PHASE 16 ARCHAEOLOGICAL MONITORING - FINAL REPORT

CLUSTER 9 – BULK WATER SUPPLY BACKLOG, NEAR TSOMO, CHRIS HANI DISTRICT MUNICIPALITY, EASTERN CAPE, SOUTH AFRICA

DATE: 2014-02-05



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SPECIALIST DECLARATION OF INTEREST

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

- \circ I am suitably qualified and accredited to act as independent specialist in this application;
- o 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 -

Elgrentel.

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EXECUTIVE SUMMARY

TERMS OF REFERENCE -

Isi-Xwiba Consulting has been appointed as Environmental Control Officer (ECO) by Maluti GSM Consulting Engineers on behalf of the project proponent, the Chris Hani District Municipality (CHDM), to ensure environmental, including heritage compliance during the construction phase of the *Cluster 9 Bulk Water Supply Backlog – Amendment Project*, near Tsomo, Eastern Cape. ArchaeoMaps was appointed by isi-Xwiba to conduct the Phase 1b archaeological monitoring for the project. This final archaeological monitoring report closes archaeological and cultural heritage requirements for the project as a heritage compliant development.

THE PHASE 1 ARCHAEOLOGICAL IMPACT ASSESSMENT -

PROJECT AREA: Tsomo, Eastern Cape [1:50,000 Map Ref – 3227BB].

COVERAGE & GAP ANALYSIS: Phase 1b archaeological monitoring at Site T1 and T8. Identification of Site T16 and consultation with Sylvia Madotyeni.

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

SUMMARY:

Map Code	Site	Co-ordinates	Recommendations / Compliance		
Phase 1b Archaeological Monitoring – Final Report – Cluster 9 Bulk Water Supply Backlog Project, near Tsomo, EC					
T1	Iron Age – Homestead	S32°02′49.4″; E27°47′42.5″	Monitoring and recording		
T8	Iron Age – Homestead	S32°01′34.1″; E27°47′51.3″	Monitoring (Site description & photographic record?)		
T16	Iron Age – Livestock enclosures	S32°01′10.0″; E27°48′36.7″	Basic recording		

RECOMMENDATIONS –

With reference to archaeological and cultural heritage compliance, as per the requirements of the NHRA 1999 and the SAHRA A&PRC Comment on the project, this report closes required archaeological monitoring and recording for the *Cluster 9 Bulk Water Supply Backlog – Amendment Project*, near Tsomo, Eastern Cape, as a heritage compliant development.

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1) INTRODUCTION

Previous Archaeological Assessments & Known Archaeological Sites

Two Phase 1 Archaeological Impact Assessments (AIA's), a Letter of Recomendation and 1 Phase 1b Archaeological Monitoring (AM) reports are of relevance to this final Phase 1b AM report, namely:

- o Anderson, G. (Umlando). 2009. Heritage Survey of the Chris Hani Cluster 9 Water Project, Eastern Cape;
- o Van Ryneveld, K. (ArchaeoMaps). 2011a. *Chris Hani District Municipality: Cluster 9 Bulk Water Supply Backlog: Amendment Tsomo, Eastern Cape, South Africa*;
- Van Ryneveld, K. (ArchaeoMaps). 2011b. Letter of Recommendation. Request of Revision of SAHRA ARC
 Recommendations Phase 1 AIA Chris Hani District Municipality, Cluster 9 Bulk water Supply Backlog:
 Amendment Tsomo, Eastern Cape, South Africa; and
- Van Ryneveld, K. (ArchaeoMaps). 2013. Phase 1b Archaeological Monitoring 1st Interim Report. Cluster 9
 Bulk Water Supply Backlog, near Tsomo, Chris Hani District Municipality, Eastern Cape, South Africa.

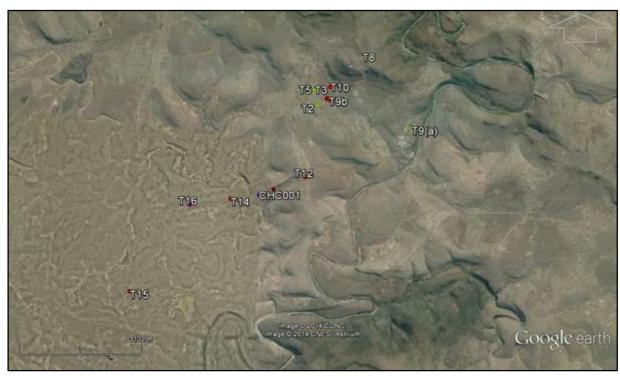
Anderson (2009) identified 15 archaeological and cultural heritage sites during his assessment of the proposed Cluster 9 line route, labeled Sites CHC001 - CHC015. A proposed realignment to the route towards the north of the study site resulted in a 2^{nd} Phase 1 AIA during which van Ryneveld (2011) identified 9 additional archaeological and cultural heritage sites, labeled TI - T9(a). Seven additional sites were recorded during the 1^{st} archaeological monitoring of the project, all closely related to an extension of the amendment portion of the line route to connect with the original route surveyed by Anderson (2009), namely Site T9(b) - T15. One additional site was recorded during construction of the extension. The site, Site T16, is situated at a safe distance from the development alignment and reported on here due to a bell discovered in the excavation trench, closely associated with the site and claimed by a descendant, Sylvia Madotyeni.

KNOWN ARCHAEOLOGICAL SITES, CLUSTER 9 BWSB, TSOMO					
Site Code	Co-ordinate	Туре	Description		
CHC001	S32°03′08.9″; E27°46′50.7″	Iron Age	Livestock enclosures		
CHC002	\$32°08'45.9"; E27°42'51.5"	Colonial Period	Fairview villa & trading post		
CHC003	\$32°06′05.8″; E27°36′39.1″	Iron Age	Livestock enclosures		
CHC004	S32°06′14.7″; E27°35′29.5″	Iron Age	Livestock enclosures		
CHC005	S32°06′42.0″; E27°36′22.2″	Iron Age	Livestock enclosures		
CHC006	\$32°09'05.5"; E27°35'25.6"	Iron Age	Cemetery		
CHC007	S32°09′54.0″; E27°41′01.0″	Iron Age	Livestock enclosures		
CHC008	S32°09′54.0″; E27°41′01.0″	Iron Age / Colonial Period	Mbulukweza store		
CHC009	S32°12′38.2″; E27°44′24.1″	Iron Age	Informal cemetery in proximity to stone walling & terraces		
CHC010	\$32°12′30.6″; E27°43′59.1″	Iron Age	Grave & stone walling		
CHC011	S32°16′52.4″; E27°44′25.4″	Iron Age	Homestead with to non-associated recent graves opposite road		
CHC012	S32°09′24.1″; E27°35′16.6″	Iron Age	Homestead		
CHC013	S32°08′01.7″; E27°36′08.9″	Iron Age	Homestead		
CHC014	S32°09′04.8"; E27°34′49.6"	Iron Age	Small village		
CHC015	S32°10′57.6″; E27°35′10.9″	Iron Age	Homestead		
T1	S32°02'49.4"; E27°47'42.5"	Iron Age	Homestead		
T2	S32°01′50.2"; E27°47′45.3"	Iron Age	Livestock enclosures		
T3	S32°01′37.0"; E27°47′41.7"	Colonial Period	Homestead		
T4	S32°01'38.6"; E27°47'35.5"	Colonial Period	Structure		
T5	S32°01'40.5"; E27°47'34.3"	Colonial Period	Tsomo Mission Church		
T6	\$32°01'36.2"; E27°47'34.6"	Colonial Period	Structure		
T7	S32°01'35.0"; E27°47'36.1"	Colonial Period	Homestead		
T8	S32°01′10.0″; E27°48′36.7″	Iron Age	Homestead		
T9a	\$32°02'05.5"; E27°49'20.8"	Colonial Period	Structure		
T9b	\$32°01'45.0"; E27°47'56.3"	Colonial Period	Livestock enclosure & stone wall		
T10	S32°01′34.1″; E27°47′51.3″	Colonial Period	Stone wall		
T11	\$32°01′44.0″; E27°47′54.3″	Iron Age	Structure remains		
T12	S32°02′51.7″; E27°47′36.5″	Iron Age	Homestead with cemetery		
T13	S32°03′03.8"; E27°47′05.2"	Iron Age	Homestead with cemetery		
T14	\$32°03′13.2″; E27°46′22.4″	Iron Age	Livestock enclosure complex		
T15	S32°04′34.6″; E27°44′48.1″	Iron Age	Livestock enclosure & cemetery		
T16	S32°03′19.6"; E27°45′41.8"	Iron Age	Livestock enclosures		

Table 1: Known archaeological sites, Cluster 9, BWSB, Tsomo



Map 1: Spatial display of all identified archaeological sites relating to the greater Cluster 9 water project



Map 2: Spatial display of archaeological sites relating to the amendment and extension of the Cluster 9 Bulk Water Supply Backlog Project study site, CHDM

2) PHASE 1B ARCHAEOLOGICAL MONITORING & RECORDING

The Phase 1b archaeological monitoring was done on 2014-01-14. Monitoring and recording focused on meeting heritage compliance requirements as detailed in the amended SAHRA A&PRC Comment (dated 22 December 2011), with specific reference to Sites T1 and T8. In addition 1 archaeological site, Site T16, was recorded and is reported on.

* Methodology

The Phase 1b archaeological monitoring was done on 2014-01-14. The assessment was done by foot and vehicle and limited to a Phase 1 surface assessment and recording including inspection of excavation trenches without archaeological excavation or testing. 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.

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

SAHRA ARCHAEOLOGICALAND 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 2: SAHRA archaeological and cultural heritage site significance assessment

* 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) HERITAGE COMPLIANCE SITE MONITORING & RECORDING

❖ Site T1 - Iron Age Homestead - S32°O2′49.9″; E27°47′42.5″

Van Ryneveld (2011a) recorded and 1st described Site T1 as an Iron Age homestead dating to Colonial Period times. Described site features include a rectangular shaped livestock enclosure containing a number of grain storage pit areas. To the west of the stock enclosure the remains of 3 huts were identified. Hut mounds exposed deteriorated *daga* floor pieces and partial stone alignments. A tree towards the north of the site demarcated the site 'meeting place' or 'kgotla', with contemporary middens and rubble scattered about. No cemetery or graves were identified at the site. The site was assigned a SAHRA *Medium Significance* and a *Generally Protected B Field Rating*.

With reference to Site T1 the initial SAHRA A&PRC Comment (dated 23 October 2011) on the project stated that: 'The pipeline route should be realigned to allow a buffer zone of at least 50m around Site T1.' In response to the SAHRA A&PRC Comment van Ryneveld (2011b) requested a revision of the SAHRA requirements based on proximity of existing village development, the road and the stream / natural drainage line, initially proposing a smaller conservation buffer with alignment to the east of the site, but pending natural environmental approval with reference to drainage line constraints. An amended SAHRA A&PRC Comment (dated 22 December 2011) stated that: 'According to the information provided in the proposed revision, it is not possible to maintain a buffer zone of 50m around the site, constituted by a traditional homestead dated to the Colonial Period. Given the situation the requested buffer zone may not be maintained and therefor it is required that an archaeologist records the site before construction starts. The site should be preserved and maintained by an archaeologist during construction.'

In accordance with the SAHRA amended requirements and primarily based on engineering specifications of the reticulation line associated with flood line environmental constraints the line route has be realigned to the west of the site, directly following the existing development perimeter at the edge of the village.

Archaeological monitoring and recording resulted in the identification of an additional hut mound, bringing the total of hut mound remains at Site T1 to 4. Seven grain storage pits were recorded within the stock enclosure with the central, larger of these being either reworked, or a new pit directly associated with refuse management. A flat stone grain storage pit lid is present among the southern pits. In addition, the site has been sign-posted, clearly indicating the heritage status thereof at a primary location along the main access road, without any impact on Site T1 itself.

Despite close proximity of the CHDM Cluster 9 water alignment to the hut mounds, excavation impacted on no site features and no artefacts were recorded from within the trench. From an Integrated Environmental Management (IEM) point of view development, considering engineering specifications, natural environmental requirements and minimum standards as well as archaeological legislation (no impact on a formally protected heritage site) was met by the final water line route, despite the fact that the heritage 'buffer zone' practice was compromised for purposes of development.

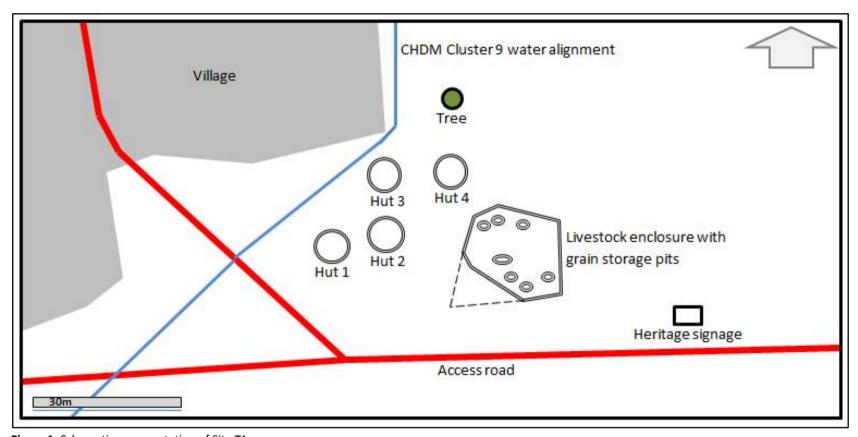


Figure 1: Schematic representation of Site T1



Plate 1: General view of Site T1



Plate 2: View towards the livestock enclosure from hut mound 1



Plate 3: A grain storage pit with lid in the livestock enclosure



Plate 4: View of Site T1 from the heritage site sign post

Site T8 - Iron Age Homestead - S32°01′10.0″; E27°48′31.7″

Site T8 was described (van Ryneveld 2011a) as:

'The large site T8 (S32°01'10.0"; E27°48'31.7") Iron Age Homestead measures approximately 500 x 200m in size and is characterized by 2 rows of stock enclosures, 4 along the southern side of the site and 2 towards the north. Stock enclosures all measure roughly 50-60m in diameter and are easily identified by the low rising remains of the original stone built walls, today with aloe growing along these disturbed portions, clearly demarcating stock enclosure boundaries and shapes. Stock enclosure localities are briefly summarized as:

- Enclosure 1 (Site co-ordinate) \$32°01′10.0″; E27°48′31.7″;
- o Enclosure 2 \$32°01'09.2"; E27°48'29.5";
- Enclosure 3 \$32°01'05.8"; E27°48'28.6";
- Enclosure 4 \$32°01'06.6"; E27°48'31.4";
- o Enclosure 5 \$32°01'11.5"; E27°48'34.4"; and
- o Enclosure 6 S32°01'12.7"; E27°48'36.4".

In addition to the large stock enclosures, smaller stone built structure remains are also present, inferred to also be livestock related and perhaps used to keep calves or as sheep / goat pens. At least 4 such smaller rectangular shaped structures are present $(1 - S32^{\circ}01'15.9''; E27^{\circ}48'41.7''; 2 - S32^{\circ}01'09.5''; E27^{\circ}48'28.2''; 3 - S32^{\circ}01'08.7''; E27^{\circ}48'35.0''; and <math>4 - S32^{\circ}01'08.8''; E27^{\circ}48'35.0'')$. Identified residential remains are restricted to 2 features including a slight mound (S32^{\circ}01'10.3''; E27^{\circ}48'34.6'') and circular change in vegetation indicative of a hut locality (S32^{\circ}01'10.3''; E27^{\circ}48'34.6''). More residential remains can reasonably be expected on a site of size. Identified remains however indicate that huts were mainly built of daga, the remains thus particularly difficult to discern in thick grass cover.

A cemetery or burial place is located roughly midway along the southern line of stock enclosures (red cross – \$32°01′11.4"; E27°48′32.6"). One modern style grave, that of Josiah Mlokoti, who was buried in 1934, constitutes the only modern style grave at the site. All other graves are demarcated only by stone headstones. Approximately 25 graves were counted at the small approximate 15 x 15m area, but thick grass cover may have obscured additional graves. Traditional style graves may well be older than the modern style grave of Josiah Mlokoti.

The current line route runs through the center of the Site T8 terrain, midway between the southern and northern stock enclosures but not impacting on any identified site features. Impact on the site would necessitate at least Phase 2 Archaeological Monitoring at the time of development impact. Alternatively the developer may opt for site conservation, implying rerouting the proposed line route in the vicinity of Site T8.'

Site T8 was assigned a SAHRA *Medium Significance* and a *Generally Protected B Field Rating*. A total of 5 site photographs were submitted as part of the site description.

The SAHRA A&PRC Comment (dated 23 October 2011) stated that: 'The pipeline route should be realigned to allow a buffer zone of at least 50m around Site T8. The site should be temporarily fenced off during construction. Given the extent of the site and since a grave site is located within the identified Iron Age homestead red and white tape is not considered a sufficient measure, a more permanent measure must be selected. The fencing may be removed after construction is completed.' It further stated that: 'Since all of Site T8 is going to be fenced off during construction, no specific fencing is required for the graveyard.' And 'Consultation with the community must be undertaken for possible permanent fencing of the grave site. Permanent fencing is SAHRA's preferred option,

however, this must be discussed in consultation with the community. Results from the consultation process must be submitted to SAHRA for comments.'

A request for amendment (Van Ryneveld 2011b) to the SAHRA A&PRC Comment was submitted to SAHRA based on engineering specifications of the project, including especially the fact that the proposed pipeline development is based on a gravity line, directly associated with landscape relief, being the most challenging and limiting design concern of the project. A 2nd proposed line route was submitted to SAHRA, again allowing the principles of IEM, with engineering design parameters, natural environmental requirements and minimum standards and basic heritage concerns taken into account. The proposed new alignment passed through the southern perimeter of the site, but not impacting on any identified site features with the majority of the line route being 40m away from any site features.

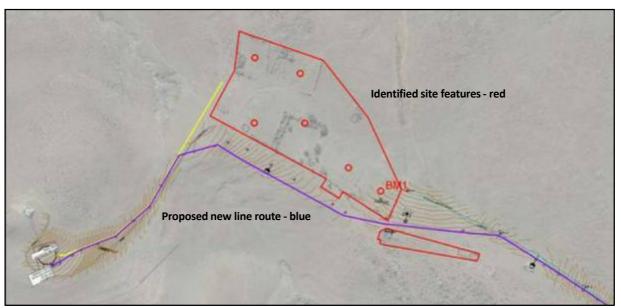


Figure 2: Site T8: The proposed new alignment

With reference to Site T8 the amended SAHRA A&PRC Comment (dated 22 December 2011) stated that:

'Site T8 is an extensive (500m x 200m) Iron Age homestead, according to the original plan the pipeline was expected to be positioned in the middle of the site. SAHRA requested instead that a 50m buffer zone to be respected around the site. Since this seems not to be possible because of environmental conditions the project proponent requested the extent of the buffer zone to be revised and allow a 40m distance between the site and the pipeline, which was then moved south of the site. SAHRA agrees with this proposal but requires that:

- 1. The Site must be clearly fenced off, at least temporarily during construction;
- 2. The Site has already been recorded with GPS co-ordinates, however, a detailed description of the site including site photographs must be undertaken before construction starts;
- 3. An archaeologist must monitor all earth moving activities. A monitoring report must be submitted to SAHRA.'

With reference to the SAHRA requirements, Site T8 has already been described in the relevant Phase 1 AIA report including site photographs (van Ryneveld 2011a): There is no additional information on the site and no additional information came to the fore during site monitoring. Photographic documentation included in this section documents site details after construction.



Plate 5: View of Site T8 [1]



Plate 6: View of Site T8 [2]



Plate 7: View of Site T8 [3]



Plate 8: View of Site T8 [4]

2.2) NEWLY IDENTIFIED SITES

Site T16 – Iron Age Livestock Enclosures – S32°O3′19.6″; E27°45′41.8″

Site T16 was identified during the construction phase of the project. The site comprises of the foundation and low rising remains of a large stone wall, situated in fairly close proximity to the tributary of the Ngcongcolora River, approximately 150m south to south-east of the indicated site locale and access road. Closer to the road the remains of at least 2 smaller rectangular stone built livestock enclosures are present, but remains are rather weathered, making it difficult to discern both the exact number of enclosures as well as their sizes, but estimated at an average or 6x6m to 8x8m in size. Development did not impact on any of the site features. A bell was however identified in the construction trenches, in the immediate vicinity of the Site T16 co-ordinate. The bell was claimed by Nombeko Sylvia Madotyeni (Sylvia Madotyeni), and as such handed by the developer to her.

Consultation with Sylvia Madotyeni at the time of the site visit resulted in a brief explanation of the origin of the bell as well the general cultural surrounds. Madotyeni explained that according to oral history her family, one of the more prominent families of the Ntsumi Village area, arrived about 4 generations ago from the greater Maluti area. Her great grandfather, Germany Madotyeni, was known to be a rich man with 4 wives and a number of children. He was involved in the building industry and known to have been part of the teams who built a number of stone churches in the area, but he also built stone houses and eventually returned to the village to build a large stone church, remembered by the community to have been surrounded by extensive orchards and large numbers of cattle and other livestock. His son, Julius (and the grandfather of Sylvia Madotyeni), was an educated man and a trained pastor, who also practiced circumcision. He is believed to have preached extensively in the area. Madotyeni recalled that the bell fits her early childhood memories of the church related artefacts, and without any other family making claim to the religious heritage it can be reasonably inferred to have been claimed by the rightful owner / descendant.

The single artefact would comprise of a heritage object. Considering the circumstances it is not recommended that the artefact be deposited for curation at a SAHRA accredited repository. Should the EC PHRA require a private collection registration for the object, such a registration can be completed for the artefact.

In addition to the claim to the bell Madotyeni requested excavation stone from the construction site. Despite proximity of the development to the livestock enclosure remains, this request falls outside the domain of heritage management.

The Site T16 Iron Age livestock enclosure remains are ascribed a SAHRA Low Significance and a Generally Protected IV-C Field Rating.



Plate 9: View of the area where the Site T16 bell was discovered looking over the valley of the main site



Plate 10: Remains of smaller livestock enclosures closer to the access road



Plate 11: Sylvia Madotyeni with the recovered bell



Plate 12: Close-up of the recovered bell

3) **RECOMMENDATIONS**

With reference to archaeological and cultural heritage compliance, as per the requirements of the NHRA 1999 and the SAHRA A&PRC Comment on the project, this report closes required archaeological monitoring and recording for the *Cluster 9 Bulk Water Supply Backlog – Amendment Project*, near Tsomo, Eastern Cape, as a heritage compliant development.