Garmin Oregon 550 (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. Scale bar: 10cm intervals.

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 I	Site conservation / Site development
High Significance	Provincial Significance	Grade II	Site conservation / Site development
High Significance	Local Significance	Grade III-A	Site conservation or extensive mitigation prior to development / destruction
High Significance	Local Significance	Grade III-B	Site conservation or extensive mitigation prior to development / destruction
High / Medium Significance	Generally Protected A	Grade IV-A	Site conservation or mitigation prior to development / destruction
Medium Significance	Generally Protected B	Grade IV-B	Site conservation or mitigation / test excavation / systematic sampling / monitoring prior to or during development / destruction
Low Significance	Generally Protected C	Grade IV-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

❖ Primary Assessor Accreditation

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

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

Karen van Ryneveld is a SAHRA / AMAFA / EC PHRA listed CRM archaeologist.

2.1) PRE-FEASIBILITY ASSESSMENT

Based on the basic introductory literature assessment of South African archaeology (see Appendix – A) the probability of archaeological and cultural heritage sites within the proposed *Xonxa Bulk and Reticulation Water Supply Scheme (CHDM Cluster 2 – RS1, RS2 and RS6)* project, near Queenstown, Eastern Cape, can briefly be described as:

1. Early Hominin : Probability – *None*

2. Stone Age
 - a. ESA : Probability – *Low-Medium*
 - b. MSA : Probability – *Medium*
 - c. LSA : Probability – *Low-Medium* (Human remains may be expected; if identified of both scientific and social significance)
 - i. Rock Art : Probability – *None-Low*
 - ii. Shell Middens : Probability – *None*

3. Iron Age
 - a. Early Iron Age : Probability – *None*
 - b. Middle Iron Age : Probability – *None*
 - c. Later Iron Age : Probability – *High*

4. Colonial Period
 - a. Colonial Period : Probability – *Low* (Human remains expected to be primarily associated with formal cemeteries)
 - b. Iron Age / Colonial Period Contact : Probability – *Low*
 - c. Industrial Revolution : Probability – *None*

❖ The SAHRA 2009 Database

A single archaeological Cultural Resources Management (CRM) project is recorded in the SAHRA 2009 Mapping Project Database situated within an approximate 35km radius from the *Xonxa Bulk and Reticulation Water Supply Scheme (CHDM Cluster 2 – RS1, RS2 and RS6)* project study site, referenced as:

- Anderson, G. (Umlando). 2007. *The Archaeological Survey of the Elitheni Mine, Indwe, Eastern Cape.*

More CRM studies can reasonably be expected to have been done in the area post-2009, reflecting increasing development in rural areas and further documentation may be available on SAHRIS.

❖ SAHRA Built Environment Database – Eastern Cape

Declared Provincial Heritage Sites (buildings older than 60 years) situated within approximately 40km from the proposed *Xonxa Bulk and Reticulation Water Supply Scheme (CHDM Cluster 2 – RS1, RS2 and RS6)* study site recorded in the SAHRA Built Environment – Eastern Cape database can be listed as:

- BE-EC90: SAHRA Identifier – 9/2/045/0005: Dutch Reformed Church, Voortrekker Street, Indwe (Registered Site);
- BE-EC133: SAHRA Identifier – 9/2/077/0003: Hexagon, Queenstown (Provincial Heritage Site);
- BE-EC135: SAHRA Identifier – 9/2/077/0005: Town Hall, Cathcart Road, Queenstown, 1882 (Provincial Heritage Site);
- BE-EC136: SAHRA Identifier – 9/2/077/0008: Museum, Naude Street, Queenstown, 1886 – built as a primary school (Provincial Heritage Site);
- BE-EC137: SAHRA Identifier – 9/2/077/0009: Queens College, Berry Street, Queenstown, 1897 (Provincial Heritage Site); and
- BE-EC173: SAHRA Identifier – 9/2/109/0003: Dutch Reformed Church, Grey Street, Dordrecht, 1882 (Provincial Heritage Site).

2.2) FIELD ASSESSMENT

Ninety one (91) archaeological and cultural heritage sites, as defined and protected by the NHRA 1999, were identified during the archaeological field assessment. The sites are discussed according to general area, as follows:

- Xonxa, Egcihbala and Rwantsana (Sites X1 to X14);
- Esikwankqeni, Bhoko, Mngangweni, Qithi, Ngxabani, Mzantsi and Mntla (Sites X15 to X21);
- Nqiningana, Mphathulo, Tsolokazi, Makhikhi, Emaqwatini and Emazimeni (Sites X22 to X30);
- Matshaba, Nkolweni and Dlakavu (Sites X31 to X56); and
- Siqabeni, Lalini, Lokishini, Manzabethu and Qaqeni (Sites X57 to X91).



Map 3: Results of the field assessment

2.2.1) XONXA, EGCIBHALA AND RWANTSANA



Map 4: Spatial distribution of archaeological and cultural heritage sites along the Xonxa, Egcihala and Rwantsana line routes (line routes – red; tracklogs – white)

Sites X1 to X14 were located along the proposed *Xonxa Bulk and Reticulation Water Supply* line route through the villages of Xonxa, Egcihala and Rwantsana. Sites identified comprise primarily of Late Iron Age sites, including homestead and aspects of homestead remains. A number of cemeteries (including an individual grave) are ascribed to the Contemporary Period, but are of Late Iron Age cultural assignation, implying continuing cultural tradition. In addition to the recorded cemetery sites a number of graves were observed within fenced homestead yards, but these being protected within yard fences were not recorded.

Between Egcihala and Rwantsana villages low densities of primarily Middle Stone Age (MSA) lithic artefacts characterized stream beds. At Xonxa village, again primarily MSA lithic artefacts were found strewn across the road surfaces, homestead yards and public open space. Here artefact ratios (artefacts: m²) of 5:1 were recorded but notably large occurrence sizes did not allow recording of the occurrence extends. For purposes of the water line development no Phase 2 archaeological mitigation recommendations are made with reference to Stone Age sites, based primarily on the large occurrence size versus the limited impact thereon by the proposed development.

At the time of the field assessment development throughout the villages of Xonxa, Egcihala and Rwantsana had already started. None of the recorded sites were impacted on. Construction fences and excavated mounds did obscure visibility and access along portions of the line route, more archaeological and cultural heritage sites may thus well be located along the line route: Recorded site localities are not represented as an all-inclusive list of sites.

❖ Site X1 – Grave – Contemporary Period – $S31^{\circ}50'53.2''$; $E27^{\circ}03'35.4''$

Site X1 comprises of a single, formally fenced, modern style grave situated adjacent to the road. The Nomadwabule grave dates to 1966. The site is thus not formally protected by the NHRA 1999, but do constitute a culturally sensitive site. Construction work in the vicinity of the site is situated on the opposite side of the access road – the site has not been impacted on by development.

- **Recommendations:** The Site X1 Contemporary Period grave is not formally protected by the NHRA 1999. But the site does constitute a culturally sensitive site. Construction work is limited to the opposite side of the access road and the site has not been impacted on.



Plate 1: General view of the Site X1 Contemporary Period grave

❖ Site X2 – Homestead – Late Iron Age – S31°51'57.3"; E27°03'33.3"

The Site X2 Late Iron Age homestead comprises of the remains of a hut and an associated livestock enclosure. The stone built hut remains measures approximately 5-6m in diameter with walls still standing to more or less 80cm in height. The hut remains is situated immediately adjacent to the access road. The associated rectangular stone built 'kraal' or livestock enclosure is located slightly further in from the access road and measures roughly 6x6m in size, standing to an average height of 40cm. The remains are inferred to pre-date 60 years of age, implying formal protection for structures under the NHRA 1999, although a 100 year age, implying assignation as an archaeological site is not inferred. Construction impact at the time of the assessment was limited to the opposite side of the access road. The site was not impacted on by the development.

- **Recommendations:** The Late Iron Age homestead, Site X2, is assigned a SAHRA *Low Significance* and a *Generally Protected C Field Rating*. The site has not been impacted on by development, restricted to the opposite side of the access road.



Plate 2: View of the Site X2 hut remains with the livestock enclosure in the background

- ❖ Site X3 – Cemetery – Contemporary Period / Late Iron Age – $S31^{\circ}52'09.7''$; $E27^{\circ}03'36.6''$

The Site X3 cemetery is formally fenced with an access gate, complying with SAHRA / EC PHRA Minimum Site Conservation Standards. The cemetery contains approximately 8 graves of mixed modern and traditional style stone outlined graves. While modern style graves post-dates 60 years of age traditional style graves may well pre-date 60 years, implying that the cemetery is formally protected by the NHRA 1999.

- **Recommendations:** The Site X3 cemetery is assigned a SAHRA *High Significance* and *Generally Protected A Field Rating*. The site is formally fenced with an access gate, complying with SAHRA / EC PHRA Minimum Site Conservation Standards. Construction impact at the time of the assessment was restricted to the opposite site of the access road: Development did not impact on the site.



Plate 3: View of the graves of the Site X3 cemetery

❖ Site X4 – Hut – Late Iron Age – S31°52'15.0"; E27°03'38.4"

The Site X4 hut remains represent a stone built circular hut, which measured approximately 4m in diameter. The walls are weathered down to foundation level. Construction impact was limited to the opposite side of the access road – the remains were thus conserved.

- **Recommendations:** Site X4 is ascribed a SAHRA *Low Significance* and a *Generally Protected C Field Rating*. The site has not been impacted on by development – restricted to the opposite side of the access road.



Plate 4: General view of Site X4

❖ Site X5 – Cemetery & Livestock Enclosures – Contemporary Period / Late Iron Age –
S31°52'14.7"; E27°03'40.2"

The Site X5 cemetery and livestock enclosures comprises of a stone built rectangular livestock enclosure of approximately 12x12m in size with a smaller calf camp, measuring roughly 4x5m, immediately adjoining the larger 'kraal'. In close proximity to the 'kraal' complex is a large informal cemetery, containing approximately 60 graves. While a few of the graves are modern style graves the majority comprises of traditional style graves, primarily earth mound and stone outlined graves, some with stone headstones. The majority of the modern, inscribed headstones indicate graves post-dating 60 years of age, but many of the traditional style graves may well be older than 60 years, implying that the site is formally protected by the NHRA 1999.

- **Recommendations:** Site X5 is ascribed a SAHRA *High Significance* and *Generally Protected A Field Rating*. The site has not been impacted on by construction activities, restricted to the opposite side of the access road.



Plate 5: View of Site X5 from the main 'kraal' with a view of the cemetery behind it



Plate 6: Selected graves from the Site X5 cemetery

❖ Site X6 – Livestock Enclosure – Late Iron Age – $S31^{\circ}52'18.0''$; $E27^{\circ}03'41.7''$

Site X6 represents the remains of an oval shaped livestock enclosure, measuring roughly 8x4m in size. The enclosure has been weathered to foundation level, but with its entrance still clearly identifiable. The structure is inferred to pre-date 60 years, although a 100 year age cannot be confirmed. The oval shape may well be indicative of fairly early acculturation, with its associated change from circular to rectangular structure shapes.

- **Recommendations:** Site X6 is ascribed a SAHRA *Low Significance* and *Generally Protected C Field Rating*. The site has not been impacted on by construction activities, restricted to the opposite side of the access road.



Plate 7: View of Site X6 with the scale bar at the entrance of the 'kraal'

❖ Site X7 – Hut & Livestock Enclosure – Late Iron Age – $S31^{\circ}52'19.1''$; $E27^{\circ}03'47.0''$

Site X7 comprises of the remains of a stone built hut, measuring approximately 4m in diameter. The walls of the hut are still standing to more or less 50cm in height. Directly associated with the hut remains is the ruins of a rectangular shaped livestock enclosure, measuring more or less 7x8m in size, but here the stone walls has been weathered basically down to foundation level, but in places still standing to approximately 30cm amongst the stone rubble mounds. The structures are inferred to pre-date 60 years of age, implying that they are formally protected by the NHRA 1999.

- **Recommendations:** Site X7 is ascribed a SAHRA *Low Significance* and *Generally Protected C Field Rating*. The site has not been impacted on by construction activities, restricted to the opposite side of the access road: The site has been conserved.



Plate 8: View of the Site X7 livestock enclosure remains



Plate 9: General view of the hut remains at Site X7

❖ Site X8 – Cemetery & Homestead – Contemporary Period / Late Iron Age –
S31°52'16.4"; E27°03'50.7"

The Site X8 homestead remains comprise of a number of structure remains, not all mentioned here, but including the remains of at least 4 huts, all measuring approximately 5m in diameter with the walls of one still standing to more or less 90cm in height and the others weathered down to foundation level. The mentioned residential remains are situated in close proximity to at least 2 livestock enclosure ruins, both of rectangular shape, measuring roughly 8x10m in size, with one weathered down to foundation level and the other predominantly identifiable by aloe demarcating the original structure boundary. Towards the north-west of the mentioned remains the presence of 'garingboom' (*Agave sisalana*) is indicative of further cultural disturbance and previous occupation and more structure remains can reasonably be expected in the area, forming part of the Site X8 homestead remains. Slightly east of the recorded homestead remains is a large informal cemetery, containing approximately 90 graves, some being modern graves but the majority thereof are traditional style graves, primarily earth mound and stone outlined. Again modern graves predominantly post-date 60 years of age, but especially settled earth mounds are indicative of quite significant age to at least some of the traditional style graves, implying that the cemetery itself is formally protected by the NHRA 1999. The cemetery is inferred to be a family cemetery and directly associated with the homestead remains, also signifying continuing cultural practice.

- **Recommendations:** The Site X8 cemetery and homestead is ascribed a SAHRA *High Significance* and *Generally Protected A Field Rating*. Construction impact at the time of the assessment was restricted to the opposite site of the access road: Development did not impact on the site.



Plate 10: View over the Site X8 homestead with stone built hut remains



Plate 12: View of the Site X8 cemetery



Plate 11: Livestock enclosures demarcated by stone and aloes at Site X8



Plate 13: Close-up of some traditional style graves at the Site X8 cemetery

❖ Site X9 – Hut & Livestock Enclosure – Late Iron Age – S31°52'17.5"; E27°03'53.7"

Site X9 comprises of the remains of a circular livestock enclosure. The 'kraal' remains measure approximately 15m in diameter, with walls in large weathered down to foundation level but standing in places to approximately 20-30cm high. Close to the 'kraal' remains are the weathered remains of a hut, measuring roughly 4m in diameter, with walls worn down to foundation level. The Site X9 hut and associated livestock enclosure may well, based on the circular shape of the 'kraal' be one of the earlier homesteads in the vicinity. At the time of the assessment construction in the vicinity of the site has been completed, impacting on the side of the access road where the site is situated, but seemingly not having affected any of the site features.

- **Recommendations:** Site X9 is ascribed a SAHRA *Low Significance* and *Generally Protected C Field Rating*. The site has not been impacted on by construction activities despite close proximity of construction impact.



Plate 14: View of the Site X9 livestock enclosure remains



Plate 15: View of the Site X9 hut remains

- ❖ Site X10 – Cemetery – Contemporary Period / Late Iron Age – $S31^{\circ}50'42.7''$; $E27^{\circ}05'04.0''$

Site X10 comprises of a large formally fence cemetery with current conservation measures, including a permanent fence and access gate, complying with SAHRA / EC PHRA Minimum Site Conservation Standards. The cemetery contains 200+ graves, the majority of which are traditional style graves including earth mound and stone outlined graves and earth mound with stone headstone demarcated graves mixed with lessor numbers of modern style and modern demarcated graves.

- **Recommendations:** The Site X10 cemetery is ascribed a SAHRA *High Significance* and *Generally Protected A Field Rating*. Current conservation measures, including a permanent fence with access gate, comply with SAHRA / EC PHRA Minimum Site Conservation Standards.



Plate 16: View of Site X10

- ❖ Site X11 – Cemetery & Homestead – Contemporary Period / Late Iron Age – S31°50'37.4"; E27°05'30.9"

The Site X11 cemetery comprise of about 10-15 graves, some are stone outlined and others demarcated with stone headstones. At present it is not possible to assign an approximate date to the graves, but settled earth mounds may well be interpreted as quite significant time depth. In close proximity to the cemetery / burial place are the remains of a homestead containing at least 2 livestock enclosures, both of rectangular shape and measuring approximately 8x8m in size. The walls of the 'kraals' are effectively weathered down to foundation level with stone mounds demarcating their positions. At least 3 huts were present on site, one ruined to a simple mound while 2, with stone and *daga* walls are still standing to roof height, but in both cases walls are only partially standing. More site features may well be present on site. Partially standing huts may be indicative of a fairly recent date, perhaps post-dating 60 years of age but the possibility that the site originated before that and that older structure remains are more hidden and weathered cannot be excluded.

- **Recommendations:** The Site X11 cemetery and associated homestead remains are ascribed a SAHRA *High Significance* and *Generally Protected A Field Rating*. At the time of the assessment construction impact had not yet reached the site locale.



Plate 17: General view of the Site X11 cemetery

- ❖ Site X12 – Cemetery – Contemporary Period / Late Iron Age – S31°49'59.2"; E27°05'47.3"

Site X12 comprises of a large informal, un-fenced cemetery containing 200+ graves. Grave styles vary, ranging from modern style graves with the majority of the graves being traditional style graves, including earth mound and stone outlined graves and graves marked with stone headstones. A few stone cairn graves are present at the site. Again the majority of the modern style graves and traditional style graves with legible inscribed stone headstones indicate dates younger than 60 years, but the many graves without inscriptions, faint inscriptions and specifically settled earth mounds are indicative of significant age, most probably with many pre-dating 60 years of age, implying that the site is formally protected by the NHRA 1999.

- **Recommendations:** The Site X12 cemetery is ascribed a SAHRA *High Significance* and *Generally Protected A Field Rating*. The site is situated approximately 100m from the proposed line route with village infrastructure forming a safe buffer between the construction alignment and the site. Construction activities at the time of the assessment did not impact on the site.



Plate 18: General view of Site X12

- ❖ Site X13 – Cemetery & Livestock Enclosure – Contemporary Period / Late Iron Age – S31°50'26.7"; E27°04'10.1"

Site X13 comprises of a large, informal cemetery containing 200+ graves. A few of the graves are modern in style but the majority are traditional style graves, primarily demarcated by stone headstones and including to a lesser extent earth mound and stone outlined graves. Inscriptions on modern style headstones indicate the majority of these post-dating 60 years of age but it is inferred that many of the traditional style graves pre-dates 60 years of age, implying that the cemetery is formally protected by the NHRA 1999. In close proximity to the cemetery is the ruined remains of a stone built livestock enclosure, rectangular in shape with dimensions approximating 8x8m in size. Stone walls of the enclosure are weathered down to foundation level.

- **Recommendations:** The Site X13 cemetery and livestock enclosure is ascribed a SAHRA *High Significance* and *Generally Protected A Field Rating*. The site is situated roughly 150m from the Xonxa line route and development did not impact on the site.



Plate 19: General view of the Site X13 cemetery

❖ Site X14 – Cemetery & Livestock Enclosure – Contemporary Period / Late Iron Age – S31°50'29.8"; E27°04'01.8"

Site X14 again comprises of 2 parts including the prominent cemetery component and an adjacent livestock enclosure. The cemetery, a large, informal, un-fenced cemetery contains more than 200 graves. A few modern graves are present at the site but the majority of the graves are traditional style graves including earth mound and stone outlined graves and graves marked with stone headstones, some inscribed and others not. Notable was the large amount of graves with settled earth mounds and many a headstone that is hardly discernible; both indicative of significant age (implying dates by far pre-dating 60 years of age) to many of the graves. Adjacent to the cemetery is the remains of a circular stone built livestock enclosure, measuring approximately 15m in diameter with walls worn down to foundation level. The circular shape of the 'kraal' may well support inferred significant age of many of the graves at the site.

- **Recommendations:** The Site X14 cemetery and livestock enclosure is ascribed a SAHRA *High Significance* and *Generally Protected A Field Rating*. The site is situated roughly 150m from the Xonxa line route and development did not impact on the site.



Plate 20: View of a portion of the Site X14 cemetery

2.2.2) ESIKHWANKQENI, BHOKO, MMANGWENI, QITHI, NGXABANI, MZANTSI AND MNTLA



Map 5: Spatial distribution of archaeological and cultural heritage sites along the Esikhwankqeni, Bhoko, Mnangweni, Qithi, Ngxabani, Mzantsi and Mntla line routes (line routes – red; tracklogs – white)

Sites X15 to X21 were identified along the general Esikhwankqeni, Bhoko, Mnangweni, Qithi, Ngxabani, Mzantsi and Mntla village line routes. Aside from the Site X20 Colonial Period homestead all sites are of Late Iron Age cultural assignment, some clearly dating to contemporary times; again signifying continuing cultural tradition in the area. The line route from Qithi to Esikhwankqeni and on to the Xonxa dam was not assessed, but sparsely distributed homesteads characterize the Qithi to Esikhwankqeni alignment and similar type sites, primarily homestead, aspects of homestead and grave or burial sites can reasonably be expected. A number of significant sites were observed in the vicinity of Mnangweni to Qithi, but these are not situated in proximity to the line route and thus not reported on. Towards the south of the line route formalized villages, specifically Mzantsi and Mntla, with clearly demarcated access roads and fenced homesteads, resulted in a low recorded record of archaeological and cultural heritage sites, but burial within homestead yards remain common practice. However, these 'sites' will not be impacted on by development.

❖ Site X15 – Livestock Enclosure – Late Iron Age – $S31^{\circ}48'31.1''$; $E27^{\circ}13'55.8''$

Site X15 comprises of the partial remains of a circular stone livestock enclosure, which measured approximately 10m in diameter. Stone walls are weathered down to foundation level. The existing access road already impacted on the site, with approximately only half of the 'kraal' still identifiable; the remainder thereof now under the access road constructed 'sidewalk'. The existing village fence runs through the site, alongside the 'sidewalk' barrier, confirming effectively the destruction of the site as a result of development, but at the same time ensuring conservation thereof during further construction activities, which will be restricted to the road reserve.

- **Recommendations:** The Site X15 livestock enclosure is assigned a SAHRA *Low Significance* and *Generally Protected C Field Rating*. The site has already been impacted on by road construction activities, but the remainder of the site will be conserved by the existing village fence with new construction activities limited to the road reserve.



Plate 21: General view of the Site X15 livestock enclosure

❖ Site X16 – Cemetery & Homestead – Contemporary Period / Late Iron Age –
S31°50'32.9"; E27°14'24.9"

The Site X16 cemetery comprises of 2 parts, 1 fenced and the other not. Seven graves are contained within the fenced portion of the site of which 2 are earth mound and stone outlined graves and the others are modern style graves. The large informal, un-fenced portion of the cemetery comprises of approximately 35-40 graves, of which only 2 are modern style graves and the remained traditional style graves, mainly earth mound and stone outlined in type but including a significant number of graves marked only with stone headstones. Some of the graves are quite difficult to discern due to settled earth mounds, indicating possible significant time depth and can reasonably be inferred to well pre-date 60 years of age.

The extensive homestead remains associated with the burial grounds comprise of at least 2 circular stone built livestock enclosures, measuring 10m and roughly 12-15m in diameter respectively, Both 'kraals' are basically weathered down to foundation level, with only low rising wall portions still standing. A stone outlined graves is situated immediately adjacent to the larger of the circular 'kraals' and is inferred to be the grave of the original male family head. A rectangular stone built 'kraal' measuring approximately 8x8m in size still stands to approximately 20cm in height and a number of smaller more ephemeral features are present of site, some of which may be representative of farming infrastructure and others residential platforms for huts. Three huts characterize the eastern perimeter of the site: 2 are circular in shape, roughly 4m in diameter with stone and *daga* walls standing to between 70cm and 1m in height. One of the huts is rectangular in shape, measuring approximately 3x4m in size with its walls standing to an estimated 70cm in height. The north-western portion of the site is typified by single lines stone alignments forming rough rectangular and curved shapes with stone aligned walkways connecting the 'encampments'. The purpose of these encampments, which may well indicate the alignments of fences built from natural material such as branch, is at present unknown, but inferred to have been enclosures for smaller livestock such as goat or even chickens.

Existing water development has already impacted on the site and a small reservoir and water tank is present on site.

- **Recommendations:** The Site X16 is assigned a SAHRA *High Significance* and *Generally Protected A Field Rating*. The site is situated approximately 100m from the proposed water line alignment. Despite existing development impact on the site every effort should be done to conserve its' integrity.



Plate 22: View of Site X16, with the cemetery and development impact in the background



Plate 24: Graves with 'kraal' and residential remains in the background



Plate 23: The cemetery with the fenced portion thereof in the background



Plate 25: The single grave adjoining the circular 'kraal'

- ❖ Site X17 – Cemetery – Contemporary Period / Late Iron Age – $S31^{\circ}50'47.6''$; $E27^{\circ}14'06.4''$

The Site X17 cemetery comprises of 8 graves, 3 of which are modern style graves and the remained earth mound and stone outlined, some of which are marked with stone headstones. Settled mounds of traditional style graves may well represent significant age of the graves. In close proximity to the cemetery is a stone packed feature, but the significance of this feature is not known.

- **Recommendations:** The Site X17 cemetery is assigned a SAHRA *High Significance* and *Generally Protected A Field Rating*. The site is situated immediately adjacent to the water line alignment and should be conserved.



Plate 26: View of the Site X17 cemetery



Plate 27: The stone feature situated in close proximity to the Site X17 cemetery

❖ Site X18 – Cemetery & Livestock Enclosures – Contemporary Period / Late Iron Age – S31°50'50.2"; E27°14'02.9"

Site X18 comprises of a fairly large un-fenced cemetery containing approximately 40 graves, 10 of which are modern style graves and the remainder being traditional style graves, primarily earth mound and stone outlined, some with stone headstones and others marked only with stone headstones. A few stone cairn graves are present at the site. Again settled earth mounds at traditional graves are indicative of quite significant age, easily pre-dating 60 years of age implying that the cemetery is formally protected by the NHRA 1999. To the east the site is typified by the remains of a large circular livestock enclosure, measuring approximately 12-15m in diameter, but with walls worn down to foundation level. Towards the western periphery of the cemetery a number of stone walls indicative of additional 'kraals' and other structure walls are present, but intersected with graves and with actual outlines obscured by vegetation.

- **Recommendations:** The Site X18 is ascribed a SAHRA *High Significance* and *Generally Protected A Field Rating*. The site should be conserved.



Plate 28: Remains of the livestock enclosure with the Site X18 cemetery in the background

❖ Site X19 – Grave – Contemporary Period / Late Iron Age – S31°50'53.8"; E27°13'41.0"

Site X19 represents the locality of a single grave situated centrally within the Ngxabani village access road, with vehicle access managed informally around the grave site. The grave itself, an earth mound and stone outlined grave, measures approximately 2.5m in length. The date of the site is unknown, but a fairly settled earth mound indicates a probable older than 60 year date for the informal burial.

- **Recommendations:** The Site X19 grave is ascribed a SAHRA *High Significance* and *Generally Protected A Field Rating*. The site should be either formally conserved, implying a permanent fence with access gate, or should be relocated to a more suitable locality. However these heritage conservation measures should be pre negotiated with the community prior to implementation.



Plate 29: View of Site X19, situated within the village access road

❖ Site X20 – Homestead – Colonial Period – $S31^{\circ}49'43.6''$; $E27^{\circ}13'45.8''$

The Site X20 Colonial Period homestead includes a number of structures; the main residence, what is inferred to have been a separate guest house of hexagonal shape, WC's and a water tank / pump house type of structure. While the guest house still seems to be in fair condition the walls of the main residence stands in part to roof height, but the doors, windows and roof have been removed. The Colonial Period homestead can reasonably be inferred to pre-date 60 years of age, implying that all structures comprising the site are formally protected by the NHRA 1999.

- **Recommendations:** The structures comprising Site X20 receives automatic SAHRA protection as a site of *High Significance* with a *Provincial Grade II Field Rating*. However, a general SAHRA *Medium Significance* and *Generally Protected B Field Rating* may well be more suitable. Site X20 will not be impacted on by development and will be conserved.



Plate 30: General view of Site X20



Plate 31: Close-up of the main residence – Site X20

❖ Site X21 – Grave – Contemporary Period / Late Iron Age – S31°52'07.8"; E27°11'36.2"

Site X21 comprises of a single earth mound and stone outlined grave situated immediately adjacent to the proposed line route. The date of the informal burial is not known, but the site is formally protected by the NHRA 1999.

- **Recommendations:** Site X21 is ascribed a SAHRA *High Significance* and a *Generally Protected A Field Rating*. The site should be conserved.



Plate 32: General view of Site X21

2.2.3) NQNINGANA, MPHOTHULO, TSOLOKAZI, MAKHIKHI, EMAQWATINI AND EMAZIMENI



Map 6: Spatial distribution of archaeological and cultural heritage sites along the Nqningana, Mphothulo, Tsolokazi, Makhikhi, Emaqwatini and Emazimeni line routes (line routes – red; tracklogs – white)

Sites X22 to X30 are situated along the Nqningana, Mphothulo, Tsolokazi, Makhikhi, Emaqwatini and Emazimeni village alignment. The majority of the sites comprise of grave or cemetery sites, in cases associated with Late Iron Age homestead aspects, most prominently livestock enclosures. The few sites recorded along this portion of the line route do not give a true reflection of the general cultural significance of the greater terrain, but is rather a reflection on well-organized village layout: Formal roadways and streets characterize these villages and many a small family cemetery or grave and even Late Iron Age archaeological remains are fenced within homestead yards.

❖ Site X22 – Hut – Late Iron Age – S31°54'33.7"; E27°07'10.5"

Site X22 comprises of the remains of a single stone built hut, measuring approximately 5m in diameter with the walls in places still standing to approximately 1.3m in height.

- **Recommendations:** Site X22 is ascribed a SAHRA *Low Significance* and a *Generally Protected C Field Rating*. The site should be conserved.



Plate 33: View of the Site X22 hut remains

- ❖ Site X23 – Cemetery – Contemporary Period / Late Iron Age – S31°55'12.7"; E27°08'46.0"

The Site X23 cemetery comprises of approximately 15 graves of which 3 are modern style graves and the remainder traditional in style and including earth mound, earth mound and stone outlined and stone headstone graves. Again specifically traditional style graves may well predate 60 years of age. The site was evidently formerly conserved with traces of heritage conservation measures, a permanent fence, now collapsed around the site.

- **Recommendations:** The Site X23 cemetery is ascribed a SAHRA *High Significance* and a *Generally Protected A Field Rating*. The site is situated approximately 175m from the end of the line route at Mphothulo village and will not be impacted on by development.



Plate 34: View of a portion of the Site X23 cemetery

❖ Site X24 – Grave – Contemporary Period / Late Iron Age – S31°54'32.1"; E27°11'52.5"

Site X24 comprises of a single grave; earth mound and stone outlined with a stone headstone with the size of the grave measuring approximately 2.5x1.5m in size. The site is formally protected by the NHRA 1999.

- **Recommendations:** Site X24 is ascribed a SAHRA *High Significance* and a *Generally Protected A Field Rating*. The site should be conserved.



Plate 35: The Site X24 grave

- ❖ Site X25 – Cemetery – Contemporary Period / Late Iron Age – $S31^{\circ}54'38.8''$; $E27^{\circ}12'54.4''$

The Site X25 cemetery contains around 7 graves, all traditional in style and primarily comprising earth mound and stone outlined graves. Settled earth mounds are indicative of significant age. The site is formally protected by the NHRA 1999.

- **Recommendations:** The Site X25 cemetery is ascribed a SAHRA *High Significance* and a *Generally Protected A Field Rating*. The site should be conserved.



Plate 36: View of the Site X25 graves

- ❖ Site X26 – Cemetery & Livestock Enclosure – Contemporary Period / Late Iron Age – S31°54'43.9"; E27°13'26.6"

The site X26 cemetery comprises of a large, informal, un-fenced cemetery containing 200+ graves, approximately 16 of which are modern style graves with the remainder being traditional style graves including earth mound and stone outlined graves and graves demarcated with stone headstones. A number of the more recent traditional style graves have wooden crosses as headstones. Notably settled mounds making identification of stone headstones in cases quite difficult are indicative of significant time depth relating to use of the cemetery. Adjacent to the cemetery is the remains of a circular shaped stone built livestock enclosure, measuring approximately 8m in diameter, but with its walls worn down to foundation level.

- **Recommendations:** Site X26 cemetery is ascribed a SAHRA *High Significance* and a *Generally Protected A Field Rating*. The site should be conserved.



Plate 37: View of a portion of the Site X26 cemetery



Plate 38: The associated circular shaped 'kraal' remains at Site X26

- ❖ Site X27 – Cemetery – Contemporary Period / Late Iron Age – $S31^{\circ}54'57.2''$; $E27^{\circ}13'25.3''$

Site X27 demarcates the locality of a large, informal, un-fenced cemetery typifying the intersection to Emaqwatini village north. The cemetery contains more than 200 graves of a mixture between modern and traditional style graves, including earth mound and stone outlined and stone headstone demarcated graves. Settled earth mounds often associated with hardly discernible stone headstones are indicative of substantial time depth at the burial grounds. The site is formally protected by the NHRA 1999.

- **Recommendations:** The Site X27 cemetery is assigned a SAHRA *High Significance* and a *Generally Protected A Field Rating*. The site should be conserved.



Plate 39: View of a portion of Site X27 [1]



Plate 40: View of a portion of Site X27 [2]

- ❖ Site X28 – Cemetery – Contemporary Period / Late Iron Age – S31°53'56.4"; E27°14'18.8"

Site X28 comprises of a small informal cemetery containing approximately 5 graves, 1 of which are modern in style and the others being traditional style graves, primarily earth mound and stone outlined graves, some with stone headstones. The date of specifically traditional style graves is impossible to determine, but it can reasonably be inferred that at least some of the pre-date 60 years of age.

- **Recommendations:** The Site X28 cemetery is assigned a SAHRA *High Significance* and a *Generally Protected A Field Rating*. The site should be conserved.



Plate 41: View of the Site X28 cemetery

- ❖ Site X29 – Cemetery – Contemporary Period / Late Iron Age – S31°53'58.3"; E27°14'24.9"

The Site X29 cemetery contains approximately 26 graves, some being earth mound and stone outlined graves and some demarcated with stone headstones. Two of the graves are modern style graves. The site is formally protected by the NHRA 1999.

- **Recommendations:** The Site X29 cemetery is assigned a SAHRA *High Significance* and a *Generally Protected A Field Rating*. The site should be conserved.



Plate 42: View of the Site X29 cemetery

❖ Site X30 – Livestock Enclosures – Late Iron Age – S31°53'58.2"; E27°14'21.2"

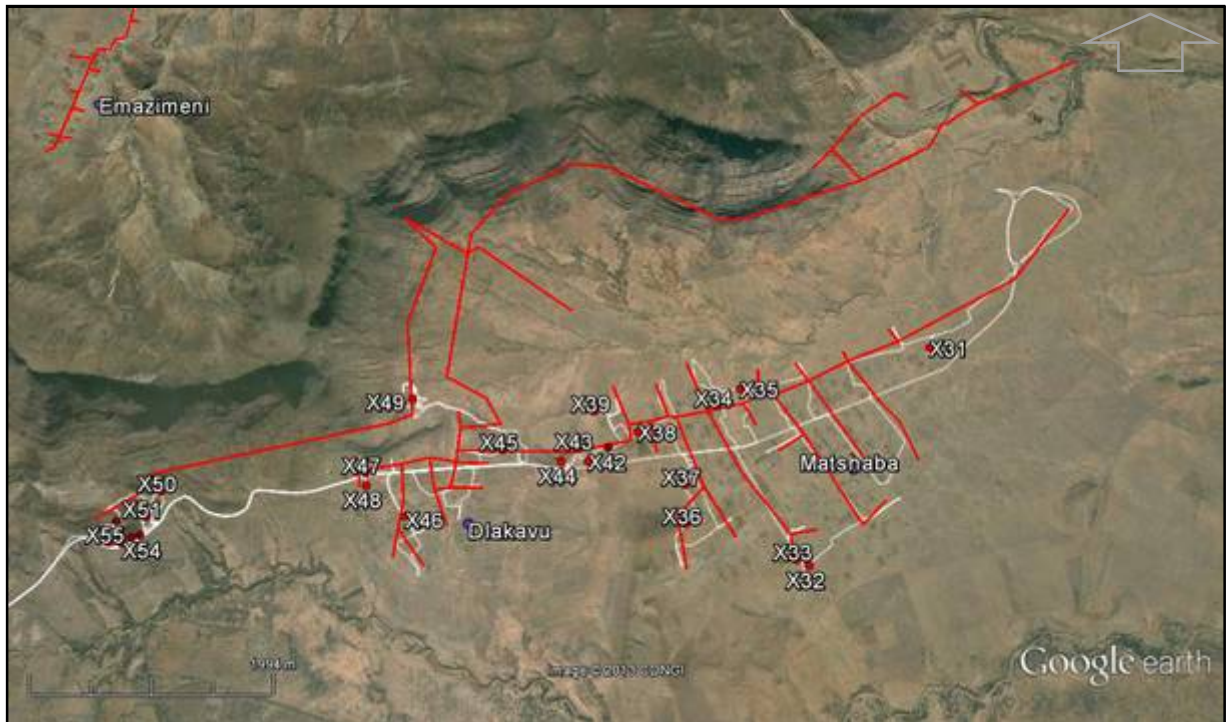
Site X30 comprises of a livestock enclosure complex encompassing roughly 8 'kraals' of varying size but in the region of 8x8m. All enclosures of the complex are rectangular in shape, indicative of a relative recent age. In general the structures are weathered down to foundation level, some marked with notable stone mounds indicating the original walls. In places stone walls are still standing to approximately 30-40cm in height.

- **Recommendations:** The Site X30 livestock enclosures are assigned a SAHRA *Low Significance* and a *Generally Protected C Field Rating*. Development will not impact on the site.



Plate 43: View of a portion of Site X30

2.2.3) MATSHABA, NKOLWENI AND DLAKAVU



Map 7: Spatial distribution of archaeological and cultural heritage sites along the Matshaba, Nkolweni and Dlakavu line routes (line routes – red; tracklogs – white)

Sites X31 to X56 were identified along the Matshaba, Nkolweni and Dlakavu line routes. All sites comprise of Late Iron Age sites, either homesteads or aspects thereof or grave/cemetery sites and within custom often combined. The list of reported on archaeological and cultural heritage sites along this portion of the line route by no means claim to be an all-inclusive list of resources. The assessment was not done to homestead level and specifically throughout Matshaba village the proposed water alignment often curs through homestead yards. A number of grave and family sites were observed situated within homestead yards, but resources situated on private properties are excluded from the list provided. Where development will cross through private property and heritage sites (specifically grave / cemetery sites) are present on the property details of development should be negotiated with the applicable family.

The northern bulk alignment was not assessed: Sites similar to those recorded, including homestead and cemetery sites may be encountered and should be conserved.

The developer is cautioned against development in proximity to heritage sites, for ex. at Site X49 the current alignment runs through the site, though not impacting on site features. In such cases the developer should ensure that realignment of the line route allows for an approximate 10-20m conservation buffer between the site features and the heritage site. Impact on a site (i.e. a line route running though a site) should be preceded by a Phase 2 archaeological mitigation / excavation project done under an EC PHRA Phase 2 Mitigation permit.

- ❖ Site X31 – Cemetery – Contemporary Period / Late Iron Age – S31°57'41.0"; E27°17'07.3"

Site X31 constitutes a large, informal, un-fenced cemetery containing 200+ graves. While a number of the graves are modern in style the majority are traditional style graves, primarily being earth mound and stone outlined and stone headstone demarcated graves. Settled earth mounds are indicative of relative time depth at the site. The Site X31 cemetery is formally protected by the NHRA 1999.

- **Recommendations:** The Site X31 cemetery is assigned a SAHRA *High Significance* and a *Generally Protected A Field Rating*. The proposed line route will run just north of the site and the site will be conserved.



Plate 44: General view of Site X31 [1]



Plate 45: General view of Site X31 [2]

- ❖ Site X32 – Cemetery – Contemporary Period / Late Iron Age – $S31^{\circ}58'39.8''$; $E27^{\circ}16'25.8''$

Site X32 represents a small cemetery comprising of approximately 4 graves, 2 of which are modern. Only 2 traditional style graves were identified at the site but older graves may be present – more difficult to identify because of settled earth mounds and disturbed stone demarcations. The site is formally protected by the NHRA 1999.

- **Recommendations:** The Site X32 cemetery is assigned a SAHRA *High Significance* and a *Generally Protected A Field Rating*. The cemetery is situated approximately 150m from the proposed line route and will not be impacted on by development. The site will be conserved.



Plate 46: General view of Site X32

- ❖ Site X33 – Cemetery – Contemporary Period / Late Iron Age – S31°58'38.1"; E27°16'21.9"

Site X33 again constitute a small informal cemetery containing 4 graves, all demarcated by stone headstones. The site is formally protected by the NHRA 1999.

- **Recommendations:** Site X33 is ascribed a SAHRA *High Significance* and a *Generally Protected A Field Rating*. The cemetery should be conserved.



Plate 47: View of Site X33

- ❖ Site X34 – Cemetery & Livestock Enclosure – Contemporary Period / Late Iron Age – S31°57'56.2"; E27°15'57.8"

Site X34 comprises of the remains of a circular stone built livestock enclosure which must have measured approximately 8-12m in diameter in the past. Large portions of the structure outline have disappeared in totality, with remaining ruins standing to foundation level only. Directly associated with the ruin are 4 graves, all being earth mound graves marked with stone headstones. The age of the site is unknown, but the circular livestock enclosure at least indicates relative time depth.

- **Recommendations:** The Site X34 cemetery and livestock enclosure is assigned a SAHRA *High Significance* and a *Generally Protected A Field Rating*. The cemetery should be conserved.



Plate 48: The Site X34 enclosure with graves in the background



Plate 49: Close-up of the Site X34 graves

- ❖ Site X35 – Graves / Cemeteries – Contemporary Period / Late Iron Age – S31°57'51.7"; E27°16'05.3"

Site X35 essentially comprises of a series of 4 grave sites / cemeteries. The first of these, demarcated at the site coordinate (X35 – S31°57'51.7"; E27°16'05.3") comprises of a single, large, stone cairn grave, measuring approximately 2x3m in size. The 2nd grave (X35-1 – S31°57'50.8"; E27°16'06.6") is an earth mound grave with a stone headstone. Cemetery 3 (X35-2 – S31°57'50.7"; E27°16'07.8") contains around 10 graves, all being earth mound and stone headstone demarcated graves. More graves may be situated here, but settled earth mounds would make identification impossible. The 4th cemetery (X35-3 – S31°57'53.2"; E27°16'10.3") comprises of around 6 graves with 4 of them marked only with stone headstones and 2 more recent earth mound graves. One of the stone headstone marked graves are situated at quite a distance from the others. These grave / cemetery sites are protected by the NHRA 1999.

- **Recommendations:** The Site X35 grave and cemetery sites are formally protected by the NHRA 1999 and should be conserved. They are ascribed a SAHRA *High Significance* and a *Generally Protected A Field Rating*.



Plate 50: View of the X35 grave



Plate 52: Graves comprising the X35-2 cemetery



Plate 51: The X35-1 grave



Plate 53: Selected graves from the Site X35-3 cemetery

❖ Site X36 – Livestock Enclosures – Late Iron Age – S31°58'27.9"; E27°15'46.8"

The Site X36 livestock enclosure complex comprises of approximately 5 rectangular 'kraals', measuring roughly 6x6m in size each, with walls still standing to varying heights of between 50cm and 1m.

- **Recommendations:** Site X36 is ascribed a SAHRA *Low Significance* and a *Generally Protected C Field Rating*. The site will not be impacted on by development.



Plate 54: General view of the Site X36 'kraal' complex

- ❖ Site X37 – Cemetery – Contemporary Period / Late Iron Age – S31°58'17.5"; E27°15'46.8"

The Site X37 comprises of 2 graves, 1 being an earth mound and stone outlined grave. The settled earth mound indicated notable time depth of the grave. The 2nd grave comprises of a very recent earth mound grave.

- **Recommendations:** The Site X37 informal cemetery is ascribed a SAHRA *High Significance* and a *Generally Protected A Field Rating*. The site should be conserved.



Plate 55: View of Site X37

- ❖ Site X38 – Grave – Contemporary Period / Late Iron Age – S31°58'03.1"; E27°15'31.9"

The Site X38 constitutes a recent earth mound and stone outlined grave. The site is formally protected by the NHRA 1999.

- **Recommendations:** Site X38 is ascribed a SAHRA *High Significance* and a *Generally Protected A Field Rating*. The site should be conserved.



Plate 56: The X38 grave

❖ Site X39 – Homestead – Late Iron Age – S31°57'57.2"; E27°15'18.1"

The Site X39 homestead comprises of the well preserved remains of a stone built hut, measuring approximately 5m in diameter with walls still standing to roof height. The ruined remains of a circular livestock enclosure is situated in direct proximity to the hut. The 'kraal' measures roughly 10m in diameter with walls standing in places to approximately 70cm in height. The circular shape of the livestock enclosure may indicate the site as one of the earlier Late Iron Age homesteads in the area.

- **Recommendations:** Site X39 is ascribed a SAHRA *Medium Significance* and a *Generally Protected B Field Rating*. The site should be conserved.



Plate 57: The Site X39 hut remains



Plate 58: Livestock enclosure remains at Site X39

- ❖ Site X40 – Cemeteries – Contemporary Period / Late Iron Age – S31°57'55.2"; E27°15'18.5"

Two small cemetery sites, demarcated Site X40, may be associated with the Site X39 homestead remains. The X40 cemetery sites comprise of 2 areas. The first of these (X40 – S31°57'55.2"; E27°15'18.5") comprise of 3 graves, 1 being an earth mound and stone outlined grave and the other 2 marked with stone headstones. These graves are situated in close proximity to 2 livestock enclosures both rectangular in shape with sizes measuring approximately 10x10 in size each. Enclosure walls are weathered down to foundation level. The 2nd cemetery site (X40-1 – S31°57'54.8"; E27°15'20.4") is situated roughly 50m east of the 1st cemetery site. Here 4 graves were identified, 3 of which are earth mound and stone outlined graves, all with stone headstones and 1 demarcated with only a stone headstone. The Site X40 graves are formally protected by the NHRA 1999.

- **Recommendations:** Site X40 is ascribed a SAHRA *High Significance* and a *Generally Protected A Field Rating*. The site should be conserved.



Plate 59: Graves at Site X40[1]



Plate 60: Graves at Site X40[2]

- ❖ Site X41 – Cemetery – Contemporary Period / Late Iron Age – S31°58'07.2"; E27°15'22.4"

The Site X41 cemetery is split, with 2 graves situated north of the access road and 2 graves situated south thereof. The northern graves comprise of an earth mound grave. The 2nd grave is a stone cairn grave. The southern graves include 1 earth mound and stone outlined grave, with what seems to be a fairly old grave, being only demarcated by a stone headstone.

- **Recommendations:** Graves of the Site X41 cemetery is formally protected by the NHRA 1999 and should be conserved. The site is ascribed a SAHRA *High Significance* and a *Generally Protected A Field Rating*.



Plate 61: The northern Site X41 graves



Plate 62: The southern Site X41 graves

❖ Site X42 – Livestock Enclosure – Late Iron Age – S31°58'11.0"; E27°15'15.9"

The Site X42 livestock enclosure comprises of an approximate 20m in diameter circular stone built 'kraal'. 'Kraal' walls are weathered, but stands in places to approximately 70cm in height.

- **Recommendations:** Site X42 is ascribed a SAHRA *Low Significance* and a *Generally Protected C Field Rating*. The site should be conserved.



Plate 63: View of Site X42

- ❖ Site X43 – Cemetery & Livestock Enclosure – Contemporary Period / Late Iron Age – S31°58'07.5"; E27°15'12.7"

Site X43 is characterized by a cemetery containing approximately 6 graves, 1 of which is modern and the remainder being earth mound and stone outlined graves, some marked with stone headstones. Adjacent to the cemetery is the remains of a circular livestock enclosure, measuring approximately 15m in diameter, but with walls collapsed and thus primarily identifiable by the stone foundation outline.

- **Recommendations:** Site X43 is ascribed a SAHRA *High Significance* and a *Generally Protected A Field Rating*. The site should be conserved.



Plate 64: Close-up of the Site X43 livestock enclosure



Plate 65: General view of the Site X43 cemetery

- ❖ Site X44 – Cemetery & Homestead – Contemporary Period / Late Iron Age – S31°58'10.9"; E27°15'07.4"

Site X44 comprise of a large homestead with a cemetery situated amidst the homestead features. The following prominent homestead features are reported on, but more features are present at the site. The low rising wall remains of a *daga* hut with an approximate 4m diameter together with the mound remains of at least 4 huts. At least 3 livestock enclosures are still easily identifiable; the 1st being an approximate 6x6 rectangular shaped enclosure with stone walls still standing to about 50cm high. The 2nd larger stone 'kraal' measures approximately 10x6m in size, with its' walls standing in places to about 80cm. The 3rd 'kraal, again rectangular is shape must have measured more or less 6x6m in size, but the area has been eroded to such an extent that the kraal has effectively been damaged to a degree that it is no longer of heritage value. The centrally located cemetery comprises of at least 6 identifiable graves, though more may be present. Graves are stone outlined, some with headstones – but time has taken its toll on many grave demarcations.

- **Recommendations:** Site X44 is ascribed a SAHRA *High Significance* and a *Generally Protected A Field Rating*. The site should be conserved.



Plate 66: General view of Site X44



Plate 68: Stone 'kraal' remains at Site X44



Plate 67: Hut remains at Site X44[1]



Plate 69: Hut remains at Site X44

❖ Site X45 – Livestock Enclosure – Late Iron Age – $S31^{\circ}58'07.4''$; $E27^{\circ}14'48.7''$

Site X45 represents the locality of the remains of a stone built rectangular 'kraal'. The enclosure remains measure approximately 20x20m in size, but walls are weathered down to foundation level.

- **Recommendations:** Site X45 is ascribed a SAHRA *Low Significance* and a *Generally Protected C Field Rating*. The site should be conserved.



Plate 70: General view of Site X45

- ❖ Site X46 – Cemetery – Contemporary Period / Late Iron Age – S31°58'25.0"; E27°14'17.4"

The Site X46 cemetery comprises of more or less 10 graves, 10 of which are modern style graves and at least 5 easily discernible traditional style graves, with all of these being earth mound and stone outlined in style.

- **Recommendations:** Site X46 is ascribed a SAHRA *High Significance* and a *Generally Protected A Field Rating*. The site should be conserved.



Plate 71: View of Site X46

- ❖ Site X47 – Cemetery – Contemporary Period / Late Iron Age – S31°58'13.1"; E27°14'04.8"

The Site X47 cemetery comprises of 7 graves including 1 modern style grave and a recent earth mound grave with stone headstone. Five older traditional style graves are also present at the site, all being earth mound and stone outlined in style. The cemetery is formally protected by the NHRA 1999. Current conservation measures, including a permanent fence with access gate comply with SAHRA / EC PHRA Minimum Site Conservation Standards

- **Recommendations:** The Site X47 cemetery is assigned a SAHRA *High Significance* and a *Generally Protected A Field Rating*. Current site conservation measures comply with SAHRA / EC PHRA Minimum Site Conservation Standards.



Plate 72: View of Site X47

- ❖ Site X48 – Cemetery – Contemporary Period / Late Iron Age – S31°58'16.5"; E27°14'05.1"

Site X48 comprises of 6 graves, 1 being modern in style and 4 being earth mound and stone outlined graves. Two of these graves have notably settled earth mounds and may be of significant age. The 6th grave is demarcated only by a stone headstone. Graves are widely scattered across the demarcated area with specifically traditional style graves situated immediately adjacent to the access road.

- **Recommendations:** The Site X48 cemetery is assigned a SAHRA *High Significance* and a *Generally Protected A Field Rating*. The site should be conserved.



Plate 73: Selected graves at Site X48



Plate 74: General view of the Site X48 cemetery area

❖ Site X49 – Cemeteries & Homestead – Contemporary Period / Late Iron Age –
S31°57'53.3"; E27°14'20.0"

Site X49 demarcates the locality of a notably large homestead, with homestead features spread across an approximate 320x180m area at the slope of a rise along which the proposed line route will be situated. Amidst the homestead features, and along the northern boundary of the site is a cemetery and again generally centrally situated. The northern cemetery comprises of 5 graves in linear alignment, of which 2 of them are earth mound and stone outlined graves and another may have been stone outlined but weathering has taken its toll on the grave demarcation. Two graves are only marked with stone headstones. The centrally located cemetery (located towards the central-western side of the site) contained an identified 6 graves, though more may be present but with grave demarcations having disappeared with time, all being traditional style graves. Site features scattered widely across the terrain include the remains of at least 7 *daga* huts, in general fairly large, between 4-6m in diameter, but with 1 having a diameter of approximately 8m, indicating the period significance thereof. Mound remains at the site may be indicative of additional residential remains; generally indicating circular shaped residences. At least 5 livestock enclosures were identified at the terrain, varying from small approximate 5x5m enclosures to large, in excess of 10x10m 'kraal' encampments. 'Kraal' walls are weathered down, in cases to foundation level, but in other cases still standing to approximately 50cm in height. A number of unidentified features are present on site, including but not limited to a large stone cairn, in excess of 2.5m long and rising to a height of close to 1m. Closer to the centrally located cemetery it seems as though single stone alignment 'pathways' demarcate former more ephemeral structure alignments.

The proposed line route passes the site immediately to its west, but widely scattered site features continues up the higher slope of the hill.

- **Recommendations:** The Site X49 is ascribed a SAHRA *High Significance* and a *Generally Protected A Field Rating*. The developer should ensure that the site be conserved in totality without development criss-crossing between site features, implying alignment along the higher lying area to the west of the site.



Plate 75: Late residential remains at Site X49



Plate 77: The large stone cairn at Site X49



Plate 76: View of a portion of Site X49



Plate 78: Selected livestock enclosures at Site X49



Plate 79: One of the burial areas at Site X49



Plate 81: Stone lid and grain pit at a livestock enclosure



Plate 80: Stone and *daga* wall remains



Plate 82: General view of the 2nd burial area at Site X49

- ❖ Site X50 – Cemetery & Livestock Enclosure – Contemporary Period / Late Iron Age – S31°58'17.3"; E27°13'00.1"

Site X50 demarcates the locality of a small cemetery comprising of 3 traditional style graves all being earth mound and stone outlined graves, some with recent inscribed headstones. Approximately 40m north of the cemetery is the remains of a livestock enclosure, rectangular in shape and measuring more or less 10x7m in size with walls standing in places up to approximately 1m in height.

- **Recommendations:** The Site X50 cemetery and livestock enclosure comprises of a cultural heritage site formally protected by the NHRA 1999. The site is ascribed a SAHRA *High Significance* and a *Generally Protected A Field Rating*. The site should be conserved.



Plate 83: View of the Site X50 livestock enclosure



Plate 84: Selected graves from the Site X50 cemetery

❖ Site X51 – Cemeteries & Homestead – Contemporary Period / Late Iron Age – S31°58'24.1"; E27°12'55.7"

The Site X51 features are scattered across a large, approximate 180x150m area. Two cemeteries are located on the site, 1 towards the south-central side, containing 7 graves including 1 modern style grave, while the remainder is traditional style graves including earth mound and stone outlined graves and graves marked with stone headstones. Two of the graves are children's graves. The 2nd cemetery is situated towards the western extremity of the site. Nine graves are located in the burial area, all being traditional style graves, primarily stone headstone demarcated graves. The site is situated close to a large tree that may have demarcated the site meeting place and thus inferred to be the older of the 2 cemeteries, this also supported by settled earth mounds. A number of primarily rectangular livestock enclosures are located on the site (roughly 8 were counted), with remains still easily identifiable. Sizes vary from fairly small, approximately 6x6m in size to of the largest being 2 adjoining 'kraals' measuring more or less 10x8m in size. Preservation of the stone walls also vary quite radically, where some walls are weathered down to foundation level others are still standing to approximately 50-70+cm high. The remains of at least 3 circular livestock enclosures are also present on site. These enclosures seem to have been noticeably large, with all having radiuses in excess of 10m. In the case of the circular enclosure remains all walls are weathered down to foundation level. It is inferred that this may represent a case of 'recycle and reuse', where 'kraals' were deteriorating or as need changed stone from one enclosure was used for the construction and upkeep of the next generation of enclosures. Residential remains are widely spread across the site with 3 stone and *daga* ruined huts characterizing the western extremity of the site. With walls in places still standing to roof height it can reasonably be inferred that these remains represent a later habitation phase. Towards the central area of the site a series of at least 4 mounds indicate further hut localities. These remains were associated with surface artefacts of metal and glass, confirming at least a post-Colonial date to use of the site. Although no indicators of pre-Colonial occupation could be identified circular enclosure remains suggest significant age. Smaller stone site features are scattered across the site and may be representative of both farming activities and occupation.

- **Recommendations:** Site X51 is assigned a SAHRA *High Significance* and a *Generally Protected A Field Rating*. The site should be conserved.



Plate 85: Series of residential remains at Site X51



Plate 87: Selected graves from the 1st cemetery at Site X51 [2]



Plate 86: Selected graves from the 1st cemetery at Site X51 [1]



Plate 88: Structure remains at Site X51



Plate 89: Structure remains with the 'meeting' tree in the background



Plate 91: Recent residential remains at Site X51



Plate 90: Livestock enclosure at Site X51



Plate 92: A livestock enclosure and the meeting tree at Site X51

❖ Site X52 – Livestock Enclosure – Late Iron Age – S31°58'29.0"; E27°12'53.7"

The Site X52 livestock enclosure was stone built in rectangular shape, measuring approximately 10x7m in size. Walls are in places still standing to more or less 1m in height. The entrance of the 'kraal' is still clearly visible.

- **Recommendations:** Site X52 is assigned a SAHRA *Low Significance* and a *Generally Protected C Field Rating*. The site should be conserved.



Plate 93: The Site X52 livestock enclosure

❖ Site X53 – Homestead – Late Iron Age – S31°58'29.6"; E27°12'51.1"

The 1st Site X53 hut remains are identifiable by a stone foundation and *daga* wall mound. The residence must have measured approximately 5m in diameter. Traces of a semi-circular stone paved verandah are still identifiable around the front door. The 2nd hut, with *daga* walls still standing to roof height measured approximately 4-5m in diameter. The remains of a stone built livestock enclosure is situated towards the front of the residential remains (facing the access road). The 'kraal' measured approximately 5x5m in size with an adjoining smaller 'kraal' measuring roughly 3x4m. Stone walls are still standing to an average height of 50cm.

- **Recommendations:** Site X53 is assigned a SAHRA *Low Significance* and a *Generally Protected C Field Rating*. The site should be conserved.



Plate 94: The Site X53 livestock enclosure



Plate 95: Homestead remains at Site X53

❖ Site X54 – Livestock Enclosure – Late Iron Age – S31°58'31.2"; E27°12'48.3"

Site X54 comprises of the remains of a rectangular shaped stone built livestock enclosure, measuring approximately 8x5m in size. Walls are fairly collapsed but in places still standing to between 80cm-1m in height.

- **Recommendations:** Site X54 is assigned a SAHRA *Low Significance* and a *Generally Protected C Field Rating*. The site should be conserved.



Plate 96: General view of Site X54

❖ Site X55 – Homestead – Late Iron Age – S31°58'30.8"; E27°12'44.1"

The Site X55 homestead is characterized by a large tree, inferred to demarcate the original meeting place of the homestead. Local consultation indicated that the site was originally typified by 2 trees, but that 1 had died in recent years. Further cultural features at the site include 3 livestock enclosures of which 2 are rectangular in shape and 1 circular, implying significant time depth to the site. The 2 rectangular stone 'kraals' measure approximately 7x7m in size, with walls rising to 1+m in height. The small circular enclosure measures more or less 4m in size with walls still standing to roughly 80cm high in places. The remains of at least 4 huts are associated with the site, all measuring roughly 4m in diameter, with mound remains and low rising wall ruins still visible. A stone outline of a verandah and path seems to be present at the 1 hut, with the verandah centered in a semi-circle around the front door and stone outlined paths leading down the steep slopes of the landscape.

- **Recommendations:** The Site X55 homestead is formally protected by the NHRA 1999 and should be conserved. The site is ascribed a SAHRA *Medium Significance* and a *Generally Protected B Field Rating*.



Plate 97: Livestock enclosures at Site X55



Plate 99: Residential remains at Site X55



Plate 98: General view of Site X55 with the 'meeting' tree to the left



Plate 100: Verandah detail at Site X55

❖ Site X56 – Livestock Enclosures – Late Iron Age – S31°58'25.1"; E27°12'46.7"

Site X56 comprises of a complex of livestock enclosures scattered across an approximate 200x100m area. Enclosures include at least 2 circular shaped 'kraal' remains with the largest of these measuring approximately 18m in diameter. A rectangular shaped adjoining 'kraal' has camp sizes of at least 20x20m in size, while another large rectangular 'kraal' has measurements approaching 15x20m in size. The majority of the smaller enclosures, all rectangular in shape measures approximately 7x7m in size. Walls of the livestock enclosures are worn to varying degrees, but with highest still standing in excess of 1m in height. Smaller surface stone features may well represent residential remains of herder boys.

- **Recommendations:** The Site X56 livestock enclosure complex is assigned a SAHRA *Low Significance* and a *Generally Protected C Field Rating*.



Plate 101: Livestock enclosures at Site X56[1]



Plate 103: Livestock enclosures at Site X56[3]



Plate 102: Livestock enclosures at Site X56[2]



Plate 104: Livestock enclosures at Site X56[4]

2.2.4) SIQABENI, LALINI, LOKISHINI, MANZABETHU AND QAQENI



Map 8: Spatial distribution of archaeological and cultural heritage sites along the Siqabeni, Lalini, Lokishini, Manzabethu and Qaqeni line routes (line routes – red; tracklogs – white)

Sites X57 to X90 were identified along the Siqabeni, Lalini, Lokishini, Manzabethu and Qaqeni line routes, with all identified sites being Late Iron Age sites and including homestead and aspects of homestead sites and grave / cemetery sites. Continued use at many a cemetery with significant age highlights cultural continuation and an emphasis on traditional values, although cultural change can be gleaned from a change in burial practice.

At Lokishini village (Sites X67 to X80) villagers requested that the possibility to extent the water line route to a disabled homestead, the house of Siyalelo Pato (situated at S31°57'28.1"; E27°07'52.3"; contact nr: 071 944 9041), be further investigated. The residence is situated just west of the Site X69 cemetery and would require an approximate 150-200m extension to the current layout.

Whilst completing the survey in Lokishini village, an assessment that took a few hours considering the high number of specifically grave and cemetery sites located in the village, the ArchaeoMaps project team was approached by a man who introduced himself as the village chairperson / leader. After extensive explanation of the purpose of the study and insistence by the man on tender particulars it became clear that consultation would serve no further effect and the ArchaeoMaps project team excused themselves to continue with field assessment, at which point in time the man informed the team that they were not allowed to leave the village because the police were underway for their arrest, without further details. Upon the arrival of the police, accompanied by a resident of the village and Intsika Yetu officer Mlamli Limani, the ArchaeoMaps team was informed that they were being arrested for the theft of an engine, with Limani 'promising' the team that they would spend the night in jail. At the local police station, after explanation to the police according to the fieldwork map, the police stated that the team was not under

arrest. Limani however insisted that he was not aware of the project and with Intsika Yetu being the project proponent of a number of developments in the area refused to let the ArchaeoMaps team be released until his requirements, including tender particulars of the project or a directly associated government department could be named by the project team. He stated that CHDM projects 'arranged' in Queenstown does not necessarily carry the consent of Intsika Yetu and such development assessments have to be verified with them. Explanation of ArchaeoMaps as an independent assessor as part of the Fieldwork EIA team and the fact that tender particulars or information would not warrant ArchaeoMaps as an independent assessor as required by the Specialist Declaration of Interest did not suffice. With the close of business day then passed he stated that verification of the project as a legal CHDM development would only be accepted by him from the CHDM, despite forwarded information from Peter Fielding on the date of the PPP and verification by DEDEAT of legally required advertisement of the project across the study site. After critical after hours' efforts by Peter Fielding and CHDM personnel and direct instruction by CHDM environmental officers Limani accepted the project as stated was legal and agreed that the police release the ArchaeoMaps team.

The incident does have impact not only on the Phase 1 AIA but on the environmental assessment at large, summarized as follows:

SPECIALIST ASSESSMENTS AND EIA's:

- Increasing direct threats to the safety of specialist assessors (and though not in this case, physical attacks) have the potential to make environmental assessments increasingly expensive while also jeopardizing the quality thereof.
- Incidents of sort have repercussions on legal time frames of specialist assessments and EIA's as per the NEMA Regulations. In the case of Xonxa, fear of safety resulted in the team returning home and having had to reschedule additional fieldwork time for the project, with the relevant impact on project costs and already scheduled ArchaeoMaps projects as well as legal submission deadlines of the Fieldwork EIA documentation.
- Neither Limani (Intsika Yetu) nor the Lokhisini village chairperson proved to have been registered as Interested and Affected Party (I&AP) on the project's Public Participation Process (PPP) – with the described incident effectively thus constituting the intentional obstruction of a legal process.
- Last but not least the purpose of the PPP needs to be reconsidered. Closely associated with South Africa's Constitution the PPP provides a platform for citizens and legal residents of South Africa to comment on their environment:
 1. It is the legal platform that ensures that comments and requirements raised by registered I&AP's can be brought to the attention of an environmental team (such a local requests for reporting when working in specific areas).
 2. Second thereto it is a legal platform where citizens can request information on the particular development and the EIA process itself. The law requires information exchange on the PPP to be transparent, there thus need to be no legal confusion regarding the EIA process. It needs to be stated that registration as I&AP remains the responsibility of the party concerned. Should a party not be registered as I&AP on a project their requirements cannot be legally considered within the framework of an EIA: No person, government official or community leader, has the legal right to make, or attempt to enforce, requirements on a particular specialist assessor / an EAP unless through the particular projects PPP.
 3. Thirdly the PPP provides a legal platform ensuring citizen opinions can be, through representation such as community representation, be brought to the attention of the developer and EAP. The case of Lokhisini village raises particular concern regarding representation: It was evident during fieldwork across the southern part of the study site that villagers were in totality unaware of the proposed development and the ArchaeoMaps team repeatedly explained not only the archaeological assessment, but the principles of EIA and the very development objectives to villagers, with this being in large the 1st that these villagers

had heard of the proposed water development. In the case of Lokhisini village the community request for an extension line to a disabled residence is the type of request that should be brought to the attention of the EAP through the PPP by the particular community representative, not effectively be requested by community members to specialist assessors at the time of assessment. The question thus being raised in this respect, is poor community representation denying villagers their Human Right to comment on their environment?

[The insistence by Mlamli Limani and the Lokhisini village chairperson on tender particulars remain unrequited.]

❖ Site X57 – Homestead – Late Iron Age – S31°59'06.2"; E27°11'16.4"

The site X57 homestead comprises of a rectangular stone built livestock enclosure measuring approximately 6x6m in size, with its weathered walls standing in places to an estimated height of 50cm. The remains of 2 stone and *daga* huts are present at the site, 1 measuring approximately 4m in diameter and the other about 5m, with the walls of the 1st standing to between 30-50cm in height and the walls of the 2nd hut still standing to approximately 80cm high.

- **Recommendations:** The Site X57 is assigned a SAHRA *Low Significance* and a *Generally Protected C Field Rating*.



Plate 105: Livestock enclosure from Site X57



Plate 106: Residential remains at Site X57

- ❖ Site X58 – Cemetery – Contemporary Period / Late Iron Age – S31°59'01.3"; E27°11'12.4"

The Site X58 cemetery comprises of approximately 150-170 graves. While some of the graves are modern in style the majority of the graves are traditional style graves, again including earth mound and stone outlined graves, stone headstone demarcated graves, mound with cross graves and a few stone cairn graves. Of the older graves, quite difficult to discern with often only half buries headstones still visible indicate quite significant time depth at the site.

- **Recommendations:** The Site X58 is assigned a SAHRA *High Significance* and a *Generally Protected A Field Rating*. The site should be conserved.



Plate 107: Selected graves from Site X58

- ❖ Site X59 – Cemetery – Contemporary Period / Late Iron Age – S31°59'11.5"; E27°11'06.3"

The site X59 cemetery comprises of more or less 70-80 graves, again with a few modern style graves but with the majority of the graves being traditional in style, primarily earth mound and stone outlined graves with a notable number of stone headstone demarcated graves. The site is formally protected by the NHRA 1999.

- **Recommendations:** The Site X59 is assigned a SAHRA *High Significance* and a *Generally Protected A Field Rating*. The site should be conserved.



Plate 108: Selected graves at Site X59

- ❖ Site X60 – Cemetery – Contemporary Period / Late Iron Age – $S31^{\circ}59'07.9''$; $E27^{\circ}11'07.7''$

Cemetery X60 comprises of approximately 8 graves. The site is formally protected by the NHRA 1999.

- **Recommendations:** The Site X60 is assigned a SAHRA *High Significance* and a *Generally Protected A Field Rating*. The site should be conserved.



Plate 109: View of Site X60

- ❖ Site X61 – Cemetery – Contemporary Period / Late Iron Age – $S31^{\circ}58'30.7''$; $E27^{\circ}10'44.3''$

The Site X61 informal cemetery contains approximately 8 graves, with the majority of them marked by stone headstones but with some of them characterized merely by earth mounds and stone outlines. The site is formally protected by the NHRA 1999.

- **Recommendations:** The Site X61 cemetery is assigned a SAHRA *High Significance* and a *Generally Protected A Field Rating*. The site should be conserved.



Plate 110: View of the Site X61 cemetery

- ❖ Site X62 – Cemetery – Contemporary Period / Late Iron Age – $S31^{\circ}57'34.0''$; $E27^{\circ}09'16.8''$

Site X62 constitutes a small informal cemetery of approximately 15 graves, including both modern and traditional style graves with some of the traditional style graves inferred to be of significant time depth. The site is formally protected by the NHRA 1999.

- **Recommendations:** Site X62 is ascribed a SAHRA *High Significance* and a *Generally Protected A Field Rating*. The site should be conserved.



Plate 111: General view of Site X62

❖ Site X63 – Hut – Late Iron Age – $S31^{\circ}57'36.8''$; $E27^{\circ}09'13.4''$

The Site X63 hut measures approximately 6m in diameter. *Daga* walls are in places still standing to roof height. The structure is inferred to pre-date 60 years of age.

- **Recommendations:** Site X63 is ascribed a SAHRA *Low Significance* and a *Generally Protected C Field Rating*. The site should be conserved.



Plate 112: View of Site X63

❖ Site X64 – Homestead – Late Iron Age – S31°57'40.2"; E27°09'14.7"

The Site X64 homestead comprises of the remains of 2 *daga* huts, both circular in shape and approximately 5m in diameter, with walls at both in part still standing to roof height. At 1 of the huts a few pieces of bottle glass and a large lower grinding stone was discovered. Slightly further afield is the remains of a cluster of 3 residences, including the stone foundation of a rectangular structure measuring approximately 6x4m in size, a 2-roomed rectangular hut measuring around 4x5m in size, with walls in places still standing to roof height and an circular hut with an approximate diameter of 5m. Here walls are again still standing to roof height and the structure displayed the remains of a small stone verandah at the front door. In close proximity to the 1st cluster of residential remains is an adjoining livestock enclosure, with both of the rectangular camps measuring more or less 6x6m in size. The 1 camp was built of stone, but the other seems to have been built of mud-brick. Walls are worn down to no higher than 20-30cm. The site seems to be fairly recent, but a pre-60 years of age date can reasonably be inferred.

- **Recommendations:** Site X64 is formally protected by the NHRA 1999. The site is ascribed a SAHRA *Medium Significance* and a *Generally Protected B Field Rating*. At present the proposed line route runs through the site, though not impacting on any of the site features. It is recommended that the route be re-aligned in the vicinity of Site X64 to pass either to the west or east of the site. The developer is reminded that impact on 'the site' not necessarily site features would require a Phase 2 archaeological mitigation project to precede development.



Plate 113: Late residential remains at Site X64



Plate 115: Close-up of residential remains at the 2nd cluster of residences



Plate 114: Lower grinding stone



Plate 116: Livestock enclosure remains at Site X64

❖ Site X65 – Livestock Enclosure – Late Iron Age – S31°57'47.1"; E27°09'24.6"

Site X65 constitutes the remains of a large rectangular livestock enclosure, measuring approximately 12x6m in size with 2 smaller calf camps immediately adjoining the larger 'kraal'. One of the calf camps measures a rough 4x5m in size, while the other is approximately 6x5m. The walls of the main 'kraal' still stands to 1m in height, while the calf camp walls are worn down to no higher than 20-30cm, but up to 50cm in places.

- **Recommendations:** Site X65 is ascribed a SAHRA *Low Significance* and a *Generally Protected C Field Rating*. The site should be conserved.



Plate 117: Close-up of the Site X65 livestock enclosure wall



Plate 118: General view of Site X65

❖ Site X66 – Homestead – Late Iron Age – S31°57'49.8"; E27°09'25.8"

The Site X66 homestead comprises of the ruined remains of a large, rectangular stone built livestock enclosure, measuring more or less 12x6m in size, with 2 smaller calf camps adjoining the 'kraal'. Walls are still standing to a height of approximately 1m. In close proximity to the livestock enclosure remains is the stone foundation of a former circular hut. A rectangular, *daga*, 3-roomed house still stands to roof height but windows and doors have weathered away. The homestead, or at least the older aspects thereof, can reasonably be inferred to be older than 60 years.

- **Recommendations:** Site X66 is ascribed a SAHRA *Low Significance* and a *Generally Protected C Field Rating*. The site should be conserved.



Plate 119: General view of Site X66



Plate 120: Close-up of a collapsed wall section at Site X66

- ❖ Site X67 – Cemetery – Contemporary Period / Late Iron Age – $S31^{\circ}57'40.6''$; $E27^{\circ}08'12.7''$

The Site X67 cemetery comprises of approximately 10 graves. All graves are traditional style graves marked with stone outlines and headstones, with some only identifiable by remaining stone headstones.

- **Recommendations:** The Site X67 cemetery is ascribed a SAHRA *High Significance* and a *Generally Protected A Field Rating*. The site should be conserved.



Plate 121: General view of Site X67

- ❖ Site X68 – Cemetery – Contemporary Period / Late Iron Age – S31°57'38.6"; E27°08'12.1"

The Site X68 cemetery comprises of approximately 5 earth mound and stone outlined graves. In close proximity to the graves is a stone cairn of more or less 3m in length and about 1m high. The stone cairn is inferred to be a 6th, perhaps family grave.

- **Recommendations:** Site X68 is ascribed a SAHRA *High Significance* and a *Generally Protected A Field Rating*. The site should be conserved.



Plate 122: General view of Site X68



Plate 123: Close-up of the stone cairn grave at Site X68

- ❖ Site X69 – Cemetery – Contemporary Period / Late Iron Age – $S31^{\circ}57'27.5''$; $E27^{\circ}07'56.1''$

Site X69 constitutes a large cemetery containing approximately 40 graves. The majority of the graves are traditional style graves marked with stone headstones while a few are characteristic earth mound and stone outlined graves.

- **Recommendations:** Site X69 is ascribed a SAHRA *High Significance* and a *Generally Protected A Field Rating*. The site should be conserved.



Plate 124: Selected graves from Site X69



Plate 125: View of Site X69

- ❖ Site X70 – Cemetery – Contemporary Period / Late Iron Age – $S31^{\circ}57'37.4''$; $E27^{\circ}07'47.2''$

Site X70 marks the general locality where community members indicated the presence of graves, but the actual grave / graves could not be located. A small pile of stones may indicate the actual locale referred to, in which case a number of inferred fairly old graves may be situated in the general area.

- **Recommendations:** Graves at Site X70 would be ascribed a SAHRA *High Significance* and a *Generally Protected A Field Rating*. Further community consultation should be done should any impact be envisioned in the area.



Plate 126: View of the inferred Site X70 grave

- ❖ Site X71 – Cemetery – Contemporary Period / Late Iron Age – S31°57'34.1"; E27°07'50.1"

Site X71 comprises of a small cemetery containing approximately 15 graves, with the majority of the graves marked with stone headstones.

- **Recommendations:** The Site X71 cemetery is ascribed a SAHRA *High Significance* and a *Generally Protected A Field Rating*. The site should be conserved.



Plate 127: General view of the Site X71 cemetery [1]



Plate 128: General view of the Site X71 cemetery [2]

- ❖ Site X72 – Grave – Contemporary Period / Late Iron Age – S31°57'34.1"; E27°07'50.1"

The contemporary grave, marked Site X72, is individually fenced. The site is formally protected by the NHRA 1999.

- **Recommendations:** The Site X72 grave is assigned a SAHRA *High Significance* and a *Generally Protected A Field Rating*. The site should be conserved.



Plate 129: View of the Site X72 grave

- ❖ Site X73 – Cemetery – Contemporary Period / Late Iron Age – $S31^{\circ}57'29.8''$; $E27^{\circ}07'42.7''$

The Site X73 cemetery comprises of approximately 20 graves, with the majority of the graves marked by stone headstones. Settled earth mounds indicate significant age to the cemetery.

- **Recommendations:** The Site X73 cemetery is ascribed a SAHRA *High Significance* and a *Generally Protected A Field Rating*. The site should be conserved.



Plate 130: General view of Site X73 [1]



Plate 131: General view of Site X73 [2]

- ❖ Site X74 – Cemetery – Contemporary Period / Late Iron Age – S31°57'17.2"; E27°07'45.3"

The Site X74 cemetery comprises of 3 fairly recent graves, marked with branch pile and others with stone headstones. The site is situated immediately adjacent to the proposed line route and particular caution should be taken at the time of development.

- **Recommendations:** The Site X74 cemetery is ascribed a SAHRA *High Significance* and a *Generally Protected A Field Rating*. The site should be conserved.



Plate 132: View of Site X74

- ❖ Site X75 – Cemetery – Contemporary Period / Late Iron Age – S31°57'21.3"; E27°07'52.9"

Site X75 is situated approximately 30m from the proposed line route and again particular caution should be taken at the time of development. The cemetery site effectively comprises of 3 parts or clusters of graves. The 1st or western part of the cemetery demarcates an area where 6 graves are present. The graves are primarily marked only with stone headstones. The central cluster of the cemetery contains approximately 15 graves, again primarily marked only with stone headstones and the northern extremity of the site where 1 modern grave is situated is fairly well demarcated and easily identifiable. The Site X75 cemetery clusters are formally protected by the NHRA 1999.

- **Recommendations:** The Site X75 cemetery is ascribed a SAHRA *High Significance* and a *Generally Protected A Field Rating*. The site should be conserved.



Plate 133: Graves from the 1st burial area at Site X75 [1]



Plate 135: Graves from the 2nd burial area at Site X75



Plate 134: Graves from the 1st burial area at Site X75 [2]



Plate 136: The single grave demarcating the 3rd burial area at Site X75

- ❖ Site X76 – Grave – Contemporary Period / Late Iron Age – S31°57'21.3"; E27°07'52.9"

The single grave comprising Site X76 is demarcated by a stone headstone only. The site is formally protected by the NHRA 1999.

- **Recommendations:** Site X76 is assigned a SAHRA *High Significance* and a *Generally Protected A Field Rating*. The site should be conserved.



Plate 137: The Site X76 grave

- ❖ Site X77 – Cemetery & Livestock Enclosure – Contemporary Period / Late Iron Age – S31°57'17.5"; E27°07'55.7"

Site X77 comprises of a fairly small stone built livestock enclosure of approximately 3x3m in size. Five graves are situated within the enclosure and immediately adjacent thereto. Graves comprise primarily of traditional style earth mound and stone outlined graves. The site is formally protected by the NHRA 1999.

- **Recommendations:** Site X77 is assigned a SAHRA *High Significance* and a *Generally Protected A Field Rating*. The site should be conserved.



Plate 138: View of Site X77

- ❖ Site X78 – Cemetery – Contemporary Period / Late Iron Age – S31°57'15.7"; E27°07'56.6"

The Site X78 cemetery contains approximately 20 graves all of traditional style but varying from a few earth mound and stone outlined graves with the majority of them being marked with stone headstones only. The site is rather overgrown and some graves are hardly discernible. Settled earth mounds and half earth covered headstones are indicative of significant age.

- **Recommendations:** Site X78 is assigned a SAHRA *High Significance* and a *Generally Protected A Field Rating*. The site should be conserved.



Plate 139: Selected graves at the Site X78 cemetery [1]



Plate 141: Selected graves at the Site X78 cemetery [3]



Plate 140: Selected graves at the Site X78 cemetery [2]



Plate 142: Selected graves at the Site X78 cemetery [4]

- ❖ Site X79 – Grave – Contemporary Period / Late Iron Age – S31°57'27.1"; E27°07'59.8"

Site X79 comprises of a large stone cairn grave measuring approximately 5x2m in size. The site is formally protected by the NHRA 1999.

- **Recommendations:** Site X79 is assigned a SAHRA *High Significance* and a *Generally Protected A Field Rating*. The site should be conserved.



Plate 143: View of Site X79

- ❖ Site X80 – Cemetery – Contemporary Period / Late Iron Age – S31°57'37.8"; E27°07'59.1"

The Site X80 comprises of 2 burial areas, the 1st contains 3 graves, all being earth mound and stone outlined graves, with notably settled earth mounds indicating significant time depth. The 2nd are characterized by 2 graves 1 being and earth mound and stone outlined grave and the other is demarcated with a stone headstone.

- **Recommendations:** Site X80 is assigned a SAHRA *High Significance* and a *Generally Protected A Field Rating*. The site should be conserved.



Plate 144: View of the 1st burial area at Site X80



Plate 145: The 2nd burial area at Site X80

❖ Site X81 – Livestock Enclosures – Late Iron Age – S31°57'17.6"; E27°08'57.6"

A number of livestock enclosure remains are situated at the general Site X81 locale including the remains of 2 fairly large rectangular enclosures measuring more or less 15x10m and 10x10m in size respectively, with the majority of the 'kraal' remains in the area comprising much smaller approximate 7x7m in size rectangular enclosure remains. Conservation of the walls vary radically, while some are standing only to a level of approximately 20-30cm in height others reach heights of in the region of 80cm. Time depth at the site is identifiable by the remains of circular livestock remains, identifiable by its trace foundation remains only.

- **Recommendations:** Site X81 is assigned a SAHRA *Low Significance* and a *Generally Protected C Field Rating*. The site should be conserved.



Plate 146: General view of Site X81

- ❖ Site X82 – Cemetery – Contemporary Period / Late Iron Age – S31°56'54.3"; E27°09'01.1"

The Site X82 cemetery contains approximately 60 graves, including a few modern style graves but with the majority of the graves being traditional style graves including earth mound and stone outlined and stone headstone demarcated graves. The cemetery is at present fenced within a communal fence.

- **Recommendations:** Site X82 is assigned a SAHRA *High Significance* and a *Generally Protected A Field Rating*. The site should be conserved.



Plate 147: View of Site X82

- ❖ Site X83 – Cemetery & Livestock Enclosures – Contemporary Period / Late Iron Age
– 531°56'50.8"; E27°09'06.4"

Site X83 comprises of the remains of a large rectangular stone built enclosure measuring approximately 18x13m in size. The walls of the enclosure have been worn down to foundation level. Four graves are situated in close proximity to the 'kraal' remains including 1 modern and 3 traditional style graves. A stone cairn may represent a further grave.

- **Recommendations:** Site X83 is assigned a SAHRA *High Significance* and a *Generally Protected A Field Rating*. The site should be conserved.



Plate 148: View of Site X84

❖ Site X84 – Homestead – Late Iron Age – S31°56'45.9"; E27°09'04.3"

Site X84 comprises of a large stone built rectangular livestock enclosure measuring approximately 10x12m in size with walls still standing to roughly 30-50cm in height. Associated with the livestock enclosure is the remains of a hut, approximately 5m in diameter and with its walls in places still standing to about roof level. The site is situated within 10m from the proposed line route and particular caution should be taken at the time of development to ensure the conservation of the site features.

- **Recommendations:** Site X84 is assigned a SAHRA *Low Significance* and a *Generally Protected C Field Rating*. The site should be conserved.



Plate 149: General view of Site X84

- ❖ Site X85 – Cemetery & Homestead – Contemporary Period / Late Iron Age – S31°56'38.9"; E27°09'17.4"

Site X85 is characterized by a large tree demarcating the original meeting place of the site. The Site X85 graves are situated amidst the site features, being stone outlined and stone cairn in character. A *daga* hut of approximately 4m in diameter further typifies the site where portions of the walls are still standing to about roof height. The remains of a stone built rectangular livestock enclosure, measuring approximately 8x8m in size still stands in places to roughly 1.2m in height with the calf encampment, directly adjoining the 'kraal' and measuring approximately 4x4m in size standing to a slightly lower level.

- **Recommendations:** Site X85 is assigned a SAHRA *High Significance* and a *Generally Protected A Field Rating*. The site should be conserved.



Plate 150: The livestock enclosure and meeting tree at Site X85



Plate 152: A grave at Site X85



Plate 151: Close-up of the livestock enclosure



Plate 153: Residential remains at Site X85

❖ Site X86 – Cemeteries & Homestead – Contemporary Period / Late Iron Age –
S31°56'28.4"; E27°08'24.8"

The Site X86 features is quite sparsely distributed across the approximate 180x110m site extent and includes 2 separate burial areas. The 1st burial area contains approximately 13 graves, all being traditional style graves and including a mixture of earth mound and stone outlined graves and graves demarcated with stone headstones only. The 2nd burial place is characterized by a single grave, being an earth mound and stone outlined grave. The remains of more than 12 huts are present in the area, in general measuring roughly 4-5m in diameter for circular shaped huts while later rectangular residential remains represent continued use of the site. In places walls are still standing to roof height, but many a residential feature is typified only by low rising wall demarcations or mound remains. A double lobed livestock enclosure with both camps measuring roughly 6x6m in size stands at its highest to about 1m.

- **Recommendations:** Site X86 is assigned a SAHRA *High Significance* and a *Generally Protected A Field Rating*. The site should be conserved.



Plate 154: View of the cemetery at Site X86



Plate 156: Livestock enclosure at Site X86



Plate 155: View of Site X86 with the cemetery area between the trees



Plate 157: Mud brick hut remains at Site X86

- ❖ Site X87 – Cemetery – Contemporary Period / Late Iron Age – S31°56'22.8"; E27°08'27.4"

The Site X87 cemetery contains about 10 graves primarily characterized by stone headstones. The site is formally conserved by the NHRA 1999.

- **Recommendations:** Site X87 is assigned a SAHRA *High Significance* and a *Generally Protected A Field Rating*. The site should be conserved.



Plate 158: View of Site X87

- ❖ Site X88 – Cemetery – Contemporary Period / Late Iron Age – S31°56′01.1″; E27°08′34.1″

The Site X88 cemetery easily contains more than 100 graves, with the cemetery fenced in part within communal land fencing. Here a number of modern style graves are mixed with traditional style graves, including primarily earth mound and stone outlined graves, some demarcated with crosses and others with stone headstones. Again stone cairn graves do not seem to be a preferred burial custom. The proposed water line will run immediately adjacent to the site and the developer is reminded that conservation measures should be in place prior to development impact and that particular caution be taken when working in the area.

- **Recommendations:** Site X88 is assigned a SAHRA *High Significance* and a *Generally Protected A Field Rating*. The site should be conserved.



Plate 159: General view of Site X88

- ❖ Site X89 – Cemetery – Contemporary Period / Late Iron Age – $S31^{\circ}55'56.9''$; $E27^{\circ}09'04.6''$

The Site X89 cemetery contains around 25 graves, with graves characterized by settled earth mounds and in large hardly discernible stone headstone. The site may well be of quite significant age and the majority of the graves is inferred to well pre-date 60 years. The site is formally protected by the NHRA 1999.

- **Recommendations:** Site X89 is assigned a SAHRA *High Significance* and a *Generally Protected A Field Rating*. The site should be conserved.



Plate 160: View of the Site X89 cemetery



Plate 161: A headstone demarcated and stone cairn grave from Site X89

- ❖ Site X90 – Grave – Contemporary Period / Late Iron Age – $S31^{\circ}56'00.6''$; $E27^{\circ}09'09.5''$

The Site X90 grave is demarcated by a stone headstone only. The site is formally protected by the NHRA 1999.

- **Recommendations:** Site X90 is ascribed a SAHRA *High Significance* and a *Generally Protected A Field Rating*. The site should be conserved.



Plate 162: The Site X90 grave

❖ Site X91 – Cemetery & Homestead – Contemporary Period / Late Iron Age – S31°56'05.0"; E27°09'21.0"

Site X91 is situated towards the back of a communal property fence and was only assessed through the fence. The site comprises of a cemetery situated approximately 70m south-east of the remainder of the site features. Here 6 graves demarcated with headstones were counted through the fence. Site features include 2 big livestock enclosures with rough size estimated of around 15x8m and with walls still standing to roughly 70cm in height. The remains of at least 2 huts were found in the accessible area of the site, thus south of the fence. Hut mounds vary between 5-7m in diameter in size.

- **Recommendations:** Site X91 is ascribed a SAHRA *High Significance* and a *Generally Protected A Field Rating*. The site should be conserved.



Plate 163: View of the livestock enclosure at Site X91



Plate 164: The Site X91 cemetery

3) RECOMMENDATIONS

With reference to archaeological and cultural heritage compliance, as per the requirements of the NHRA 1999, it is recommended that the proposed *Xonxa Bulk and Reticulation Water Supply Scheme (CHDM Cluster 9 – RS1, RS2 and RS6)* project, near Queenstown, Eastern Cape, proceeds as applied for provided the developer comply with the below listed heritage compliance requirements:

XONXA BULK AND RETICULATION WATER SUPPLY SCHEME (CHDM CLUSTER 2 – RS1, RS2 AND RS6), NEAR QUEESTOWN, EASTERN CAPE, SOUTH AFRICA			
Map Code	Site	Co-ordinates	Recommendations
<i>Xonxa, Egcihala and Rwantsana</i>			
Site X1	Grave – Cont. Period	S31°50'53.2"; E27°03'35.4"	Permanent conservation measures in place
Site X2	Homestead – Late Iron Age	S31°51'57.3"; E27°03'33.3"	Permanent sign-posting
Site X3	Cemetery – Cont. Period / Late Iron Age	S31°52'09.7"; E27°03'36.6"	Permanent sign-posting
Site X4	Hut – Late Iron Age	S31°52'15.0"; E27°03'38.4"	Permanent sign-posting
Site X5	Cemetery & Livestock Enclosure – Cont. Period / Late Iron Age	S31°52'14.7"; E27°03'40.2"	Permanent sign-posting
Site X6	Livestock Enclosure – Late Iron Age	S31°52'18.0"; E27°03'41.7"	Permanent sign-posting
Site X7	Hut & Livestock Enclosure – Late Iron Age	S31°52'19.1"; E27°03'47.0"	Permanent sign-posting
Site X8	Cemetery & Homestead – Cont. Period / Late Iron Age	S31°52'16.4"; E27°03'50.7"	Permanent sign-posting
Site X9	Hut & Livestock Enclosure – Late Iron Age	S31°52'17.5"; E27°03'53.7"	Permanent sign-posting
Site X10	Cemetery – Cont. Period / Late Iron Age	S31°50'42.7"; E27°05'04.0"	Permanent sign-posting Permanent conservation measures in place
Site X11	Cemetery & Homestead – Cont. Period / Late Iron Age	S31°50'37.4"; E27°05'30.9"	Permanent sign-posting
Site X12	Cemetery – Cont. Period / Late Iron Age	S31°49'59.2"; E27°05'47.3"	Permanent sign-posting
Site X13	Cemetery & Livestock Enclosure – Cont. Period / Late Iron Age	S31°50'26.7"; E27°04'10.1"	Permanent sign-posting
Site X14	Cemetery & Livestock Enclosure – Cont. Period / Late Iron Age	S31°50'29.8"; E27°04'01.8"	Permanent sign-posting
<i>Esikhwankqeni, Bhoka, Mnangweni, Qithi, Ngxabani, Mzantsi and Mntla</i>			
Site X15	Livestock Enclosure – Late Iron Age	S31°48'31.1"; E27°13'55.8"	Temporary conservation & Permanent sign-posting
Site X16	Cemetery & Homestead – Cont. Period / Late Iron Age	S31°50'32.9"; E27°14'24.9"	Temporary conservation & Permanent sign-posting
Site X17	Cemetery – Cont. Period / Late Iron Age	S31°50'47.6"; E27°14'06.4"	Temporary conservation & Permanent sign-posting
Site X18	Cemetery & Livestock Enclosures – Cont. Period / Late Iron Age	S31°50'50.2"; E27°14'02.9"	Temporary conservation & Permanent sign-posting
Site X19	Grave – Cont. Period / Late Iron Age	S31°50'53.8"; E27°13'41.0"	Formal conservation or Relocation to be consulted with the community
Site X20	Homestead – Cont. Period	S31°49'43.6"; E27°13'45.8"	Temporary conservation & Permanent sign-posting
Site X21	Grave – Cont. Period / Late Iron Age	S31°52'07.8"; E27°11'36.2"	Temporary conservation & Permanent sign-posting
<i>Nqiningana, Mphathulo, Tsolokazi, Makhikhi, Emaqwatini and Emazimeni</i>			
Site X22	Hut – Late Iron Age	S31°54'33.7"; E27°07'10.5"	Temporary conservation & Permanent sign-posting
Site X23	Cemetery – Cont. Period / Late Iron Age	S31°55'12.7"; E27°08'46.0"	Repair of existing permanent fence & Permanent sign-posting
Site X24	Grave – Cont. Period / Late Iron Age	S31°54'32.1"; E27°11'52.5"	Temporary conservation & Permanent sign-posting
Site X25	Cemetery – Cont. Period / Late Iron Age	S31°54'38.8"; E27°12'54.4"	Temporary conservation & Permanent sign-

			posting
Site X26	Cemetery & Livestock Enclosure – Cont. Period / Late Iron Age	S31°54'43.9"; E27°13'26.6"	Temporary conservation & Permanent sign-posting
Site X27	Cemetery – Cont. Period / Late Iron Age	S31°54'57.2"; E27°13'25.3"	Temporary conservation & Permanent sign-posting
Site X28	Cemetery – Cont. Period / Late Iron Age	S31°53'56.4"; E27°14'18.8"	Temporary conservation & Permanent sign-posting
Site X29	Cemetery – Cont. Period / Late Iron Age	S31°53'58.3"; E27°14'24.9"	Temporary conservation & Permanent sign-posting
Site X30	Livestock Enclosures – Late Iron Age	S31°53'58.2"; E27°14'21.2"	Temporary conservation & Permanent sign-posting
Matshaba, Nkolweni and Dlakavu			
Site X31	Cemetery- Cont. Period / Late Iron Age	S31°57'41.0"; E27°17'07.3"	Temporary conservation & Permanent sign-posting
Site X32	Cemetery – Cont. Period / Late Iron Age	S31°58'39.8"; E27°16'25.8"	Temporary conservation & Permanent sign-posting
Site X33	Cemetery – Cont. Period / Late Iron Age	S31°58'38.1"; E27°16'21.9"	Temporary conservation & Permanent sign – posting
Site X34	Cemetery & Livestock Enclosure – Cont. Period / Late Iron Age	S31°57'56.2"; E27°15'57.8"	Temporary conservation & Permanent sign – posting
Site X35	Graves / Cemeteries – Cont. Period /Late Iron Age	S31°57'51.7"; E27°16'05.3"	Temporary conservation & Permanent sign-posting
Site X36	Livestock Enclosures - Late Iron Age	S31°58'27.9"; E27°15'46.8"	Temporary conservation & Permanent sign-posting
Site X37	Cemetery – Cont. Period / Late Iron Age	S31°58'17.5"; E27°15'46.8"	Temporary conservation & Permanent sign-posting
Site X38	Grave – Cont. Period / Late Iron Age	S31°58'03.1"; E27°15'31.9"	Temporary conservation & Permanent sign-posting
Site X39	Homestead – Late Iron Age-	S31°57'57.2"; E27°15'18.1"	Temporary conservation & Permanent sign-posting
Site X40	Cemeteries – Cont. Period / Late Iron Age	S31°57'55.2"; E27°15'18.5"	Temporary conservation & Permanent sign-posting
Site X41	Cemetery – Cont. Period / Late Iron Age	S31°58'07.2"; E27°15'22.4"	Temporary conservation & Permanent sign-posting
Site X42	Livestock Enclosure – Late Iron Age	S31°58'11.0"; E27°15'15.9"	Temporary conservation & Permanent sign-posting
Site X43	Cemetery & Livestock Enclosure – Cont. Period / Late Iron Age	S31°58'07.5"; E27°15'12.7"	Temporary conservation & Permanent sign-posting
Site X44	Cemetery & Homestead – Cont. Period / Late Iron Age	S31°58'10.9"; E27°15'07.4"	Temporary conservation & Permanent sign-posting
Site X45	Livestock Enclosure – Late Iron Age	S31°58'07.4"; E27°14'48.7"	Temporary conservation & Permanent sign-posting
Site X46	Cemetery – Cont. Period / Late Iron Age	S31°58'25.0"; E27°14'17.4"	Temporary conservation & Permanent sign-posting
Site X47	Cemetery Cont. Period / Late Iron Age	S31°58'13.1"; E27°14'04.8"	Permanent sign- posting Permanent conservation measures in place
Site X48	Cemetery – Cont. Period / Late Iron Age	S31°58'16.5"; E27°14'05.1"	Temporary conservation & Permanent sign-posting
Site X49	Cemeteries & Homestead – Cont. Period / Late Iron Age	S31°57'53.3"; E27°14'20.0"	Temporary conservation & Permanent sign-posting Realignment to the west of the site
Site X50	Cemetery & Livestock Enclosure – Cont. Period / Late Iron Age	S31°58'17.3"; E27°13'00.1"	Temporary conservation & Permanent sign-posting
Site X51	Cemeteries & Homestead – Cont. Period / Late Iron Age	S31°58'24.1"; E27°12'55.7"	Temporary conservation & Permanent sign-posting
Site X52	Livestock Enclosure - Late Iron Age	S31°58'29.0"; E27°12'53.7"	Temporary conservation & Permanent sign-posting
Site X53	Homestead – Late Iron Age	S31°58'29.6"; E27°12'51.1"	Temporary conservation & Permanent sign-posting
Site X54	Homestead – Late Iron Age	S31°58'31.2"; E27°12'48.3"	Temporary conservation & Permanent sign-posting
Site X55	Homestead – Late Iron Age	S31°58'30.8"; E27°12'44.1"	Temporary conservation & Permanent sign-posting

Site X56	Livestock Enclosure – Late Iron Age	S31°58'25.1"; E27°12'46.7"	Temporary conservation & Permanent sign-posting
<i>Siqabeni, Lalini, Lokishini, Manzabethu and Qaqeni</i>			
Site X57	Homestead – Late Iron Age	S31°59'06.2"; E27°11'16.4"	Temporary conservation & Permanent sign-posting
Site X58	Cemetery – Cont. Period / Late Iron Age	S31°59'01.3"; E27°11'12.4"	Temporary conservation & Permanent sign-posting
Site X59	Cemetery – Cont. Period / Late Iron Age	S31°59'11.5"; E27°11'06.3"	Temporary conservation & Permanent sign-posting
Site X60	Cemetery – Cont. Period / Late Iron Age	S31°59'07.9"; E27°11'07.7"	Temporary conservation & Permanent sign-posting
Site X61	Cemetery – Cont. Period / Late Iron Age	S31°58'30.7"; E27°10'44.3"	Temporary conservation & Permanent sign-posting
Site X62	Cemetery – Cont. Period / Late Iron Age	S31°57'34.0"; E27°09'16.8"	Temporary conservation & Permanent sign-posting
Site X63	Hut – Late Iron Age	S31°57'36.8"; E27°09'13.4"	Temporary conservation & Permanent sign-posting
Site X64	Homestead – Late Iron Age	S31°57'40.2"; E27°09'14.7"	Temporary conservation & Permanent sign-posting Realignment to either east or west of site
Site X65	Livestock Enclosure – Late Iron Age	S31°57'47.1"; E27°09'24.6"	Temporary conservation & Permanent sign-posting
Site X66	Homestead - Late Iron Age	S31°57'49.8"; E27°09'25.8"	Temporary conservation & Permanent sign-posting
Site X67	Cemetery – Cont. Period / Late Iron Age	S31°57'40.6"; E27°08'12.7"	Temporary conservation & Permanent sign-posting
Site X68	Cemetery – Cont. Period / Late Iron Age	S31°57'38.6"; E27°08'12.1"	Temporary conservation & Permanent sign-posting
Site X69	Cemetery – Cont. Period / Late Iron Age	S31°57'27.5"; E27°07'56.1"	Temporary conservation & Permanent sign-posting
Site X70	Cemetery – Cont. Period / Late Iron Age	S31°57'37.4"; E27°07'47.2"	Temporary conservation & Permanent sign-posting
Site X71	Cemetery – Cont. Period / Late Iron Age	S31°57'34.1"; E27°07'50.1"	Temporary conservation & Permanent sign-posting
Site X72	Grave – Cont. Period / Late Iron Age	S31°57'31.1"; E27°07'49.2"	Permanent sign-posting Permanent conservation measures in place
Site X73	Cemetery – Cont. Period / Late Iron Age	S31°57'29.8"; E27°07'42.7"	Temporary conservation & Permanent sign-posting
Site X74	Cemetery – Cont. Period / Late Iron Age	S31°57'17.2"; E27°07'45.3"	Temporary conservation & Permanent sign-posting
Site X75	Cemetery – Cont. Period / Late Iron Age	S31°57'21.3"; E27°07'52.9"	Temporary conservation & Permanent sign-posting
Site X76	Grave – Cont. Period / Late Iron Age	S31°57'17.8"; E27°07'51.0"	Temporary conservation & Permanent sign-posting
Site X77	Cemetery & Livestock Enclosure – Cont. Period / Late Iron Age	S31°57'17.5"; E27°07'55.7"	Temporary conservation & Permanent sign-posting
Site X78	Cemetery – Cont. Period / Late Iron Age	S31°57'15.7"; E27°07'56.6"	Temporary conservation & Permanent sign-posting
Site X79	Grave – Cont. Period / Late Iron Age	S31°57'27.1"; E27°07'59.8"	Temporary conservation & Permanent sign-posting
Site X80	Cemetery – Cont. Period / Late Iron Age	S31°57'37.8"; E27°07'59.1"	Temporary conservation & Permanent sign-posting
Site X81	Livestock Enclosures – Late Iron Age	S31°57'17.6"; E27°08'57.6"	Temporary conservation & Permanent sign-posting
Site X82	Cemetery – Cont. Period / Late Iron Age	S31°56'54.3"; E27°09'01.1"	Permanent sign-posting Permanent conservation measures in place
Site X83	Cemetery & Livestock Enclosures – Cont. Period / Late Iron Age	S31°56'50.8"; E27°09'06.4"	Temporary conservation & Permanent sign-posting
Site X84	Homestead – Late Iron Age	S31°56'45.9"; E27°09'04.3"	Temporary conservation & Permanent sign-posting
Site X85	Cemetery & Homestead – Cont. Period / Late Iron Age	S31°56'38.9"; E27°09'17.4"	Temporary conservation & Permanent sign-posting
Site X86	Cemeteries & Homestead – Cont. Period / Late Iron Age	S31°56'28.4"; E27°08'24.8"	Temporary conservation & Permanent sign-posting

Site X87	Cemetery – Cont. Period / Late Iron Age	S31°56'228"; E27°08'27.4"	Temporary conservation & Permanent sign-posting
Site X88	Cemetery – Cont. Period / Late Iron Age	S31°56'01.1"; E27°08'34.1"	Permanent sign- posting Permanent conservation measures in place
Site X89	Cemetery – Cont. Period / Late Iron Age	S31°55'56.9"; E27°09'04.6"	Temporary conservation & Permanent sign-posting
Site X90	Grave – Cont. Period / Late Iron Age	S31°56'00.6"; E27°09'09.5"	Temporary conservation & Permanent sign-posting
Site X91	Cemetery & Homestead – Cont. Period / Late Iron Age	S31°56'05.0"; E27°09'21.0"	Permanent sign- posting Permanent conservation measures in place
Community request to extent the line route to disabled household of Siyalelo Pato (S31°57'28.1"; E27°07'52.3")			
Intentional obstruction of specialist archaeological and heritage assessment by Insika Yetu officer Mlamli Limani and Lokishini village community leader(s)			

Table 2: Summarized results of the Phase 1 AIA

Temporary conservation measures: Temporary conservation measures can comprise of a construction netting or danger tape fence to clearly visually indicate the site as a no-entry area. Temporary conservation measures should include temporary sign indicating the areas as heritage conservation areas to avoid accidental impact on the sites at the time of development. Temporary conservation measures should be in place prior to development impact in the particular area.

Permanent sign-posting: It is recommended that archaeological and cultural heritage sites be permanently sign-posted rather than permanently fenced for permanent conservation purposes. (Any permanent conservation fences should be pre-negotiated with the community.) Permanent sign posts can include relevant information as follows:

- ① Site X1
- ② CHDM-Cluster 2-RS1, RS2 and RS6 Water Supply Project
- ③ This site is protected by the National Heritage Resources Act, No 25 of 1999

Where –

- ① Indicates the site number as in the report (different for each site)
- ② Indicates the project name (same for all the identified sites)
- ③ Indicates the conservation status (same for all the identified sites)

Realignment: Where realignment is recommended (Sites X49 and X64) the developer is reminded that should realignment around the site not be possible development should be preceded by a Phase 2 archaeological mitigation project to be done under an EC PHRA permit.

NOTES:

- Should any archaeological or cultural heritage resources, including human remains / graves, 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 the EC PHRA and an ASAPA accredited CRM archaeologist. Human remains confirmed younger than 60 years are to be reported directly to the nearest police station.

- Should any registered Interested & Affected Party (I&AP) wish to be consulted in terms of Section 38(3)(e) of the NHRA 1999 (Socio-cultural consultation / SAHRA SIA) it is recommended that the developer / EAP ensures that the consultation be prioritized within the timeframe of the Environmental Impact Assessment (EIA).

4) REFERENCES

1. Fieldwork. 2013. Chris Hani District Municipality. Proposed development of CHDM Cluster 2 RS1, RS2 and RS6 Water Supply Scheme. Background Information Document.
2. South African Government. (No. 107 of) 1998. *National Environmental Management Act*.
3. South African Government. (No. 25 of) 1999. *National Heritage Resources Act*.
4. South African Government. (No. 28 of) 2002. *Minerals and Petroleum Resources Development Act*.
5. South African Heritage Resources Agency. 2007. *Minimum Standards for the Archaeological and Heritage Components of Impact Assessments*. (Unpublished guidelines.)

INTRODUCTION TO THE ARCHAEOLOGY OF SOUTH AFRICA

Archaeologically the southern African cultural environment is roughly divided into the Stone Age, the Iron Age and the Colonial Period, including its subsequent Industrial component. This cultural division has a rough temporal association beginning with the Stone Age, followed by the Iron Age and the Colonial Period. The division is based on the identified primary technology used. The hunter-gatherer lifestyle of the Stone Age is identified in the archaeological record through stone being the primary raw material used to produce tools. Iron Age people, known for their skill to work iron and other metal, also practiced agriculture and animal husbandry. Kingdoms and civilizations associated with the Iron Age are indicative of a complex social hierarchy. The Colonial Period is marked by the advent of writing, in southern Africa primarily associated with the first European travelers (Mitchell 2002).

During the latter part of the Later Stone Age (LSA) hunter-gatherers shared their cultural landscape with both pastoralists and Iron Age people, while the advent of the Colonial Period in South Africa is marked by a complex cultural mosaic of people; including LSA hunter-gatherers, pastoralists, Later Iron Age farming communities and Colonial occupation.

1) EARLY HOMININ EVOLUTION

DNA studies indicate that humans and chimpanzees shared a common ancestor between 6-8Mya (Sibley & Ahlquist 1984). By 4Mya, based on fossil evidence from Ethiopia and Kenya, hominins (humans and their immediate fossil ancestors and relatives) had already evolved. The earliest fossils are ascribed to *Ardipithecus ramidus* (4.4Mya), succeeded by *Australopithecus anamensis* (4.2-3.9Mya). These fossils are inferred to lie at the base from which all other hominins evolved (Leakey *et al.* 1995; White *et al.* 1994).

In South Africa the later hominins are classed into 3 groups or distinct genera; *Australopithecus* (gracile australopithecines), *Paranthropus* (robust australopithecines) and *Homo*. South Africa has 3 major hominin sites: Taung in the North-West Province, where Raymond Dart identified the first *Australopithecus* fossil in 1924 (Dart 1925); The Cradle of Humankind (Sterkfontein Valley) sites in Gauteng, the most prolific hominin locality in the world for the period dating 3.5-1.5Mya which have yielded numerous *Australopithecus*, *Paranthropus* and limited *Homo* fossils (Keyser *et al.* 2000; Tobias 2000); and Makapansgat in the Limpopo Province, where several more specimens believed to be older than most of the Cradle specimens were discovered (Klein 1999).

A. africanus, represented at all 3 sites are believed to have been present on the South African landscape from about 3Mya. From approximately 2.8Mya they shared, at least in the Cradle area, the landscape with *P. robustus* and from roughly 2.3Mya with early forms of *Homo* (Clarke 1999). Global climatic cooling around 2.5Mya may have stimulated a burst of species turnover amongst hominins (Vrba 1992); the approximate contemporary appearance of the first stone tools suggests that this was a critical stage in human evolution. But exactly which early hominin population is to be accredited as the ancestor of *Homo* remains elusive.

H. ergaster is present in the African palaeo-anthropological record from around 1.8Mya and shortly thereafter the first exodus from Africa is evidenced by *H. erectus* specimens from China, Indonesia and even Europe (Klein 1999).

2) THE STONE AGE

2.1) The Earlier Stone Age

In South Africa the only Earlier Stone Age (ESA) Oldowan lithic assemblage comes from Sterkfontein Cave. The predominant quartz assemblage is technologically very simple, highly informal and inferred to comprise exclusively of multi-purpose tools (Kuman *et al.* 1997). The latter part of the ESA is characterized by the Acheulean Industrial Complex, present in the archaeological record from at least 1.5Mya. Both *H. ergaster* and *P. robustus* may be accredited with the production of these tools. The association between stone tools and increased access to meat and marrow supporting the greater dietary breadth of *Homo* may have been vital to *Homo's* evolutionary success; and the eventual extinction of the robust australopithecines (Klein 1999).

Probably the longest lasting artefact tradition ever created by hominins, the Acheulean is found from Cape Town to north-western Europe and India, occurring widely in South Africa. Despite the many sites it is still considered a 'prehistoric dark age' by many archaeologists, encompassing one of the most critical periods in human evolution; the transition from *H. ergaster* to archaic forms of *H. Sapiens* (Klein 1999).

The Acheulean industry is characterized by handaxes and cleavers as *foliilles directeurs* (signatory artefact types), in association with cores and flakes. Handaxes and cleavers were multi-purpose tools used to work both meat and plant matter (Binneman & Beaumont 1992). Later Acheulean flaking techniques involved a degree of core preparation that allowed a single large flake of predetermined shape and size to be produced. This

Victoria West technique indicates an origin within the Acheulean for the *Levallois technique* of the Middle Stone Age (Noble & Davidson 1966). The lithic artefact component was supplemented by wood and other organic material (Deacon 1970).

2.2) The Middle Stone Age

The Middle Stone Age (MSA), dating from approximately 500kya to 40-27/23kya is interpreted as an intermediate technology between the Acheulean and the Later Stone Age (LSA) (Goodwin & van Riet Lowe 1929). The MSA is typologically characterized by the absence of handaxes and cleavers, the use of prepared core techniques and the production of blades, triangular and convergent flakes, with convergent dorsal scars and faceted striking platforms, often produced by means of the *Levallois technique* (Volman 1984). The widespread occurrence of MSA technology across Africa and its spread into much of Eurasia in Oxygen Isotope Stage (OIS) 7 is viewed as part of a process of population dispersal associated with both the ancestors of the later Neanderthals in Europe and anatomically modern humans in Africa (Foley & Lahr 1997).

After the riches offered by the Cradle sites and Makapansgat, southern Africa's Middle Pleistocene fossil record is comparatively poor. Early Middle Pleistocene fossil evidence suggests an archaic appearance and fossils are often assigned to *H. heidelbergensis* and *H. sapiens rhodesiensis* (Rightmire 1976). Modern looking remains, primarily from Border Cave (KwaZulu-Natal) and Klasies River Mouth (Eastern Cape) raised the possibility that anatomically modern humans had, by 120kya, originated south of the Sahara before spreading to other parts of the world (Brauer 1982; Stringer 1985). Subsequent studies of modern DNA indicated that African populations are genetically more diverse and probably older than those elsewhere (Cann *et al.* 1994). Combined, the fossil and genetic evidence underpins the so-called *Out of Africa 2* model (arguing that gene flow and natural selection led regional hominin populations along distinct evolutionary trajectories after *Homo's* expansion from Africa in the Lower Pleistocene *Out of Africa 1* model) of modern human origins and the continuing debate as to whether it should be preferred to its *Multiregional* alternative (arguing that modern humans evolved more or less simultaneously right across the Old World) (Mellars & Stringer 1989; Aitken *et al.* 1993; Nitecki & Nitecki 1994).

Persuasive evidence of ritual activity or bodily decoration is evidenced by the widespread presence of red ochre at particularly MSA 2 sites (after Volman's 1984 MSA 1-4 model; Hensilwood & Sealy 1997), while evidence from Lion Cave, Swaziland, indicates that specularite may have been mined as early as 100kya (Beaumont 1973). Evidence for symbolic behavioral activity is largely absent; no evidence for rock art or formal burial practices exists.

2.3) The Later Stone Age

Artefacts characteristic of the Later Stone Age (LSA) appear in the archaeological record from 40/27-23kya and incorporates microlithic as well as macrolithic assemblages. Artefacts were produced by modern *H. sapien* or *H. sapien sapien*, who subsisted on a hunter-gatherer way of life (Deacon 1984; Mitchell 2002).

According to Deacon (1984) the LSA can temporally be divided into 4 broad units directly associated with climatic, technological and subsistence changes:

1. Late Pleistocene microlithic assemblages (40-12kya);
2. Terminal Pleistocene / early Holocene non-microlithic assemblages (12-8kya);
3. Holocene microlithic assemblages (8kya to the Historic Period); and
4. Holocene assemblages with pottery (2kya to the Historic Period) closely associated with the influx of pastoralist communities into South Africa (Mitchell 2002).

Elements of material culture characteristic of the LSA reflect modern behavior. Deacon (1984) summarizes these as:

1. Symbolic and representational art (paintings and engravings);
2. Items of personal adornment such as decorated ostrich eggshell, decorated bone tools and beads, pendants and amulets of ostrich eggshell, marine and freshwater shells;
3. Specialized hunting and fishing equipment in the form of bows and arrows, fish hooks and sinkers;
4. A greater variety of specialized tools including bone needles and awls and bone skin-working tools;
5. Specialized food gathering tools and containers such as bored stone digging stick weights, carrying bags of leather and netting, ostrich eggshell water containers, tortoiseshell bowls and scoops and later pottery and stone bowls;
6. Formal burial of the dead in graves (sometimes covered with painted stones or grindstones and accompanied by grave goods);
7. The miniaturization of selected stone tools linked to the practice of hafting for composite tools production; and
8. A characteristic range of specialized tools designed for making some of the items listed above.

➤ Rock Art

Rock Art is one of the most visible and informative components of South Africa's archaeological record. Research into LSA ethnography (as KhoiSan history) has revolutionized our understanding of both painted and engraved (petroglyph) images, resulting in a paradigm shift in Stone Age archaeology (Deacon & Dowson 2001). Paintings are concentrated in the Drakensberg / Maluti mountains, the eastern Free State, the Cape Fold Mountains, the Waterberg Plateau and the Soutpansberg mountains. Engravings on the other hand are found throughout the Karoo, the western Free State and North-West Province (Mitchell 2002). Both forms of LSA art drew upon a common stock of motifs, derived from widely shared beliefs and include a restricted range of naturalistically depicted animals, geometric imagery, human body postures and non-realistic combinations of human and animal figures (anthropomorphic figurines). LSA Rock Art is closely associated with spiritual or magical significance (Lewis-Williams & Dowson 1999).

Aside from LSA or KhoiSan Rock Art, thus art produced by both hunter-gatherer and pastoralist and agro-pastoralist groups, Rock Art produced by Iron Age populations are known to be present towards the north of the country.

➤ Shell Middens ('Strandloper' Cultures)

South Africa's nearly 3,000km coastline is dotted by thousands of shell middens, situated between the high water mark and approximately 5km inland, bearing witness to long-term exploitation of shellfish mainly over the past 12,000 years. These LSA shell middens are easily distinguishable from natural accumulations of shells and deposits can include bones of animals eaten such as shellfish, turtles and seabirds, crustaceans like crabs and crayfish and marine mammal remains of seals, dolphins and occasionally whales. Artefacts and hearth and cooking remains are often found in shell midden deposits. Evidence exist that fish were speared, collected by hand, reed baskets and by means of stone fish traps in tidal pools (Mitchell 2002).

Shell midden remains were in the past erroneously assigned to 'Strandloper cultures'. Deacon & Deacon (1999) explain that '*no biological or cultural group had exclusive rights to coastal resources.*' Some LSA groups visited the coast periodically while others stayed year round and it is misleading to call them all by the same name. Two primary sources of archaeological enquiry serves to shed more light on the lifestyles of people who accumulated shell middens, one being the analysis of food remains in the middens itself and the other being the analysis of LSA human skeletal remains of people buried either in shell middens or within reasonable proximity to the coast.

Shell middens vary in character ranging from large sites tens of meters in extent and with considerable depositional depth to fairly small ephemeral collections, easily exposed and destroyed by shifting dune action. Shell middens are also found inland, along rivers where fresh water mussels occur. These middens are often fairly small and less common; in the Eastern Cape often dated to within the past 3,000 years (Deacon & Deacon 1999).

In addition shell middens are not exclusively assigned to LSA cultures; shellfish were exploited during the Last Interglacial, indicating that the practice was most probably continuous for the past 120,000 years (MSA shell middens). Along the coast of KwaZulu-Natal evidence exist for the exploitation of marine food resources by Iron Age communities. These shell middens are easily distinguished from Stone Age middens by particularly rich, often decorated ceramic artefact content. Colonial Period shell middens are quite rare and extremely ephemeral in character; primarily the result of European shipwreck survivors and reported on along the coast of KwaZulu-Natal and the Transkei, Eastern Cape.

3) THE IRON AGE

For close to 2 millennia people combining cereal agriculture with stock keeping have occupied most of southern Africa's summer rainfall zone. The rapid spread of farming, distinctive ceramics and metallurgy is understood as the expansion of a Bantu-speaking population, in archaeological terms referred to as the Iron Age.

3.1) The Early Iron Age

Ceramic typology is central to current discussions of the expansion of iron using farming communities. The most widely used approach is that of Huffman (1980), who employs a multidimensional analysis (vessel profile, decoration layout and motif) to reconstruct different ceramic types. Huffman (1998) argues that ceramics can be used to trace the movements of people, though not necessarily of specific social or political groupings. Huffman's Urewe Tradition coincides largely with Phillipson's (1977) Eastern Stream. A combined Urewe Tradition / Eastern Stream model for the Early Iron Age can be summarized as:

1. The Kwale branch (extending along the coast from Kenya to KwaZulu-Natal);
2. The Nkope branch (located inland and reaching from southern Tanzania through Malawi and eastern Zambia into Zimbabwe); and
3. The Kalundu branch (stretching from Angola through western Zambia, Botswana and Zimbabwe into South Africa).

In southern Africa, recent work distinguishes two phases of the Kwale branch: The earlier Silver Leaves facies (250-430AD) occurring as far south as the Northern Province. The later expression or Mzonjani facies (420-580AD) occurs in the Northern Province as well as along the KwaZulu-Natal coastal belt (Huffman 1998). Since the Silver Leaves facies is only slightly younger than the Kwale type site in Kenya, very rapid movement along the coast, perhaps partly by boat, is inferred (Klapwijk 1974). Subsequently (550-650AD) people making Mzonjani derived ceramics settled more widely in the interior of South Africa.

Assemblages attributable to the Nkope branch appear south of the Zambezi but north of South Africa from the 5th Century. Ziwa represents an early facies, with Gokomere deriving jointly from Ziwa and Bambata. A subsequent phase is represented by the Zhizo facies of the Shashe-Limpopo basin, and by Taukome (Huffman 1994). Related sites occur in the Kruger National Park (Meyer 1988). Zhizo (7th – 10th Century) is ancestral to the Toutswe tradition which persisted in eastern Botswana into the 13th Century.

Kalundu origins need further investigation; its subsequent development is however better understood. A post Bambata phase is represented by the 5th – 7th Century sites of Happy Rest, Klein Africa and Maunatlana in the Northern Province and Mpumalanga (Prinsloo 1974, 1989). Later phases are present at the Lydenburg Heads site (Whitelaw & Moon 1996) and by the succession of Mzuluzi, Ndondonwane and Ntshekane in KwaZulu-Natal (7th – 10th Centuries) (Prins & Grainger 1993). Later Kalundu facies include Klingbeil and Eiland in the northern part of the country (Evers 1980) with Kgopolwe being a lowveld variant in Mpumalanga (10th – 12th Century). Broadhurst and other sites indicate a still later survival in Botswana (Campbell 1991).

Despite the importance accorded to iron agricultural implements in expanding the spread of farming and frequent finds of production debris, metal objects are rare. Metal techniques were simple, with no particular sign of casting, wire drawing or hot working. Jewelry (bangles, beads, pendants etc.) constitute by far the largest number of finds but arrows, adzes, chisels, points and spatulae are known (Miller 1996).

Early Iron Age people were limited to the Miombo and Savannah biomes; excluded from much of the continent's western half by aridity and confined in the south during the 1st millennium to bushveld areas of the old Transvaal. Declining summer rainfall restricted occupation to a diminishing belt close to the East Coast and north of S33° (Maggs 1994); sites such as Canasta Place (800AD), Eastern Cape, mark the southern-most limit of Early Iron Age settlement (Nogwaza 1994).

➤ The Central Cattle Pattern

The Central Cattle Pattern (CCP) was the main cognitive pattern since the Early Iron Age (Huffman 1986). The system can be summarized as opposition between male pastoralism and female agriculture; ancestors and descendants; rulers and subjects; and men and women. Cattle served as the primary means of transaction; they represented symbols exchanged for the fertility of wives, legitimacy of children and appeasement of ancestors. Cattle were also used as tribute to rulers confirming sub-ordination and redistribution as loan cattle by the ruler to gain political support. Cattle represented healing and fertilizing qualities (Huffman 1998; Kuper 1980).

This cognitive and conceptual structure underlies all cultural behavior, including the placement of features in a settlement. The oppositions of male and female, pastoralism and agriculture, ancestors and descendants, rulers and subjects, cool and hot are represented in spatial oppositions, either concentric or diametric (Huffman 1986).

A typical CCP village comprise of a central cattle enclosure (byre) where men are buried. The *Kgotla* (men's meeting place / court) is situated adjacent to the cattle enclosure. Surrounding the enclosure is an arc of houses, occupied according to seniority. Around the outer perimeter of the houses is an arc of granaries where women keep their pots and grinding stones (Huffman 1986). The model varies per ethnic group which helps to distinguish ethnicity throughout the Iron Age, but more studies are required to recognize the patterns.

3.2) The Middle Iron Age

The hiatus of South African Middle Iron Age activity was centered in the Shashe-Limpopo Valley and characterized by the 5-tier hierarchical Mapungubwe State spanning some 30,000km². By the 1st millennium ivory and skins were already exported overseas, with sites like Sofala and Chibuene, Mosambique, interfacing between interior and transoceanic traders. Exotic glass beads, cloth and Middle Eastern ceramics present at southern African sites mark the beginning of the regions incorporation into the expanding economic system that, partly tied together with maritime trading links across the Indian Ocean, increasingly united Africa, Asia and Europe long before Da Gama or Columbus (Eloff & Meyer 1981; Meyer 1998).

Occupation was initially focused at Bambandanyalo and K2. The Bambandanyalo main midden (1030-1220AD) stands out above the surrounding area, reaching more than 6m in places and covering more than 8ha the site may have housed as many as 2,000 people (Meyer 1998). The CCP was not strictly followed; whether this is ideologically significant or merely a reflection of local topography remains unclear. The midden, the size of which may reflect the status of the settlement's ruler, engulfed the byre around 1060-1080AD, necessitating relocation of

the cattle previously kept there. The re-organization of space and worldview implied suggests profound social changes even before the sites' abandonment in the early 13th century, when the focus of occupation moved to Mapungubwe Hill, 1 km away (Huffman 1998).

Excavations at Mapungubwe Hill, though only occupied for a few decades (1220-1290AD), yielded a deep succession of gravel floors and house debris (Eloff & Meyer 1981). Huffman (1998) suggests that the suddenness with which Mapungubwe was occupied may imply a deliberate decision to give spatial expression to a new social order in which leaders physically removed themselves from ordinary people by moving onto more inaccessible, higher elevations behind the stone walls demarcating elite residential areas. Social and settlement changes speak of considerable centralization of power and perhaps the elaboration of new ways of linking leaders and subjects.

At Bambandanyalo and Mapungubwe elite burial grave goods include copper, bone, ivory and golden ornaments and beads. Social significance of cattle is reinforced by their importance among the many human and animal ceramic figurines and at least 6 'beast burials' (Meyer 1998).

Today the drought prone Shashe-Limpopo Valley receives less than 350mm of rainfall per annum, making cereal cultivation virtually impossible. The shift to drier conditions in the late 1200's across the Shashe-Limpopo basin and the eastern Kalahari may have been pivotal in the break-up of the Mapungubwe polity, the collapse of Botswana's Toutswe tradition and the emergence of Great Zimbabwe (1220-1550AD), southern Africa's best known and largest (720ha) archaeological site (Meyer 1998).

South of the Limpopo and north of the Soutpansberg, Mapungubwe derived communities survived into the 14th Century, contemporary with the establishment of Sotho-speaking makers of Maloko pottery.

3.3) The Later Iron Age

South African farming communities of the 2nd millennium experienced increased specialization of production and exchange, the development of more nucleated settlement patterns and growing political centralization, albeit not to the same extent as those participating in the Zimbabwe tradition. However, together they form the background to the cataclysmic events of the late 18th / early 19th Century *Mfecane* (Mitchell 2002).

Archaeological evidence of settlement pattern, social organization and ritual practice often differ from those recorded ethnographically. The Moloko ceramic tradition seems to be ancestral to modern Sotho-Tswana speakers (Evers 1980) and from about 1,100AD a second tradition, the Blackburn tradition, appears along South Africa's eastern coastline. Blackburn produced mostly undecorated pottery (Davies 1971), while Mpambanyoni assemblages, reaching as far south as Transkei, includes examples of rim notching, incised lines and burnished ochre slip (Robey 1980). At present, no contemporary farming sites are known further inland in KwaZulu-Natal or the Eastern Cape.

Huffman (1989) argues that similarities between Blackburn and early Maloko wares imply a related origin, presumably in the Chifumbaze of Zambia or the Ivuna of Tanzania, which contains a range of ceramic attributes important in the Blackburn as well as beehive grass huts similar to those made by the Nguni. This is one of the few suggestions of contact between Sotho-Tswana and Nguni speakers on the one hand and farming communities who, if Huffman is correct, were already long established south of the Limpopo. Both ethnographic and archaeological data demonstrate that Sotho-Tswana and Nguni are patrilineal and organize their settlements according to the CCP (Kuper 1980).

From 1,300AD there is increasing evidence for the beginning of agro-pastoralist expansion considerably beyond the area of previous occupation. It is also to this time that the genealogies of several contemporary Bantu speaking groups can be traced (Wilson & Thompson 1969). Associated with this expansion was the regular employment of stone, rather than wood, as building material, an adaptation that has greatly facilitated the discovery and identification of settlements. Maggs (1976) describes 4 basic settlement types all characterized by the use of semi weathered dolomite to produce hard binding *daga* for house floors and a wall building tradition employing larger more regular stones for the inner and outer faces and smaller rubble for the infill. As with the more dispersed homesteads of KwaZulu-Natal and the Eastern Cape, sites tend to be in locally elevated situations, reflecting a deep seated Sotho and Nguni preference for benign higher places rather than supernaturally dangerous riverside localities; another important contrast to both 1st millennium (Maggs 1976) and later Zulu Kingdom settlement patterns (Hall & Maggs 1979).

The lack of evidence for iron production in the interior and eastern part of South Africa emphasize exchange relationships between various groups and associated more centralized polities. By the 19th Century iron production in KwaZulu-Natal was concentrated in particular clans and lineages and associated with a range of social and religious taboos (Maggs 1992). South of Durban comparatively few smelting sites are known (Whitelaw 1991), a trend even more apparent in Transkei (Feely 1987). However, metal remained the most important and archaeologically evident item traded between later farming communities. (Other recorded trade items include glass and ostrich eggshell beads; Indian Ocean seashells; siltstone pipes; *dagga*, and later on tobacco; pigments including ochre, graphite and specularite; hides and salt.) Rising polity settlements are particularly evident in the north of the country and dated to the 17th Century, including Molokwane, capital of the Bakwena chiefdom (Pistorius 1994) and Kaditshwene, capital of a major section of the Hurutshe, whose population of 20,000 in 1820 almost

equals contemporary Cape Town in size (Boeyens 2000). The agglomeration of Tswana settlements in the north of the country was fuelled by both population growth and conflict over access to elephant herds for ivory and long distance trade with the East Coast. During this period ceramic decoration became blander and more standardized than the earlier elaborate decoration that included red ochre and graphite coloring.

The *Mfecane* refers to the wars and population movements of the early 19th Century which culminated in the establishment of the Zulu Kingdom and came to affect much of the interior, even beyond the Zambezi: The late 18th Century was marked by increasing demands for ivory (and slaves) on the part of European traders at Delagoa Bay; as many as 50 tones of ivory were exported annually from 1750-1790. As elephant populations declined, competition increased both for them and for the post 1790 supply of food to European and American whalers calling at Delagoa Bay (Smith 1970). Cattle raiding, conflict over land and changes in climatic and subsistence strategies characterized much of the cultural landscape of the time.

Competition for access to overseas trade encouraged some leaders to replace locally organized circumcision schools and age-sets with more permanently maintained military regiments. These were now used to gain access through warfare to land, cattle and stored food. By 1810 three groups, the Mthethwa, Ndwandwe and Ngwane dominated northern KwaZulu-Natal (Wright 1995). The Mthethwa paramountcy was undermined by the killing of its leader Dingiswayo in *circa* 1818, which led to a brief period of Ndwandwe dominance. In consequence one of Dingiswayo's former tributaries, Shaka, established often forceful alliances with chiefdoms further south. Shaka's Zulu dominated coalition resisted the Ndwandwe who in return fled to Mozambique. As the Zulu polity expanded it consolidated its control over large areas, incorporating many communities into it. Others sought refuge from political instability by moving south of the Thukela River, precipitating a further *domino effect* as far as the Cape Colony's eastern border (Wright 1995).

4) THE COLONIAL PERIOD

In the 15th Century Admiral Zheng He and his subordinates impressed the power of the Ming Dynasty rulers in a series of voyages as far afield as Java, Sri Lanka, southern Arabia and along the East African coast, collecting exotic animals *en route*. But nothing more came of his expeditions and China never pursued opportunities for trade or colonization (Mote 1991).

Portuguese maritime expansion began around the time of Zheng He's voyages; motivated by a desire to establish a sea route to the riches of the Far East. By 1485 Diogo Cao had reached Cape Cross, 3 years later Bartolomeu Dias rounded the Cape of Good Hope and less than a decade later Vasco da Gama called at several places along South Africa's coast, trading with Khoekhoen (Khoi) at Mossel Bay before reaching Mozambique and crossing the ocean to India. His voyage initiated subsequent Portuguese bases from China to Iraq. In Africa interest was focused on seizing important coastal trading towns such as Sofala and gaining access to the gold of Zimbabwe. Following the 1510 Portuguese-Khoekhoen battle at Table Bay, in which the viceroy of India was killed, Portuguese ships ceased to call along the South African coast (Elphick 1985).

A number of shipwrecks, primarily along the eastern coast attest to Portuguese activity including the Sao Joao, wrecked in 1552 near Port Edward and the Sao Bento, destroyed in 1554 off the Transkei coast. Survivors' accounts provided the 1st detailed information on Africa's inhabitants (Auret & Maggs 1982).

By the late 1500's Portuguese supremacy of the Indian Ocean was threatened. From 1591 numerous Dutch and English ships called at Table Bay and in 1652 the Dutch East Indian Company (VOC) established a permanent base, with the intent to provide fresh food and water to VOC ships. In an attempt to improve the food supply a few settlers (free burghers) were allowed to establish farms. The establishment of an intensive mixed farming economy failed due to shortages of capital and labor, and free burghers turned to wheat cultivation and livestock farming. While the population grew slowly the area of settlement expanded rapidly with new administrative centers established at Stellenbosch (1676), Swellendam (1743) and Graaf-Reinet (1785). By the 1960's the Colony's frontier was too long to be effectively policed by VOC officials (Elphick 1985).

From the 1700's many settlers expanded inland over the Cape Fold Mountain Belt. The high cost of overland transport constrained the ability to sell their produce while settlement of the interior was increasingly made difficult by resident KhoiSan groups, contributing due to a lack of VOC military support to growing Company opposition in the years before British control of the Cape (1795 / 1806) (Davenport & Saunders 2000).

In 1820 a major British settlement was implanted on the eastern frontier of the Cape Colony, resulting in large numbers of the community moving into the interior, initially to KwaZulu-Natal, and then after Britain annexed Natal (1843), further into the interior to beyond the Vaal River. Disruptions of the *Mfecane* eased their takeover of African lands and the *Boers* (farmers) established several Republics. A few years later the 2nd South African War saw both the South African and Orange Free State Republics annexed by Britain, a move largely motivated by British desire to control the goldfields of the Witwatersrand. With adjacent regions of the sub-continent also falling, directly or indirectly, under British rule and German colonization of Namibia, European control of the whole of southern Africa was firmly established before the 1st World War (Davenport & Saunders 2000).

➤ Xhosa Iron Age Cultures meets Colonists in the Eastern Cape

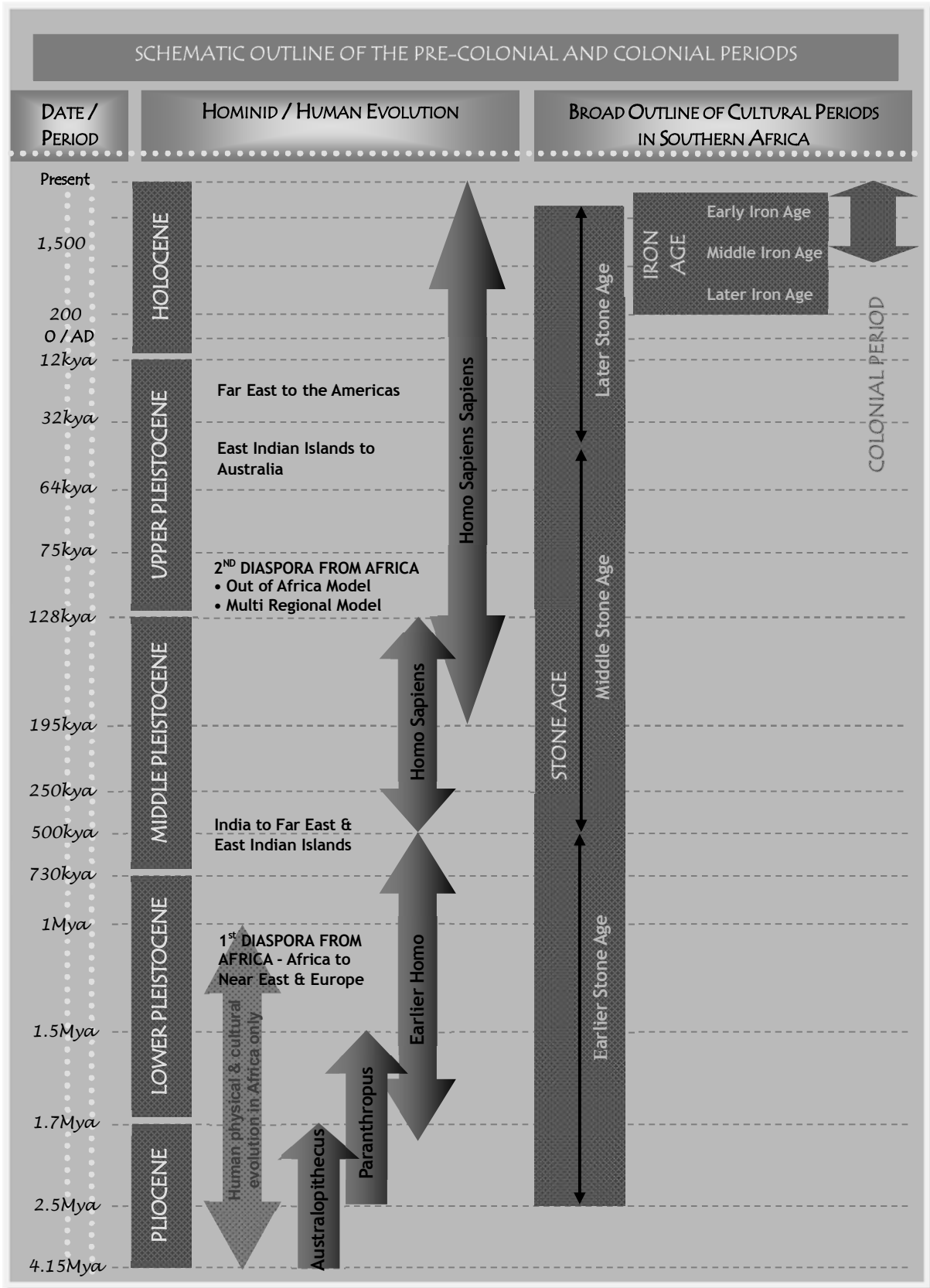
From the late 1600's conflict between migrants from the Cape (predominantly Boers) and Xhosa people in the region of the Fish River were strife, ultimately resulting in a series of 9 Frontier Wars (1702-1878) (Milton 1983). Both cultures were heavily based and reliant on agriculture and cattle farming. As more Cape migrants, and later settlers from Britain (1820) and elsewhere arrived, population pressures and competition over land, cattle and good grazing became intense. Cattle raiding became endemic on all sides, with retaliatory raids launched in response. As missionaries arrived with evangelical messages, confrontations with hostile chiefs who saw them as undermining traditional Xhosa ways of life resulted in conflicts which flared into wars.

As pressures between the European settlers and the Xhosa grew, settlers organized themselves into local militia, counteracted by Xhosa warring skills: But both sides were limited by the demands of seasonal farming and the need for labor during harvest. Wars between the Boers and the Xhosa resulted in shifting borders, from the Fish to the Sundays River, but it was only after the British annexed the Cape in 1806 that authorities turned their attention to the Eastern regions and petitions by the settlers about Xhosa raids. British expeditions, in particular under Colonel John Graham in 1811 and later Harry Smith in 1834, were sent not only to secure the frontier against the Xhosa, but also to impose British authority on the settlers, with the aim to establish a permanent British presence. Military forts were built and permanently manned. Over time the British came to dominate the area both militarily and through occupation with the introduction of British settlers. The imposition of British authority led to confrontations not only with the Xhosa but also with disaffected Boers and other settlers, and other native groups such as the Khoikhoi, the Griqua and the Mpondo. The frontier wars continued over a period of about 150 years; from the 1st arrival of the Cape settlers, and with the intervention of the British military ultimately ending in the subjugation of the Xhosa people. Fighting ended on the Eastern Cape frontier in June 1878 with the annexation of the western areas of the Transkei and administration under the authority of the Cape Colony (Milton 1983).

➤ The Industrial Revolution

The Industrial Revolution refers roughly to the period between the 18th - 19th Centuries, typified by major changes in agriculture, manufacturing, mining, transport, and technology. Changing industry had a profound effect on socio-economic and socio-cultural conditions across the world: The Industrial Revolution marks a major turning point in human history; almost every aspect of daily life was eventually influenced in some way. Average income and population size began to exhibit unprecedented growth; in the two centuries following 1800 the world's population increased over 6-fold, associated with increasing urbanization and demand of resources. Starting in the latter part of the 18th century, the transition from manual labor towards machine-based manufacturing changed the face of economic activity; including the mechanization of the textile industries, the development of iron-making techniques and the increased use of refined coal. Trade expansion was enabled by the introduction of canals, improved roads and railways. The introduction of steam power fuelled primarily by coal and powered machinery was underpinned by dramatic increases in production capacity. The development of all-metal machine tools in the first two decades of the 19th century facilitated the manufacture of more production machines in other industries (More 2000).

Effects of the Industrial Revolution were widespread across the world, with its enormous impact of change on society, a process that continues today as 'industrialization'.



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EXTRACTS FROM THE NATIONAL HERITAGE RESOURCES ACT, NO 25 OF 1999

DEFINITIONS

Section 2

In this Act, unless the context requires otherwise:

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

NATIONAL ESTATE

Section 3

- 1) For the purposes of this Act, those heritage resources of South Africa which are of cultural significance or other special value for the present community and for future generations must be considered part of the national estate and fall within the sphere of operations of heritage resources authorities.
- 2) Without limiting the generality of subsection 1), the national estate may include –
 - a) places, buildings, structures and equipment of cultural significance;
 - b) places to which oral traditions are attached or which are associated with living heritage;
 - c) historical settlements and townscapes;
 - d) landscapes and natural features of cultural significance;
 - e) geological sites of scientific or cultural importance;
 - f) archaeological and palaeontological sites;
 - g) graves and burial grounds, including –
 - i. ancestral graves;
 - ii. royal graves and graves of traditional leaders;
 - iii. graves of victims of conflict;
 - iv. graves of individuals designated by the Minister by notice in the Gazette;
 - v. historical graves and cemeteries; and
 - vi. other human remains which are not covered in terms of the Human Tissue Act, 1983 (Act No 65 of 1983)
 - h) sites of significance relating to the history of slavery in South Africa;
 - i) movable objects, including –

- i. objects recovered from the soil or waters of South Africa, including archaeological and palaeontological objects and material, meteorites and rare geological specimens;
- ii. objects to which oral traditions are attached or which are associated with living heritage;
- iii. ethnographic art and objects;
- iv. military objects;
- v. objects of decorative or fine art;
- vi. objects of scientific or technological interest; and
- vii. books, records, documents, photographic positives and negatives, graphic, film or video material or sound recordings, excluding those that are public records as defined in section 1 xiv) of the National Archives of South Africa Act, 1996 (Act No 43 of 1996).

STRUCTURES

Section 34

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

ARCHAEOLOGY, PALAEOLOGY AND METEORITES

Section 35

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

BURIAL GROUNDS AND GRAVES

Section 36

- 3) No person may, without a permit issued by SAHRA or a provincial heritage resources authority –
 - a) destroy, damage, alter, exhume or remove from its original position or otherwise disturb the grave of a victim of conflict, or any burial ground or part thereof which contains such graves;
 - b) destroy, damage, alter, exhume, remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority; or
 - c) bring onto or use at a burial ground or grave referred to in paragraph a) or b) any excavation equipment, or any equipment which assists in the detection or recovery of metals.
- 4) SAHRA or a provincial heritage resources authority may not issue a permit for the destruction of any burial ground or grave referred to in subsection 3a) unless it is satisfied that the applicant has made satisfactory arrangements for the exhumation and re-interment of the contents of such graves, at the cost of the applicant and in accordance with any regulations made by the responsible heritage resources authority.
- 5) SAHRA or a provincial heritage resources authority may not issue a permit for any activity under subsection 3b) unless it is satisfied that the applicant has, in accordance with regulations made by the responsible heritage resources authority –
 - a) made a concerted effort to contact and consult communities and individuals who by tradition have an interest in such grave or burial ground; and
 - b) reached agreements with such communities and individuals regarding the future of such grave or burial ground.

- 6) Subject to the provision of any other law, any person who in the course of development or any other activity discovers the location of a grave, the existence of which was previously unknown, must immediately cease such activity and report the discovery to the responsible heritage resources authority which must, in co-operation with the South African Police Service and in accordance with regulations of the responsible heritage resources authority –
- 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
 - if such grave is protected or is of significance, assist any person who or community which is a direct descendant to make arrangements for the exhumation and re-internment of the contents of such grave or, in the absence of such person or community, make any such arrangements as it deems fit.

HERITAGE RESOURCES MANAGEMENT

Section 38

- Subject to the provisions of subsections 7), 8) and 9), any person who intends to undertake a development categorised as –
 - the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300 m in length;
 - the construction of a bridge or similar structure exceeding 50 m in length;
 - any development or other activity which will change the character of a site –
 - exceeding 5 000 m² in extent; or
 - involving three or more existing erven or subdivisions thereof; or
 - involving three or more erven or subdivisions thereof which have been consolidated within the past five years; or
 - the costs which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;
 - the rezoning of a site exceeding 10 000 m² in extent; or
 - 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.
- The responsible heritage resources authority must, within 14 days of receipt of a notification in terms of subsection 1) –
 - 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
 - notify the person concerned that this section does not apply.
- The responsible heritage resources authority must specify the information to be provided in a report required in terms of subsection 2a) ...
- The report must be considered timeously by the responsible heritage resources authority which must, after consultation with the person proposing the development decide –
 - whether or not the development may proceed;
 - any limitations or conditions to be applied to the development;
 - what general protections in terms of this Act apply, and what formal protections may be applied, to such heritage resources;
 - whether compensatory action is required in respect of any heritage resources damaged or destroyed as a result of the development; and
 - whether the appointment of specialists is required as a condition of approval of the proposal.

APPOINTMENT AND POWERS OF HERITAGE INSPECTORS

Section 50

- 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.
- 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.
- Where a heritage inspector has reasonable grounds to suspect that an offence in terms of this Act has been, is being, or is about to be committed, the heritage inspector may with such assistance as he or she thinks necessary –
 - enter and search any place, premises, vehicle, vessel or craft, and for that purpose stop and detain any vehicle, vessel or craft, in or on which the heritage inspector believes, on reasonable grounds, there is evidence related to that offence;
 - confiscate and detain any heritage resource or evidence concerned with the commission of the offence pending any further order from the responsible heritage resources authority; and
 - take such action as is reasonably necessary to prevent the commission of an offence in terms of this Act.
- 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.