

PHASE 1 ARCHAEOLOGICAL IMPACT ASSESSMENT FOR THE PROPOSED BREIDBACH CROSS CATCHMENT TRANSFER PUMPING SCHEME (SEWER PIPELINE), BREIDBACH, KING WILLIAMS TOWN, AMATHOLE DISTRICT MUNICIPALITY.

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CONTENTS

1. EXECUTIVE SUMMARY	3.
1.1. Purpose of the Study	3.
1.2. Brief Summary of Findings	3.
1.3. Recommendations	4.
2. DECLARATION OF INDEPENDENCE	5.
3. SUMMARY OF SPECIALIST EXPERIENCE	5.
4. INTRODUCTION	5.
4.1. BACKGROUND INFORMATION	5.
4.1.1. Type of Development	5.
4.2. Applicant	6.
4.3. Environmental Assessment Practitioner (EAP)	6.
5. SCOPE OF WORK / TERMS OF REFERENCE	6.
6. LEGISLATIVE AND POLICY FRAMEWORK	7.
7. ARCHAEOLOGICAL BACKGROUND	7.
7.1. Early Stone Age (ESA) - 1.5 million to 250 000 years ago	8.
7.2. Middle Stone Age (MSA) – 250 000 – 30 000 years ago	9.
7.3. Later Stone Age (LSA) – 30 000 years ago – recent (100 years ago)	9.
7.4. Last 2 000 years – Khoekhoen Pastoralism	11.
7.5. Last 2 000 Years - The Iron Age	11.
7.6. Human Remains	14.
7.7. Rock Art (Paintings and Engravings)	14.
7.8. Historical Period (Last 500 years)	14.
7.8.1. Brief Historical Overview of the Establishment of King Williams Town	14.
7.8.2. Brief Historical Overview of Kaffrian German Settlers (1856 – 1877)	16.
8. DESCRIPTION OF THE PROPERTY	17.
8.1. Location data	17.
8.2. Map	17.
9. ARCHAEOLOGICAL INVESTIGATION	24.
9.1. Methodology	24.
9.2. Results of the Archaeological Investigation	24.
10. COORDINATES AND SITES FOR THE PROPOSED BREIDBACH CROSS CATCHMENT TRANSFER PUMPING SCHEME (SEWER PIPELINE), BREIDBACH, KING WILLIAMS TOWN, AMATHOLE DISTRICT MUNICIPALITY	37.
11. CULTURAL LANDSCAPE	38.
11.1. Concept of Cultural Landscape	38.
11.2. Archaeological Landscape	40.
11.3. Historical and Contemporary Landscape	41.
12. RECOMMENDATIONS	41.
13. CONCLUSION	42.
14. REFERENCES	42.
15. RELEVANT ARCHAEOLOGICAL AND HERITAGE IMPACT ASSESSMENTS	47.
16. GENERAL REMARKS AND CONDITIONS	48.
LIST OF APPENDICES	
APPENDIX A: HERITAGE LEGISLATIVE REQUIREMENTS	49.
APPENDIX B: GRADING SYSTEM	57.

LIST OF FIGURES

Figure 1. 1:50 000 topographic map 3227 CD KING WILLIAMS TOWN (2005 edition) showing the location of the proposed Cross Catchment Transfer Pumping Scheme (Sewer Pipeline), Breidbach, near King Williams Town.	18.
Figure 2. Google Earth generated map of the location of the proposed showing the location of the proposed Cross Catchment Transfer Pumping Scheme (Sewer Pipeline), Breidbach, near King Williams Town.	19.
Figure 3. Close-up aerial view of the location of the proposed Cross Catchment Transfer Pumping Scheme (Sewer Pipeline), Breidbach, near King Williams Town.	20.
Figure 4. View of the proposed Cross Catchment Transfer Pumping Scheme (Sewer Pipeline) including the pump station to be situated in Breidbach showing the survey track and location of archaeological and other heritage resources.	21.
Figure 5. View of the archaeological and other heritage sites documented along the route for the proposed Breidbach Sewer Pumpstation and pipeline (map courtesy of Makhetha Environment Consultants (PTY) LTD.	22.
Figure 6. View of a section of the proposed Cross Catchment Transfer Pumping Scheme (Sewer Pipeline) showing the survey track and location of the bridge (BB_BE1) and the ruins (BB_BE2).	23.
Figure 7. View of the general landscape of the area around the proposed location of the pump station and pipeline route.	25.
Figure 8. View of the general landscape of the area around the proposed location of the pump station and pipeline route.	26.
Figure 9. View of the general landscape of the area around the proposed location of the pump station and pipeline route.	26.
Figure 10. View of the general landscape of the area around the proposed location of the pump station and pipeline route.	27.
Figure 11. View of the general landscape of the area around the proposed location of the pump station and pipeline route.	27.
Figure 12. View of the general landscape of the area around the proposed location of the pump station and pipeline route.	28.
Figure 13. View of the foot bridge between Breidbach and Acorn Valley that the pipeline route will follow.	28.
Figure 14. View of the pipeline routes from the foot bridge along the access road to Acorn Valley.	29.
Figure 15. View of the pipeline route along Welkom Road towards Zwelitsha showing the general landscape.	29.
Figure 16. View of the pipeline route along Welkom Road towards Zwelitsha showing the general landscape.	30.
Figure 17. View of the pipeline route along Welkom Road towards Zwelitsha showing the general landscape.	30.
Figure 18. View of the pipeline route along Welkom Road towards Zwelitsha showing the general landscape.	31.
Figure 19. View of the pipeline route along Welkom Road towards Zwelitsha showing the general landscape.	31.
Figure 20. View of the pipeline route along Welkom Road towards Zwelitsha showing the general landscape.	32.
Figure 21. View of the pipeline route along Welkom Road towards Zwelitsha showing the general landscape.	32.
Figure 22. View of the dedication to the opening of the footbridge between Breidbach and Acorn Valley in 2003 situated on the edge of the proposed area for the pump station.	33.
Figure 23. View of the bridge along the access road to Acorn Valley built in 1948.	33.
Figure 24. View of the ruins near the corner of Welkom Road.	34.
Figure 25. View of the ruins near the corner of Welkom Road.	34.
Figure 26. View of a built environment structure along Welkom Road.	35.
Figure 27. View of a road marker along the Welkom Road.	35.
Figure 28. View of the mound situated outside the proposed area for the pump station.	36.
Figure 29. View of the mound situated outside the proposed area for the pump station.	36.
Figure 30. View of a mound situated along the route of the pipeline next to Welkom Road.	37.

LIST OF TABLES

Table 1. Coordinates and sites for the proposed Breidbach Cross Catchment Transfer Pumping Scheme (Sewer Pipeline), Breidbach, King Williams Town, Amathole District Municipality	37.
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THE PROPOSED BREIDBACH CROSS CATCHMENT TRANSFER PUMPING SCHEME (SEWER PIPELINE), BREIDBACH, KING WILLIAMS TOWN, AMATHOLE DISTRICT MUNICIPALITY.

NOTE: The phase 1 archaeological impact assessment was conducted as a requirement of the National Heritage Resources Act 25 of 1999, Section 38 (1)(a), (c)(i):

38. (1) Subject to the provisions of subsections (7), (8) and (9), any person who intends to undertake a development categorized as –

(a) the construction of a road, wall, power line, pipeline, canal or other similar form of linear development or barrier exceeding 300 m in length;

(c) any development or other activity which will change the character of the site –

(i) exceeding 5 000 m² in extent,

This report follows the minimum standard guidelines required by the South African Heritage Resources Agency (SAHRA) and the Eastern Cape Provincial Heritage Resources Agency (ECPHRA) for compiling a full Phase 1 Archaeological Impact Assessment (AIA).

1. EXECUTIVE SUMMARY

1.1. Purpose of the Study

The purpose of the study was to conduct a phase 1 archaeological impact assessment for the proposed Breidbach Cross Catchment Transfer Pumping Scheme (Sewer Pipeline), Breidbach, King Williams Town, Amathole District Municipality.

The survey was conducted to establish the range and importance of the exposed and *in situ* archaeological heritage material remains, sites and features; to establish the potential impact of the development; and to make recommendations to minimize possible damage to the archaeological heritage.

1.2. Brief Summary of Findings

One stone artefact (BB_SA1) was observed along the footpath and an unidentified large mound (BB_G1) resembling an informal burial with some stone packing was identified within the originally intended area proposed for the pump station between Breidbach and the N2 National Road to the south. The mound does not resemble a dumping area and no historical information, until submission for the report, was acquired that could give further information on whether it may be a burial. The proposed location of the pump station has since been relocated to the western end of Pieter Swartz Close.

The remains of ruins of a stone packed structure (BB_BE2), most likely older than 60 years, was documented along the road that runs from Welkom Road to Acorn Valley.

The bridge at entrance to Acorn Valley is dated to 1948. Both heritage resources (BB_BE1 and BB_BE2) are protected under Section 34 of the NHRA 25 of 1999 (see Appendix A, Section 34 for more heritage legislation information).

1.3. Recommendations and Mitigation

The area is considered as having a *low archaeological heritage significance*. The built environment structures are protected under Section 34 of the NHRA. Development may proceed as planned; however, the following recommendations must be considered during the planning phase for proposed development:

1. The bridge (BB_BE1) dated to 1948 is protected under Section 34 of the National Heritage Resources Act, therefore if the proposed pipeline is to impact on the bridge, the developer must apply for a permit to conduct such work. The permit application can be completed and submitted to the Eastern Cape Provincial Heritage Resources Authority (ECPHRA) Built Environment permitting committee.
2. It is unlikely that the ruins of the structure (BB_BE2) situated near the corner of Welkom Road will be negatively impacted during the construction activities for the proposed pipeline. The area must be identified and the construction managers and staff must be made aware of its historical significance and informed that the area must be damaged during the construction phases.
3. The mound (BB_G1) identified in the open space between Breidbach and the N2 National Road falls outside the proposed development area and will therefore not be negatively impacted during the development and associated construction activities.
4. If concentrations of pre-colonial archaeological heritage material and/or human remains (including graves and burials) are uncovered during construction, all work must cease immediately and be reported to the Albany Museum (046 622 2312) and/or the Eastern Cape Provincial Heritage Resources Agency (ECPHRA) (043 745 0888) so that systematic and professional investigation/excavation can be undertaken. Phase 2 mitigation in the form of test-pitting/sampling or systematic excavations and collections of the pre-colonial shell middens and associated artefacts will then be conducted to establish the contextual status of the sites and possibly remove the archaeological deposit before development activities continue.
5. Construction managers/foremen and/or the Environmental Control Officer (ECO) should be informed before construction starts on the possible types of heritage sites and cultural material they may encounter and the procedures to follow when they find sites.
6. The developer / ECO / or construction manager must apply to the Eastern Cape Provincial Heritage Resources Agency (ECPHRA) for a destruction permit to disturb the stone artefact scatters prior to the commencement of the development.

2. DECLARATION OF INDEPENDENCE

This section confirms a declaration of independence that archaeological heritage specialist, Ms Celeste Booth, has no financial or any other personal interests in the project for the proposed Breidbach Cross Catchment Transfer Pumping Scheme (Sewer Pipeline), Breidbach, King Williams Town, Amathole District Municipality.

Ms Celeste Booth was appointed on a strictly professional basis to conduct a Phase 1 Archaeological Impact Assessment in line with the South African national heritage legislation, the National Heritage Resources Act 25 of 1999 (NHRA 25 of 1999) and in response to the recommendations provided by the Department of Environmental Affairs and according to the environmental impact assessment regulations.

3. SUMMARY OF SPECIALIST EXPERTISE

Ms Celeste Booth (BSc Honours: Archaeology) is an archaeologist who has had ten years of full-time experience in Cultural Resource Management in the Eastern Cape and sections of the Northern Cape and Western Cape. Ms Booth has conducted several Archaeological Desktop Studies and Phase 1 Archaeological Impact Assessments within the Eastern Cape and in the Karoo region across the Eastern Cape, Northern Cape and Western Cape.

4. INTRODUCTION

4.1. BACKGROUND INFORMATION

4.1.1. Type of Development

Daku Group, on behalf of the Department of Human Settlements and Buffalo City Metropolitan Municipality (BCMM) propose to develop a rising main sewer pipeline and pumpstation at Breidbach, within the BCMM. The pipeline is mostly located in the road reserve, with small sections crossing open, undeveloped areas. At river crossings, it is proposed that the pipe be attached to existing bridges in order to prevent excavation in watercourses. The area is significantly transformed and degraded.

The following activity listed in the 2014 National Environmental Management Act (NEMA) Environmental Impact Assessment (EIA) Regulations (as amended in 2017) is triggered: GNR 324 – 12 (ii) The clearance of an area of 300 square metres or more of indigenous vegetation within critical biodiversity areas identified in bioregional plans. The proposed sewer will result in the clearing of indigenous vegetation in excess of 300 square metres, and is located in a Critical Biodiversity Area (CBA) in terms of the Eastern Cape Biodiversity Conservation Plan (ECBCP) 2007 bioregional plan. In terms of Government Notice 324 of the NEMA EIA Regulations, 'Indigenous vegetation refers to vegetation consisting of indigenous plant species occurring naturally in an area, regardless of the level of alien infestation and where the topsoil has not been lawfully disturbed during the preceding ten

years. This definition does not preclude the road reserve/servitude, where indigenous vegetation may have been re-established subsequent to, or not disturbed during the development of the road. Please see the map attached showing the CBA areas.

4.2. Applicant

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4.3. Environmental Assessment Practitioner (EAP)

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5. SCOPE OF WORK AND TERMS OF REFERENCE

The purpose of the study was to conduct a phase 1 archaeological impact assessment (AIA) for the proposed Breidbach Cross Catchment Transfer Pumping Scheme (Sewer Pipeline), Breidbach, King Williams Town, Amathole District Municipality.

The survey was conducted to:

- Make a basic surface assessment of the study site (including a desktop study or brief background assessment of the area) to identify, describe, record the localities;
- Assign a heritage site significance rating to heritage resources protected by law; and
- Make recommendations to the relevant Provincial Heritage Resources Authority (PHRA) regarding the conservation or mitigation thereof for purposes of development.

Archaeological and historical material remains, features, and sites were evaluated and assessed based on the following points:

- Type of site;
- Location and environmental surrounds;
- Site category;
- Context and condition;
- Estimated size and depth of deposit;
- Cultural affinities;
- Record site content;
- Record basic information of finds;
- Estimate relative age of sites from cultural material and other information;
- Record and describe graves, graveyards, and informal burials;
- Assess the importance and significance of material remains, features, and sites; and;
- Significance ratings based on local to international.

6. LEGISLATIVE AND POLICY FRAMEWORK

An archaeological impact assessment is required as a requisite of the National Heritage Resources Act 25 of 1999, Section 38 (a):

38. (1) Subject to the provisions of subsections (7), (8) and (9), any person who intends to undertake a development categorized as –
(a) the construction of a road, wall, power line, pipeline, canal or other similar form of linear development or barrier exceeding 300 m in length;

This report follows the minimum standard guidelines required by the South African Heritage Resources Agency (SAHRA) and the Eastern Cape Provincial Heritage Resources Agency (ECPHRA) for compiling a Phase 1 Archaeological Impact Assessment. The study will be undertaken as part of a basic assessment report (BAR) in support of an environmental authorisation application (See Appendix A for further heritage legislation).

7. ARCHAEOLOGICAL BACKGROUND

No systematic archaeological research has been conducted within the proposed area and immediate surrounds. Several archaeological, heritage and cultural impact assessments have been conducted within the King Williams Town, Breidbach, and East London area. These assessments recorded colonial heritage sites as well as Early, Middle and Later Stone Age sites including coastal shell middens, as well as graves and buildings of architectural significance.

At Lovedale College, two caches were found in trenches and that contained rifle barrels from at least 4 different types of weapon, while a third cache contained only rifle bayonets

in a shallow trench. In addition, traces of older stone foundations and rubble were noted in places where they have been exposed by foundation trenches. These were believed to be remnants of Fort Hill, built between 1835 and 1847 (Halkett 2009).

7.1. Early Stone Age (ESA) - 1.5 million to 250 000 years ago

The Early Stone Age from between 1.5 million and 250 000 years ago refers to the earliest that *Homo sapiens sapiens* predecessors began making stone tools. The earliest stone tool industry was referred to as the Olduvai Industry originating from stone artefacts recorded at Olduvai Gorge, Tanzania. The Acheulian Industry, the predominant southern African Early Stone Age Industry, replaced the Olduvai Industry approximately 1.5 million years ago, is attested to in diverse environments and over wide geographical areas. The hallmark of the Acheulian Industry is its large cutting tools (LCTs or bifaces), primarily handaxes and cleavers. Bifaces emerged in East Africa more than 1.5 million years ago (mya) but have been reported from a wide range of areas, from South Africa to northern Europe and from India to the Iberian coast. The end products were similar across the geographical and chronological distribution of the Acheulian techno-complex: large flakes that were suitable in size and morphology for the production of handaxes and cleavers perfectly suited to the available raw materials (Sharon 2009).

One of the most well-known Early Stone Age sites in southern Africa is Amanzi Springs (Deacon 1970), situated about 10 km north-east of Uitenhage and 45 km south east of the WEF site. The site is situated on a north-facing hill overlooking the Coega River. The earliest reference to the spring was made by an early traveller, Barrow (1801). FitzPatrick first reported stone artefacts in the area in 1924. Ray Inskeep (Inskeep 1965) conducted a small-scale excavation of the site in 1963. It was only in 1964 and 1965 that large scale excavations were conducted by Hilary Deacon. In a series of spring deposits, a large number of stone tools were found *in situ* to a depth of 3-4 m. Wood and seed material preserved remarkably very well within the spring deposits, and possibly date to between 800 000 to 250 000 years old.

Other Early Stone Age sites that contained preserved bone and plant material include Wonderwerk Cave in the Northern Province, near Kimberly and Montagu Cave in the Western Cape, near the small town of Montagu (Mitchell 2007). Early Stone Age sites have also been reported in the foothills of the Sneeuberge Mountains (in Prins 2011).

The location of Early Stone Age sites are biased by several factors, the change in land surface, so that the evidence of coastal exploitation is absent, the survival of Early Stone Age material either *in situ* or sealed within Pleistocene deposits is limited by soil and water activities and numerous processes in environmental change over time and research interests of professional archaeologists. Early Stone Age materials are the earliest evidence for human ancestors occupying the Transkei and Ciskei regions and typically occur on floodplains of perennial rivers and along drainage lines and water courses.

7.2. Middle Stone Age (MSA) – 250 000 – 30 000 years ago

The Middle Stone Age spans a period from 250 000 - 30 000 years ago and focuses on the emergence of modern humans through the change in technology, behaviour, physical appearance, art and symbolism. Various stone artefact industries occur during this time period, although less is known about the time prior to 120 000 years ago, extensive systemic archaeological research is being conducted on sites across southern Africa dating within the last 120 000 years (Thompson & Marean 2008). The large handaxes and cleavers were replaced by smaller stone artefacts called the Middle Stone Age flake and blade industries. Surface scatters of these flake and blade industries occur widespread across southern Africa although rarely with any associated botanical and faunal remains. It is also common for these stone artefacts to be found between the surface and approximately 50-80 cm below ground. Fossil bone may in rare cases be associated with Middle Stone Age occurrences (Gess 1969). These stone artefacts, like the Earlier Stone Age handaxes are usually observed in secondary context with no other associated archaeological material.

The Middle Stone Age is distinguished from the Early Stone Age by the smaller-sized and distinctly different stone artefacts and *chaîne opératoire* (method) used in manufacture, the introduction of other types of artefacts and evidence of symbolic behaviour. The prepared core technique was used for the manufacture of the stone artefacts which display a characteristic faceted striking platform and includes mainly unifacial and bifacial flake blades and points. The Howiesons Poort Industry (80 000 - 55 000 years ago) is distinguished from the other Middle Stone Age stone artefacts: the size of tools are generally smaller, the range of raw materials include finer-grained rocks such as silcrete, chalcedony, quartz and hornfels, and include segments, backed blades and trapezoids in the stone toolkit which were sometimes hafted (set or glued) onto handles. In addition to stone artefacts, bone was worked into points, possibly hafted, and used as tools for hunting (Deacon & Deacon 1999).

Other types of artefacts that have been encountered in archaeological excavations include tick shell (*Nassarius kraussianus*) beads, the rim pieces of ostrich eggshell (OES) water flasks, ochre-stained pieces of ostrich eggshell and engraved and scratched ochre pieces, as well as the collection of materials for purely aesthetic reasons. Although Middle Stone Age artefacts occur throughout the Eastern Cape, the most well-known Middle Stone Age sites include the type-site for the Howiesons Poort stone tool industry, Howiesons Poort (HP) rock shelter, situated close to Grahamstown, and Klasies River Mouth Cave (KRM), situated along the Tsitsikamma coast. Middle Stone Age sites are located both at the coast and in the interior across southern Africa.

7.3. Later Stone Age (LSA) – 30 000 years ago – recent (100 years ago)

The Later Stone Age (LSA) spans the period from about 20 000 years ago until the colonial era, although some communities continue making stone tools today. The period between

30 000 and 20 000 years ago is referred to as the transition from the Middle Stone Age to Later Stone Age; generally there is a lack of crucial sites and evidence that represent this change, however, several sites to the west of the proposed development in the eastern Cape Highlands, north in eastern Lesotho and the Drakensburg in KwaZulu Natal have been dated to this time period. By the time of the Later Stone Age the genus *Homo*, in southern Africa, had developed into *Homo sapiens*, and in Europe, had already replaced *Homo neanderthalensis*.

The Later Stone Age is marked by a series of technological innovations, new tools and artefacts, the development of economic, political and social systems, and core symbolic beliefs and rituals. The stone toolkits changed over time according to time-specific needs and raw material availability, from smaller microlithic Robberg (20/18 000-14 000 ya), Wilton (8 000-the last 500 years) Industries and in between, the larger Albany/Oakhurst (14 000-8 000ya) and the Kabeljous (4 500-the last 500 years) Industries. Bored stones were used as part of digging sticks, grooved stones for sharpening and grinding, and stone tools fixed to handles with mastic also become more common. Fishing equipment such as hooks, gorges and sinkers also appear within archaeological excavations. Polished bone tools such as eyed needles, awls, linkshafts and arrowheads also become a more common occurrence. Most importantly bows and arrows revolutionized the hunting economy. It was only within the last 2 000 years that earthenware pottery was introduced, before then tortoiseshell bowls were used for cooking and ostrich eggshell (OES) flasks were used for storing water. Decorative items like ostrich eggshell and marine/fresh water shell beads and pendants were made.

Hunting and gathering made up the economic way of life of these communities; therefore, they are normally referred to as hunter-gatherers. Hunter-gatherers hunted both small and large game and gathered edible plantfoods from the veld. For those that lived at or close to the coast, marine shellfish and seals and other edible marine resources were available for gathering. The political system was mainly egalitarian, and socially, hunter-gatherers lived in bands of up to twenty people during the scarce resource availability dispersal seasons and aggregated according to kinship relations during the abundant resource availability seasons. Symbolic beliefs and rituals are evidenced by the deliberate burial of the dead and in the rock art paintings and engravings scattered across the southern African landscape.

The majority of hunter-gatherer archaeological sites found usually date from the past 10 000 years where San hunter-gatherers inhabited the landscape living in rock shelters and caves as well as on the open landscape. These latter sites are difficult to find because they are in the open veld and often covered by vegetation and sand. Sometimes these sites are only represented by a few stone tools and fragments of bone. The preservation of these sites is poor and it is not always possible to date them (Deacon and Deacon 1999). Caves and rock shelters, however, in most cases, provide a more substantial preservation record of pre-colonial human occupation.

Later Stone Age sites occur both at the coast (caves, rock shelters, open sites and shell middens) and in the interior (caves, rock shelters and open sites) across southern Africa. There are more than a few significant Later Stone Age sites in the Eastern Cape. The most popular are the type-sites for the above-mentioned stone artefact industries, namely Wilton (for the Wilton Industry), Melkhoutboom (for the Albany Industry), both rock shelters situated to the west of Grahamstown, and Kabeljous Rock Shelter (for the Kabeljous Industry) situated just north of Jeffreys Bay. Caves and rock shelters that were occupied by the San during the Later Stone Age sometimes contain numerous paintings along the walls.

According to Derricourt (1977) open Later Stone Age sites in the Transkei and Ciskei are mostly located close to water regardless of whether it may be seasonal or perennial and water courses and notes that lydianite (indurated shale / hornfels) is predominant as a raw material. He also notes that it is possible that Later Stone Age open sites may be distinguished by those containing pottery and those without.

7.4. Last 2 000 years – Khoekhoen Pastoralism

Until 2 000 years ago, hunter-gatherer communities traded, exchanged goods, encountered and interacted with other hunter-gatherer communities. From about 2 000 years ago the social dynamics of the southern African landscape started changing with the immigration of two 'other' groups of people, different in physique, political, economic and social systems, beliefs and rituals. One of these groups, the Khoekhoen pastoralists or herders entered southern Africa with domestic animals, namely fat-tailed sheep and goats, travelling through the south towards the coast. Khoekhoen pastoralist sites are often found close to the banks of large streams and rivers. They also introduced thin-walled pottery common in the interior and along the coastal regions of southern Africa. Their economic systems were directed by the accumulation of wealth in domestic stock numbers and their political make-up was more hierarchical than that of the hunter-gatherers.

The most significant Khoekhoen pastoralist sites in the Eastern Cape include Scott's Cave near Patensie (Deacon 1967), Goedgeloof shell midden along the St. Francis coast (Binneman 2007) and Oakleigh rock shelter near Queenstown (Derricourt 1977). Often, these archaeological sites are found close to the banks of large streams and rivers. It is much more difficult to locate Khoekhoen open sites, owing to their settlement pattern and lack of stone artefacts, makes evidence of occupation almost 'invisible'.

7.5. Last 2 000 Years - The Iron Age

The Nguni-speaking agropastoralists or 'first-farming communities' or Iron Age communities entered southern Africa along the east coast within the last 2 000 years. They owned domestic stock, namely goats, sheep and cattle. Their pottery was different to that of the Khoekhoe, in the shape, thickness, heavy decoration and variety of the vessels. First farming communities lived a relatively sedentary way of life, they planted sorghum

and millet, and were therefore limited to settle in the summer rainfall areas. In addition, first farming communities possessed the skill of metal working, having the ability to mine and work iron, copper, tin and even gold. Their economic systems were also based on the accumulation of wealth through ownership and their political organization was slightly more hierarchical than that of the Khoekhoen.

Much research has been conducted on the Iron Age (IA) across southern Africa, therefore resulting in well-established chronological and typological frameworks and settlement and economic patterns for the Iron Age sequence (Huffman 2007). The Iron Age sequence is based on ceramic phases determined by vessel profile and decoration motif and placement.

According to Huffman (2007) an eastern migration stream, known as the Chifumbaze Complex spread southwards from East Africa south into southern Africa during the period of about AD 200–300 where several KwaZulu-Natal and north-Eastern Cape sites were occupied. The Early Iron Age sites in the Eastern Cape dates to between circa AD 600 to AD 900 and can be divided into the following ceramic facies (Maggs 1989; Huffman 2007):

- Msuluzi (AD 500-700);
- Ndondondwane (AD 700 – 800);
- Ntshekane (AD 800 – 900).

Thicker and decorated pottery sherds, kraals, possible remains of domesticated animals, upper and lower grindstones, storage pits, metal and iron implements are associated with identifying Early Iron Age sites. The sites are generally large settlements, but the archaeological visibility may in most cases be difficult owing to the organic nature of the homesteads. Additional evidence of these agropastoralist groups derives from rock paintings of cattle painted by hunter-gatherer groups who encountered or interacted with these communities. The bones of cattle and sheep excavated at Oakleigh Shelter near Queenstown may be an indication of possible stock theft (Derricourt 1977). The Early Iron Age (EIA) first-farming communities during the first millennium AD generally preferred to occupy river valleys within the eastern half of southern Africa owing to the summer-rainfall climate that was conducive for growing millet and sorghum.

In comparison to other areas containing Iron Age sites only a small amount of Iron Age research has been conducted in the Eastern Cape thus far. Earlier investigations into the Early Iron Age in the Transkei and Ciskei includes work at Buffalo River Mouth (Wells 1934; Laidler 1935), at Chalumna River Mouth (Derricourt 1977) and additional research by Feely (1987) and Prins (1989). Early Iron Age Sites (EIA) sites also include Kulubele situated in the Great Kei River Valley near Khomga (Binneman 1996), Ntsitsana situated in the interior Transkei, 70 km west of the coast, along the Mzimvubu River (Prins & Granger 1993), and Canasta Place situated on the west bank of the Buffalo (Qonce) River (Nogwaza 1994). Along the coast, near Coffee Bay, Early Iron Age sites have been dated from AD 670 and includes the sites of Mpame and Mqanduli. Early Iron Age pottery scatters have been documented along several area of the Wild Coast coastline including Zig-Zag Cave near Port St Johns (Derricourt 1977).

In relation to the proposed development site, Early Iron Age sites occur as far inland as the limit of the woodland (savanna) vegetation mainly in the Eastern Valley Bushveld in deeply incised river valleys in the basins of the Mzimvubu and Mzintlana Rivers up to 100 km (Feely & Bell-Cross 2011). Ntsitsana is a first millennium farming site (AD 650 - 950) located on alluvial flats on the outer bend of a meander of the Mzimvubu River (situated near Tanbankula 70 km inland from the coast and 30 km south of the current development site). Surface scatters of potsherds indicated that the site belonged to the oldest known phase of farming settlement in Transkei (Prins 1993). The pottery associated with the site is of the Msuluzi and Ndongwane facies (Huffman 2007).

There has in the past been some speculation that Early Iron Age populations may have spread well south of the Transkei into the Ciskei, possibly up to the Great Fish River (Binneman *et al.* 1992), however, no further research has been undertaken to confirm these statements.

Hilltop settlement is mainly associated with Later Iron Age (LIA) settlement patterns that occurred during the second millennium AD. The Later Iron Age communities later moved from settlement in river valleys to the hilltops. Later Iron Age settlements have been formally recorded by the Albany Museum. With the exception of the Tembu, stone buildings which characterizes the Iron Age sites of Sotho areas, is absent in the Transkei and Ciskei, and a pattern of some mobility without, it is presumed, a stone working technology of significance, makes the allocation of sites a major problem (Derricourt 1973).

Huffman's (2004) ceramic sequence among the Nguni groups contains three facies:

- Blackburn (AD 1 050 – 1 300): along north and south coasts of KwaZulu Natal;
- Moor Park (AD 1 300 – 1 700): first recorded in Estcourt Midlands then along Transkei coast where it was called Umgazana Ware. Appears south of the Mtamvuma River and it is suggested that it was the beginning of the division between southern and northern Nguni people and probably continued into the nineteenth century;
- Nqabeni (AD 1 700 – 1 850): style centres on KwaZulu Natal;

In relation to the proposed area for development three second millennium Late Iron Age sites, Ngosi, Nqukwe Traditional Cwera Homestead and Nqukwe dating to between AD 1820 and AD 1955 were identified near to the Ntsitsana site along the banks of the Mzimvubu River (Prins 1993).

Several Late Iron Age, historical settlements, as well as recent settlements have been documented near Mount Ayliff area and within the wider former Transkei region by cultural resource management practitioners.

7.6. Human Remains

It is difficult to detect the presence of archaeological human remains on the landscape as these burials, in most cases, are not marked at the surface. Human remains are usually observed when they are exposed through erosion or construction activities for development. Several human remains have been rescued eroding out of the dunes along this coastline. In some instances, packed stones or rocks may indicate the presence of informal pre-colonial burials.

The Albany Museum Database holds records of human remains that have been exposed and collected for conservation and curation within the wider region especially along the coastal areas. Cultural Resource Management practitioners whilst conducting archaeological heritage impact assessments have also recorded formal historical and contemporary cemeteries and informal burials within the wider region.

7.7. Rock Art (Paintings and Engravings)

Rock art is generally associated with the Later Stone Age period mostly dating from the last 5000 years to the historical period. It is difficult to accurately date the rock art without destructive practices. The southern African landscape is exceptionally rich in the distribution of rock art which is determined between paintings and engravings. Rock paintings occur on the walls of caves and rock shelters across southern Africa and are prolific in the Southern Drakensberg, north-eastern Cape extending the entire Drakensberg range into KwaZulu-Natal and Lesotho. Rock engravings are limited to the Karoo and Northern Cape Regions and do not generally occur within the north-eastern Cape region and Transkei region.

Rock art research within the Southern Drakensberg has been conducted by several researchers and students from the Rock Art Research Institute, University of the Witwatersrand, over a period of 25 years, with a well-established database of site from Maclear, Tsolo, Barkly East, Ugie, Dordrecht and the wider region and extent of the Drakensberg range and Maluti Mountains. The South African Rock Art Database established by the Rock Art Research Institute is a useful source for rock art site information across southern Africa.

7.8. Historical Period (Last 500 years)

7.8.1. Brief Historical Overview of the Establishment of King Williams Town

Reverend John Brownlee, from the London Missionary Society, established the Buffalo Mission on the bank of the Buffalo River in January 1826. By 1832, the mission consisted of five substantial buildings. The mission station was attacked and burnt by the Xhosa during the War of Hintsa (1834-1835). King Williams Town was then to serve as the military and administrative centre for the new Province of Queen Adelaide.

During May 1835, Governor D'Urban extended the colonial boundary of the Cape to the western bank of the Great Kei River extending the from the Keiskamma and Kei Rivers and south as far as the coast. The northern boundary, at this stage was indeterminate. However, by November 1835, D'Urban annexed the territory up to the Orange River in order to extend jurisdiction over Boers already grazing there and to neutralize Louis Trichardt's anti-British provocations (Lester 1998).

King Williams Town, which was to be established on the LMS land, was declared the capital of the annexed territory of the conquered Province of Queen Adelaide in May 1835, during the 6th Frontier War. King Williams Town was surrounded by a ring of defensive forts Fort Beaufort, Fort Cox, Fort Thompson, Fort Peddie, Fort Willshire (was re-occupied) and Fort Montgomery-Williams, and Fort Hill (King Williams Town) (thesis). The subsequent peace treaty signed allowed the Xhosa to remain in specifically designated areas, termed locations, however, the bulk of their lands were given to European occupation (SAHO)

It was soon realized that the colonial forces had little prospect of controlling the remote vastness of the province's Amatole Mountains and the continued resistance from the Xhosa. The Province of Queen Adelaide was retained for 18 months before being abandoned under pressure from the imperial government. This short-lived but significant annexation represented 'the first British attempt to extend control over a large body of formerly independent Africans (Martens 2015). By July 1836, the British Cor renounced its claim to the Province of Queen Adelaide and ordered the withdrawal of all troops in the area, retaining only King Williams Town and Fort Cox (thesis)

By the end of 1848, King Williams Town's importance was once again re-established when it became the capital of the new Crown Colony, British Kaffraria (thesis). The 8th Frontier War (the War of the Axe), brought destruction to the LMS and the lands between the Keiskamma and Great Kei Rivers were annexed to the Cape Colony. The new territory, known as British Kaffraria was divided into seven counties named Bedfordshire, Cambridgeshire, Lincolnshire, Middlesex, Yorkshire, Sussex and Northumberland which was roughly coincidental with the tribal divisions existing in the region before the war (SAHO).

By the end of the 8th Frontier War, King Williams Town, had become a large military base and a number of structures had been built. The town was largely planned by the Royal Engineers and built with military labour.

During 1860 British Kaffraria territory was proclaimed a Crown Colony with divisions at East London, King Williams Town, Stutterheim, Gonube, Keiskammahoek and Middeldrift (SAHO). In April 1862, the military headquarters for the Eastern Frontier were moved from Grahamstown to King Williams Town as Grahamstown was already experiencing an economic depression. However, this endeavor was short-lived owing to the immense costs of housing the additional troops and the Cape colony High Commission Sir Phillip Wodehouse, recommended the reestablishment of Grahamstown as the military headquarters (Welsh 2000, Garson 1992, Lamar & Thompson 1981, Caffrey 1973) (thesis)

In 1866 King Williams Town was incorporated into the Cape Colony. The town's so-called coloured and Xhosa inhabitants also lived at Brownlee Station, Bidhili, Tsolo (later Ginsberg), Gillam's Drift (subsequently Schornville) and Breidbach. They were free to erect their own houses and municipal control was limited, however, they could not own land. Until 1870 the town's commercial and administrative significance grew and expanded along the plain on the left bank of the Buffalo River. At least four separate urban developments are clearly discernable (before 1870): New Town, just across the Fleet Ditch, Pensioner's Village, German Village and the areas on the lower slopes of the hills were wealthy residents erected their dwellings (Webb 2013).

In May 1880: King Williams Town was connected by rail via Blaney Junction, with the centres of East London, Kei Road, Kubusie, Cathcart and Queenstown which proved to be a tremendous boost to the commercial interests of the town. By 1889, King Williams Town had become one of the largest trading districts in the Cape Colony, largely due to trade with the Xhosa and had come to be known as "the wholesale emporium of East London".

At the turn of the century, King Williams Town was beginning to stagnate in relation to East London, largely because of their harbor facilities. After 1910: British Kaffraria became known as the Border region (SAHO). King Williams Town remained a garrison town, until 1913, and the military presence contributed greatly to the social scene, entertainment and sport. Between 1946-1982: Segregation was further imposed on the landscape with the establishment of townships like Zwelitsha (1946), Schornville (1959), Dimbaza (1968), and Phakamisa (c. 1982) and determined to a large extent, the development of the town.

8.7.2. Brief Historical Overview of Kaffrarian German Settlers (1856 – 1877)

British Kaffraria experienced three waves of German immigrants in 1856, 1858, and 1877. The first of the German settlers were members of the German Crimean Legion in 1856. The British German Legion (or Anglo-German Legion) was a group of German soldiers recruited to fight for Britain in the Crimean War. It was disbanded near the end 1856, having seen little or no military action due to the war having ended. The majority of the members of the legion were resettled in the Eastern Cape Colony, in South Africa. As a result, to this day there are place names of German origin in the area around King Williams Town, including the town of Stutterheim. Ten locations at which German military settlers were placed that survived, five were alongside or near existing towns that enhanced their viability (Peddie, King Williams Town, Keiskammahoek, Cambridge and Panmure). Only five settlements established for German military settlers (about 23%) could be said to have become towns in their own right – Frankfort, Hamburg, Berlin, Breidbach and Stutterheim (Webb 2013).

The 1877 settler scheme was much smaller than the first two schemes – only 700 Germans arrived in the Eastern Cape in 1877 under the auspices of this latter recruitment drive (Schell 1954: 217) They did not settle in the same places as the previous German Settlers and most moved to "Kwelegha, Lilyfontein and Paardekraal" (Schnell 1954:218), with only

three locations showing any overlap at all between the 1857-1858 settlements and these later settlers, namely Keiskammahoek, East London, and King Williams Town (Schnell 1954:218) (Zipp 2012).

8. DESCRIPTION OF THE PROPERTY

8.1. Location data

The proposed development area is situated 5 km east of King Williams Town off the N2 National Road en route to East London. The site for the proposed pumpstation is situated between Pieter Swartz Close and the N2 National Road in the suburb / village of Breidbach. The area is approximately 2 hectares in extent. The pipeline is mostly located in the road reserve, with small sections crossing open, undeveloped areas. The pipeline will run from June Street into Daniel Crescent and into Pieter Swartz Close within Breidbach. From the pumpstation the pipeline will follow the footbridge across the N2 National Road and along the access road to Acorn Valley towards Welkom Road. The pipeline will continue along Welkom Road into Zwelitsha Township.

8.2. Map

1:50 000 Topographic Map: 3227 CD KING WILLIAMS TOWN

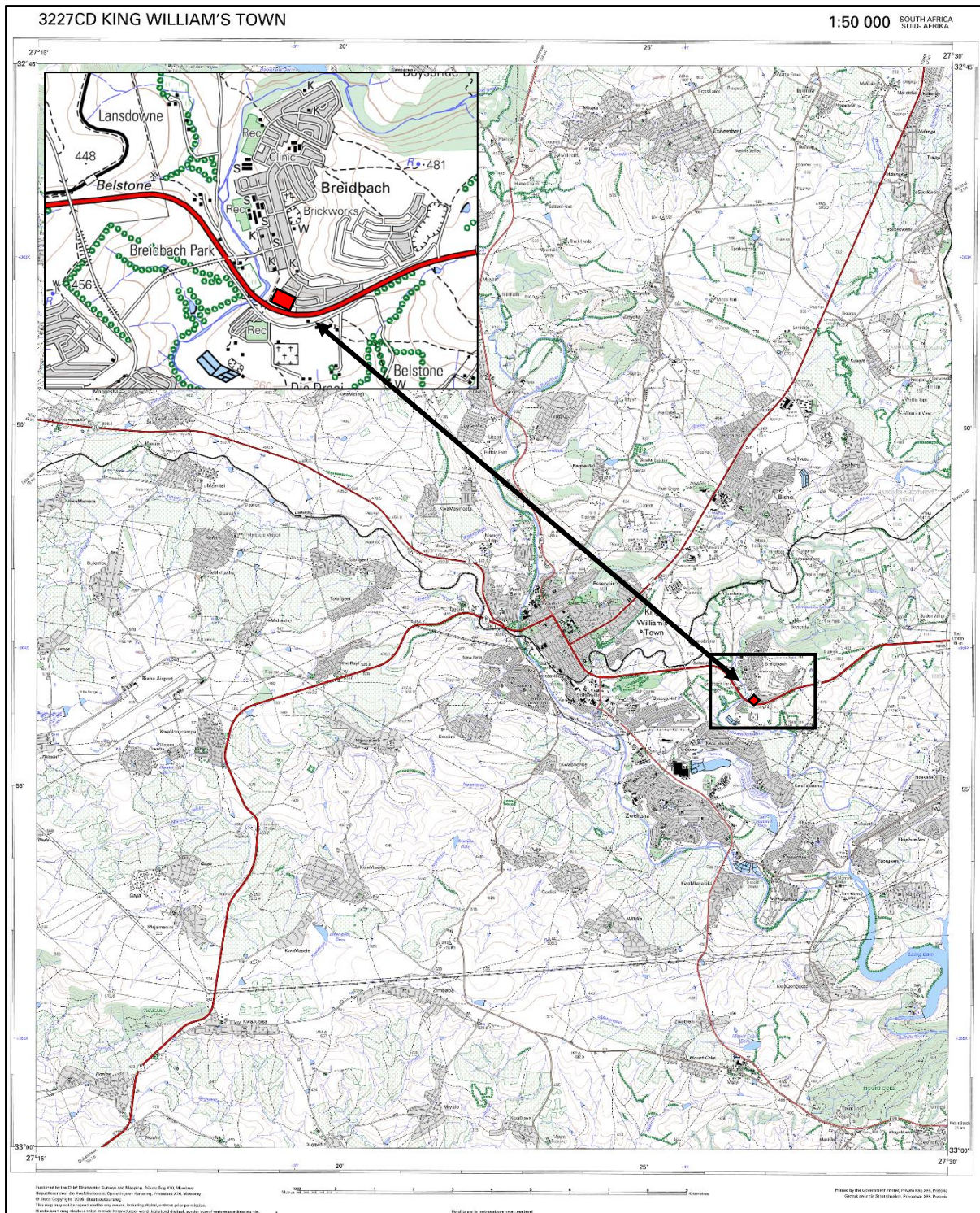


Figure 1. 1:50 000 topographic map 3227 CD KING WILLIAMS TOWN (2005 edition) showing the location of the proposed Cross Catchment Transfer Pumping Scheme (Sewer Pipeline), Breidbach, near King Williams Town.

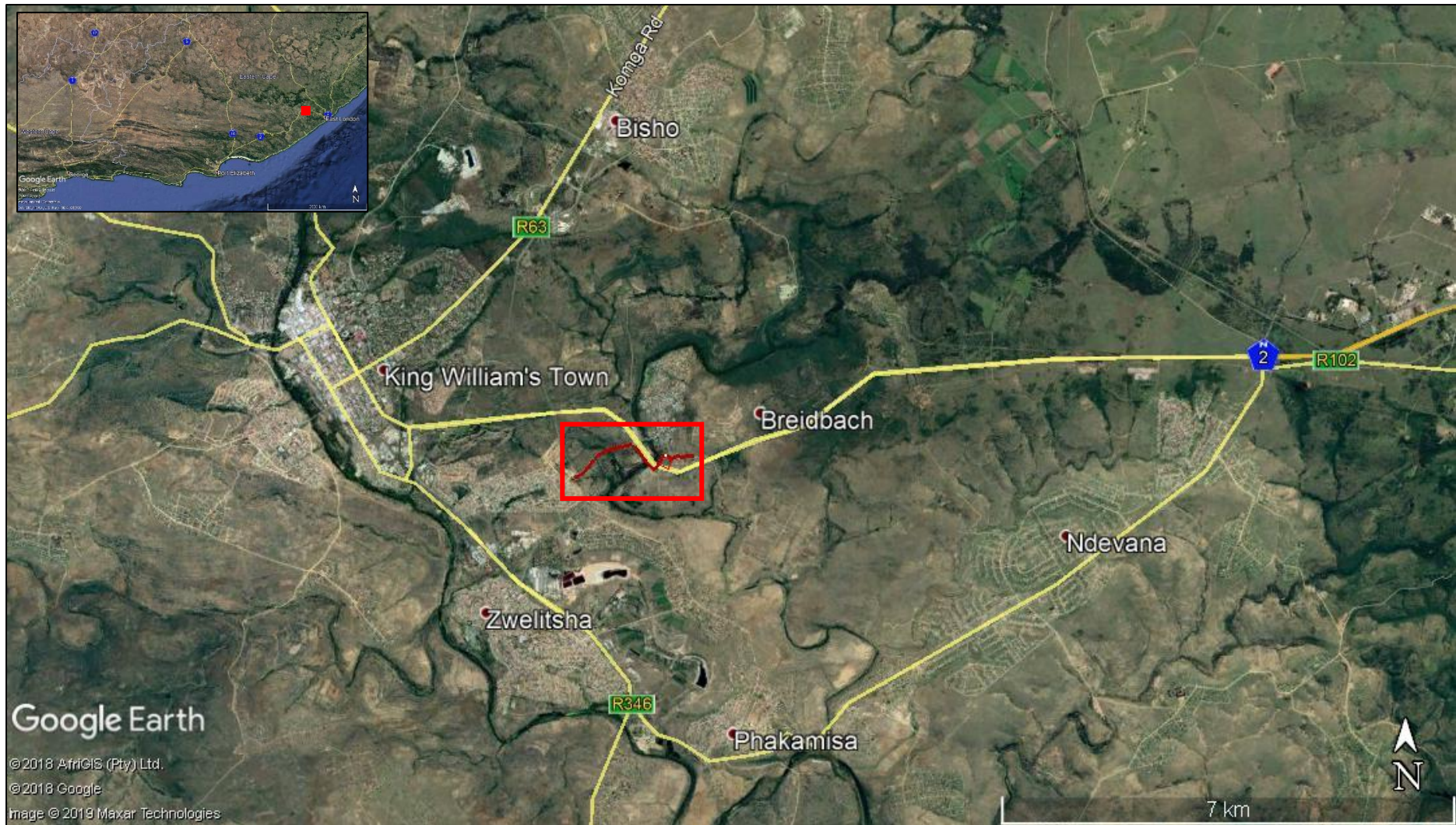


Figure 2. Google Earth generated map of the location of the proposed showing the location of the proposed Cross Catchment Transfer Pumping Scheme (Sewer Pipeline), Breidbach, near King Williams Town



Figure 3. Close-up aerial view of the location of the proposed Cross Catchment Transfer Pumping Scheme (Sewer Pipeline), Breidbach, near King Williams Town



Figure 4. View of the proposed Cross Catchment Transfer Pumping Scheme (Sewer Pipeline) including the originally intended area for the pump station (red outline) and the relocated position (white block outline) between Breidbach and N2 National Road showing the survey track and location of archaeological and other heritage resources.

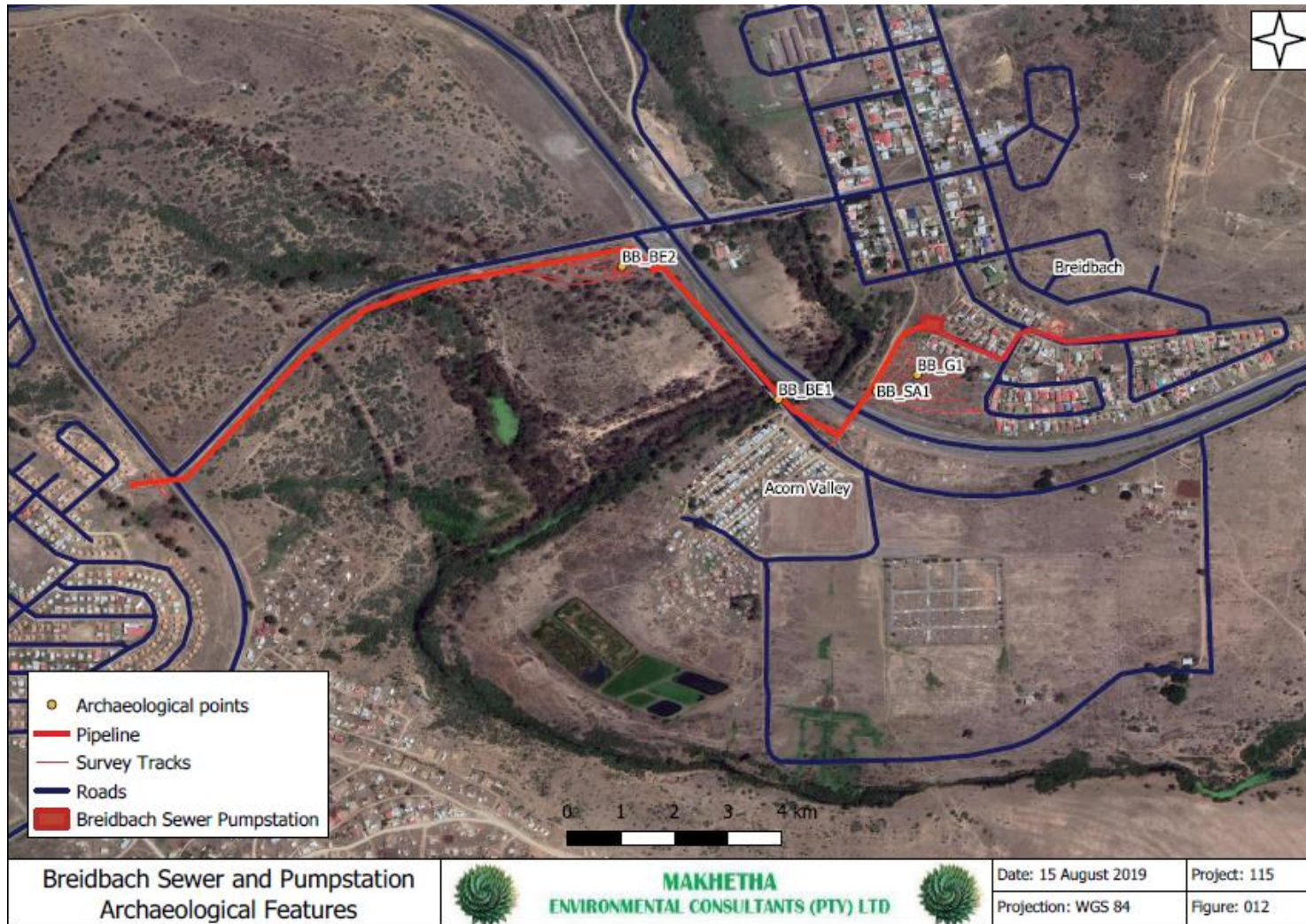


Figure 5. View of the archaeological and other heritage sites documented along the route for the proposed Breidbach Sewer Pumpstation and pipeline (map courtesy of Makhetha Environment Consultants (PTY) LTD.

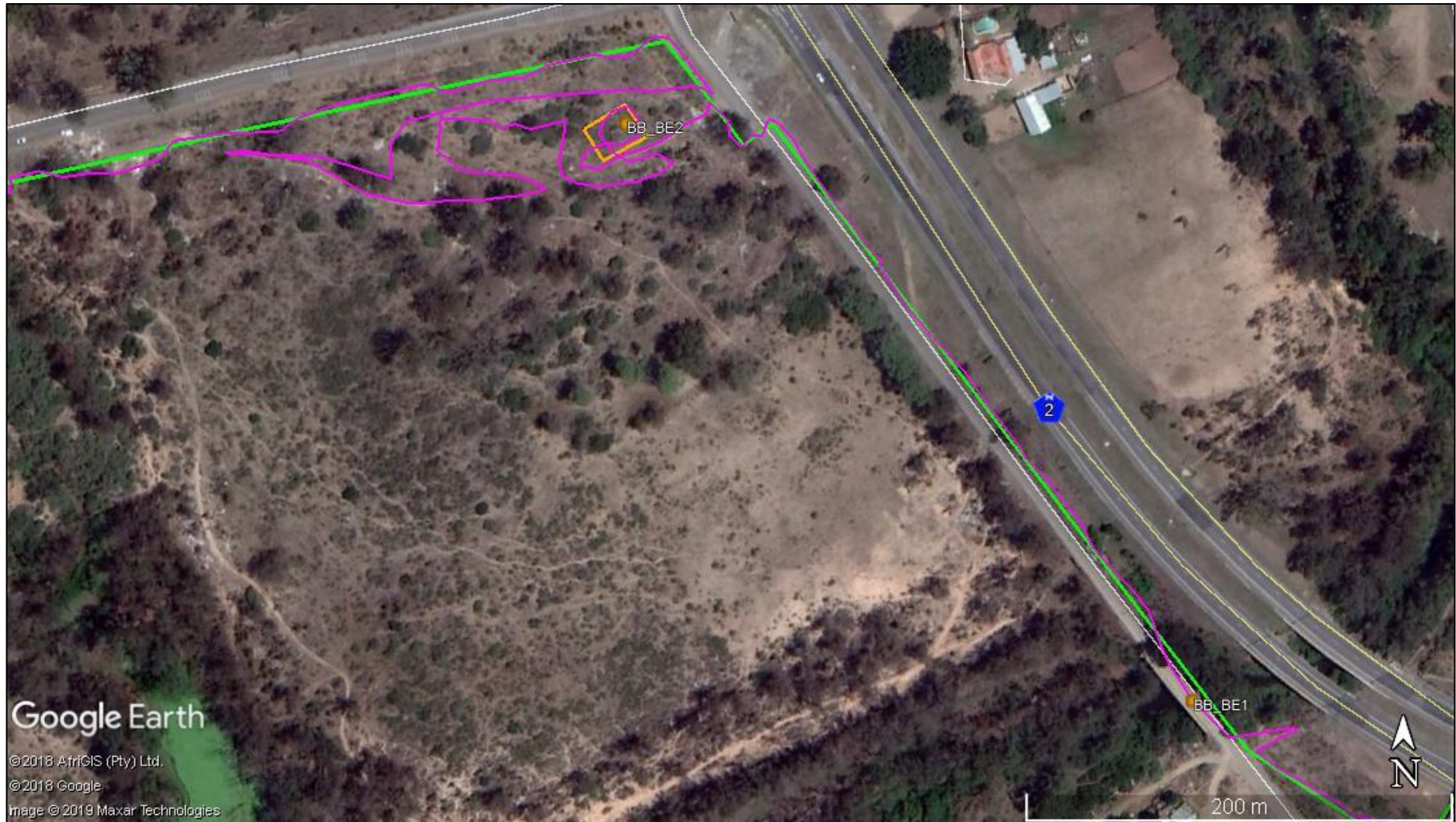


Figure 6. View of a section of the proposed Cross Catchment Transfer Pumping Scheme (Sewer Pipeline) showing the survey track and location of the bridge (BB_BE1) and the ruins (BB_BE2).

9. ARCHAEOLOGICAL INVESTIGATION

9.1. Methodology

A literature review was conducted prior to the field survey to establish the potential archaeological and heritage sites that may be encountered within the proposed area and provide insight into the archaeological background of the wider region. No systematic archaeological research has been conducted within the proposed area and immediate surrounds. Several archaeological, heritage and cultural impact assessments have been conducted within the King Williams Town, Breidbach, and East London area. These assessments recorded colonial heritage sites as well as Early, Middle and Later Stone Age sites including coastal shell middens, as well as graves and buildings of architectural significance.

The survey conducted on foot. GPS co-ordinates and photographs were taken using a Garmin Oregon 650 GPS unit.

9.2. Results of the Archaeological Investigation

The areas proposed for the pumpstation (Figures 7 – 14) and pipeline route have in the past been heavily disturbed. Archaeological visibility was generally good within the vicinity of the proposed pumpstation area and originally intended area. The footpaths and exposed surface areas were investigated for the possibility of identifying archaeological and other heritage resources. The area has been disturbed by the construction of an underground pipeline and manholes on the southern boundary of the site as well as evidence of diggings. The site is also used for informal dumping.

The proposed pipeline route will be attached to the footbridge that links Breidbach and Acorn Valley (Figures 15 – 16), but mostly follows the road reserve which in the past has been disturbed by the construction of the internal roads within Breidbach Village, towards Acorn Valley, and along Welkom Road (Figures 18-23). Most of the area along Welkom Road is covered in dense vegetation which obscured archaeological visibility.

One stone artefact (BB_SA1) was observed along the footpath within the originally intended for the proposed development of the pumpstation in Breidbach. The stone artefact occurs in secondary context and no other stone artefacts were observed. However, it is likely that stone artefacts may be uncovered during the proposed construction activities, between the surface and 50 cm – 80 cm below ground.

An unidentified large mound (BB_G1) resembling an informal burial with some stone packing was identified within the originally intended area proposed for the pumpstation in Breidbach (Figures 30-32). The mound does not resemble a dumping area and no historical information. The historian at the Amathole Museum was consulted for additional information and assistance, however, until submission of the report, no information confirming that the mound is a burial was acquired.

The originally intended area for the proposed development of the pumpstation has been changed to a smaller footprint located at the western end of Pieter Swartz Close.

The bridge (BB_BE1) along the road to Acorn Valley is dated to 1948, older than 60 years (71 years old), and is protected under Section 34 of the NHRA 25 (Figure 25). The appropriate legislative permitting procedure must be followed in order to attach the proposed pipeline to the bridge.

The remains of ruins of a stone packed structure or dwelling (BB_BE2), most likely older than 60 years, was documented along the road that runs from Welkom Road to Acorn Valley (Figures 26 – 27). The wider area was investigated for any possible artefact scatters; however, none were observed. The structure is protected under Section 34 of the NHRA 25 of 1999. It is unlikely that the construction of the pipeline would negatively impact on the structure.

Other built environment structures were identified, but these do not have any heritage significance (Figures 28 – 29).



Figure 7. View of the general landscape of the area around the proposed location of the pump station and pipeline route.



Figure 8. View of the general landscape of the area around the proposed location of the pump station and pipeline route.



Figure 9. View of the general landscape of the area around the proposed location of the pump station and pipeline route.



Figure 10. View of the general landscape of the area around the proposed location of the pump station and pipeline route.

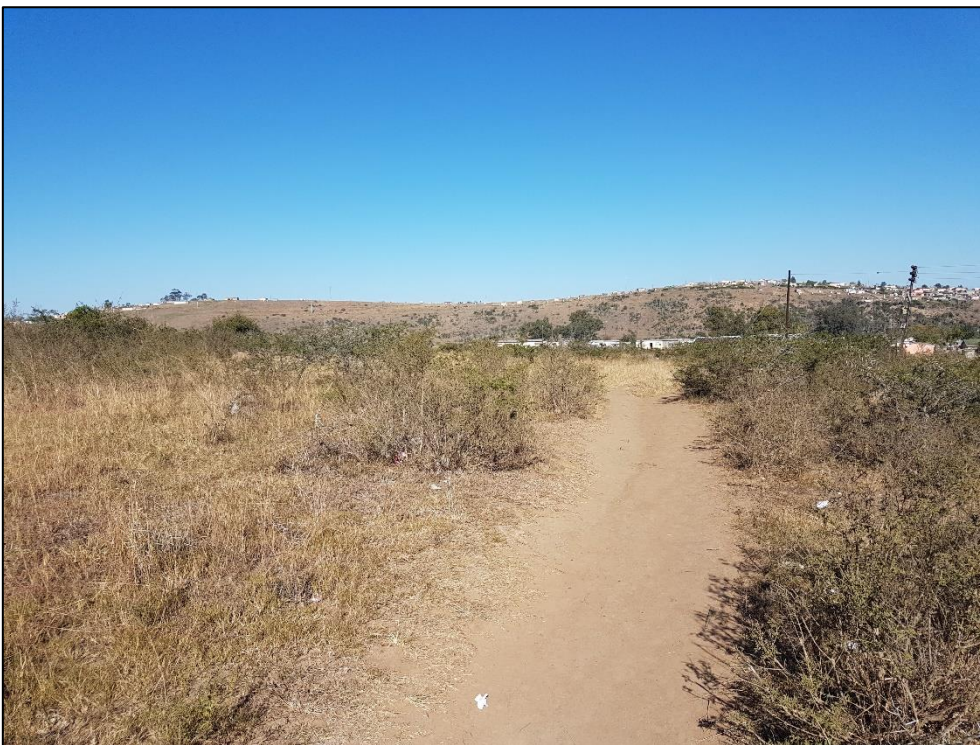


Figure 11. View of the general landscape of the area around the proposed location of the pump station and pipeline route.



Figure 12. View of the general landscape of the area around the proposed location of the pump station and pipeline route.

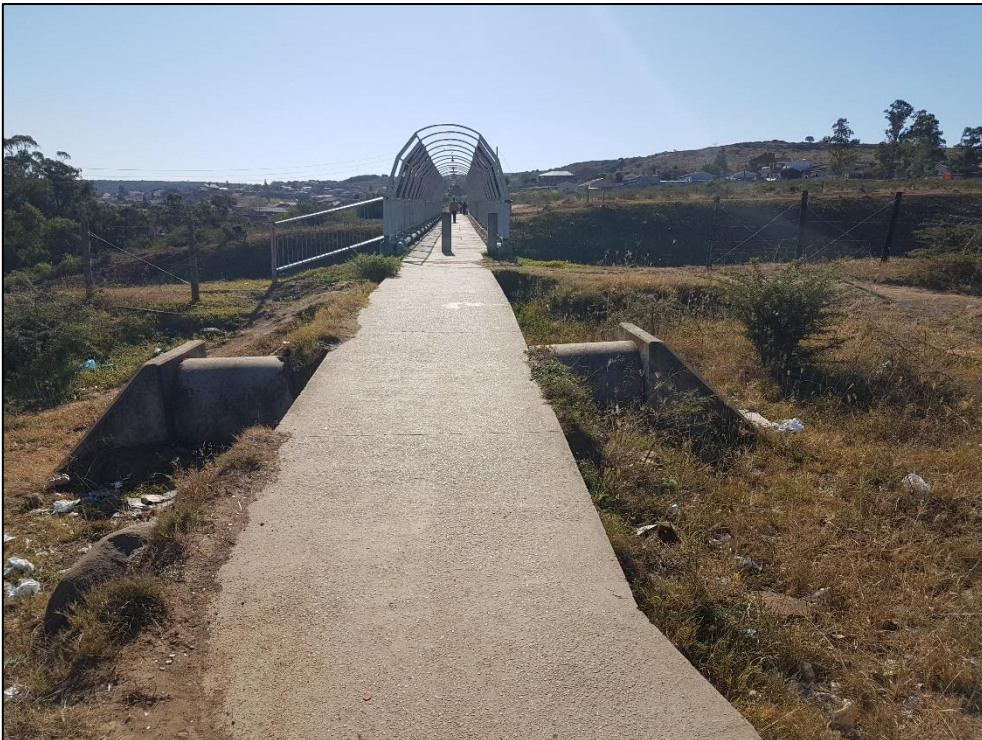


Figure 13. View of the foot bridge between Breidbach and Acorn Valley that the pipeline route will follow.



Figure 14. View of the pipeline routes from the foot bridge along the access road to Acorn Valley.



Figure 15. View of the pipeline route along Welkom Road towards Zwelitsha showing the general landscape.



Figure 16. View of the pipeline route along Welkom Road towards Zwelitsha showing the general landscape.

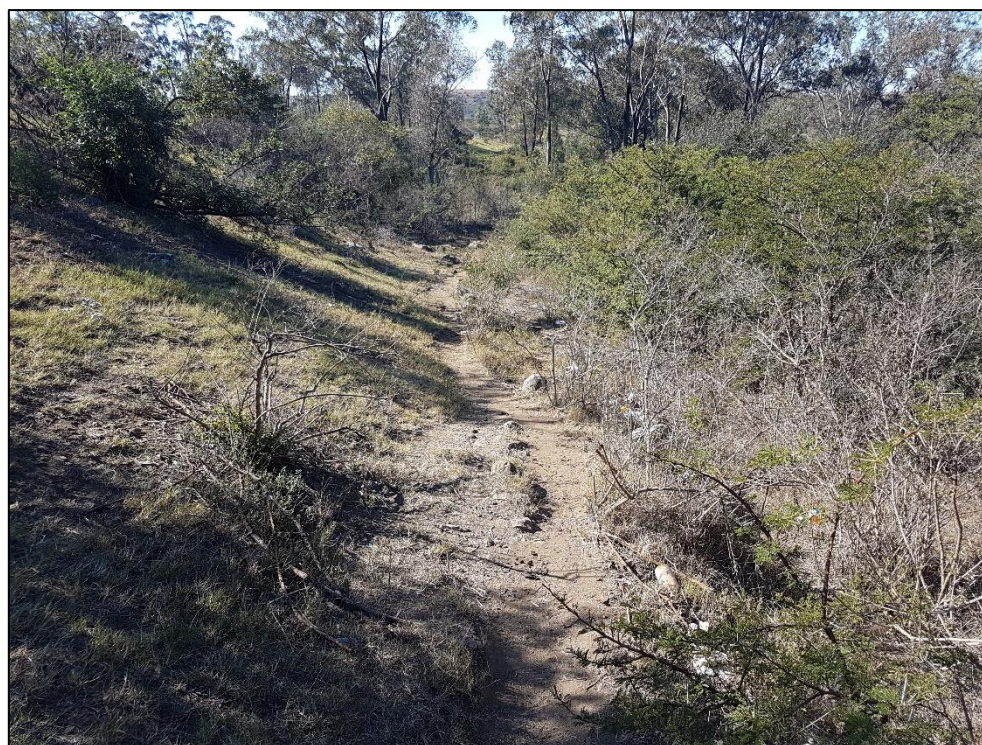


Figure 17. View of the pipeline route along Welkom Road towards Zwelitsha showing the general landscape.



Figure 18. View of the pipeline route along Welkom Road towards Zwelitsha showing the general landscape.



Figure 19. View of the pipeline route along Welkom Road towards Zwelitsha showing the general landscape.



Figure 20. View of the pipeline route along Welkom Road towards Zwelitsha showing the general landscape.



Figure 21. View of the pipeline route along Welkom Road towards Zwelitsha showing the general landscape.



Figure 22. View of the dedication to the opening of the footbridge between Breidbach and Acorn Valley in 2003 situated on the edge of the proposed area for the pump station.



Figure 23. View of the bridge along the access road to Acorn Valley built in 1948.



Figure 24. View of the ruins near the corner of Welkom Road.



Figure 25. View of the ruins near the corner of Welkom Road.



Figure 26. View of a built environment structure along Welkom Road.



Figure 27. View of a road marker along the Welkom Road.



Figure 28. View of the mound situated outside the proposed area for the pump station.



Figure 29. View of the mound situated outside the proposed area for the pump station.



Figure 30. View of a mound situated along the route of the pipeline next to Welkom Road.

10. COORDINATES AND SITES FOR THE PROPOSED BREIDBACH CROSS CATCHMENT TRANSFER PUMPING SCHEME (SEWER PIPELINE), BREIDBACH, KING WILLIAMS TOWN, AMATHOLE DISTRICT MUNICIPALITY.

Table 1. Coordinates and sites for the proposed Breidbach Cross Catchment Transfer Pumping Scheme (Sewer Pipeline), Breidbach, King Williams Town, Amathole District Municipality.

REFERENCE	DESCRIPTION	CO-ORDINATE	HERITAGE GRADING
BB_SA1	Isolated stone artefact (located outside of the proposed development area)	32°53'46.50"S; 27°26'42.17"E	'General' Protection C (Field Rating IV C): Low significance).
BB_BE1	Bridge dated to 1948 (71 years old)	32°53'47.02"S; 27°26'35.61"E	Not Graded
BB_BE2	Remains of the ruins of a structure	32°53'38.14"S; 27°26'25.17"E	Not Graded
BB_G1	Mound resembling a burial (located outside of the proposed development area)	32°53'45.38"S; 27°26'44.89"E	Not Graded

11. CULTURAL LANDSCAPE

Cultural landscapes are a significant considering factor when conducting various archaeological and heritage impact assessments for proposed developments. The areas investigated for the proposed Breidbach Cross Catchment Transfer Pumping Scheme (Sewer Pipeline), Breidbach, King Williams Town, Amathole District Municipality, considered as having a low cultural heritage significance.

This section gives a brief introduction to the concept of cultural landscape and its relation to various aspects of the dynamic interaction of humans as cultural agents and the landscape as a medium. A description of the interwoven relationships of humans with the landscape over time will be given including the archaeological, historical, and contemporary connections. Lastly, the living heritage makes up a small part of the study undertaken, its significance will be highlighted in relation to the communities who still identify with the area and retain a sense of identity to the landscape.

11.1. Concept of Cultural Landscape

Cultural landscapes can be interpreted as complex and rich extended historical records conceptualised as organisations of space, time, meaning, and communication moulded through cultural process. The connections between landscape and identity and, hence, memory are fundamental to the understanding of landscape and human sense of place. Cultural landscapes are the interface of culture and nature, tangible and intangible heritage, and biological and cultural diversity. They represent a closely woven net of relationships, the essence of culture and people's identity. They are symbol of the growing recognition of the fundamental links between local communities and their heritage, human kind, and its natural environment. In contemporary society, particular landscapes can be understood by taking into consideration the way in which they have been settled and modified including overall spatial organisation, settlement patterns, land uses, circulation networks, field layout, fencing, buildings, topography, vegetation, and structures. The dynamics and complex nature of cultural landscapes can be regarded as text, written and read by individuals and groups for very different purposes and with very many interpretations. The messages embedded in the landscape can be read as signs about values, beliefs, and practices from various perspectives. Most cultural landscapes are living landscapes where changes over time result in a montage effect or series of layers, each layer able to tell the human story and relationships between people and the natural processes.

The impact of human action of the landscape occurs over time so that a cultural landscape is the result of a complex history and creates the significance of place in shaping historical identities by examining a community's presence or sense of place. The deeply social nature

of relationships to place has always mediated people's understanding of their environment and their movements within it, and is a process which continues to inform the construction of people's social identity today. Social and spatial relationships are dialectically interactive and interdependent. Cultural landscape reflects social relations and institutions and they shape subsequent social relations.

Cultural landscapes tell the story of people, events, and places through time, offering a sense of continuity, a sense of the stream of time. Landscapes reflect human activity and are imbued with cultural values. They combine elements of space and time, and represent political as well as social and cultural constructs. Culture shapes the landscape through day-to-day routine and these practices become traditions incorporated with a collective memory the ultimate embodiments of memorial consciousness', examples such as monuments, annual events and, archives. As they have evolved over time, and as human activity has changed, they have acquired many layers of meaning that can be analysed through archaeological, historical, geographical, and sociological study.

Indigenous people, European explorers, missionaries, pastoralists, international and domestic travellers all looked or look at similar landscapes and experience different versions of reality. Regardless of the power of different cultural groups, however, all groups create cultural landscape and interpret them from their own perspectives. This gives rise to tensions and contradictions between groups, invariably expressed in landscape forms as well.

The dynamics and complex nature of cultural landscapes can be regarded as text, written and read by individuals and groups for very different purposes and with very many interpretations. The messages embedded in the landscape can be read as signs about values, beliefs, and practices from various perspectives.

Most cultural landscapes are living landscapes where changes over time result in a montage effect or series of layers, each layer able to tell the human story and relationships between people and the natural processes. A common theme underpinning the concept of ideology of landscape itself is the setting for everything we do is that of the landscape as a repository of intangible values and human meaning that nurture our very existence. Intangible elements are the foundation of the existence of cultural landscapes, and that are still occupied by contemporary communities, Landscape, culture and collective memory of a social group are intertwined and that this binds the individuals to their community. Culture shapes their everyday life, the values bind gradually, change slowly, and transfer from generation to generation – culture is a form of memory. We see landscapes as a result of our shared system of beliefs and ideologies. In this way landscape is a cultural construct, a mirror of our memories and myths encoded with meanings which can be read and interpreted. Pivotal to the significance of cultural landscapes and the ideas of the ordinarily sacred is the realisation that it is the places, traditions, and activities of ordinary people that create a rich cultural tapestry of life, particularly through our

recognition of the values people attach to their everyday places and concomitant sense of place and identity.

Living heritage means cultural expressions and practices that form a body of knowledge and provide for continuity, dynamism, and meaning of social life to generations of people as individuals, social groups, and communities. It also allows for identity and sense of belonging for people as well as an accumulation of intellectual capital current and future generation in the context of mutual respect for human, social and cultural rights.

Protection of these cultural landscapes involves some management issues such as successful conservation is based on the continuing vital link between people and their landscapes. This link can be disrupted or affected by for instance economic reasons. Other threats can also be attributed to urban expansion and development, tourism, war and looting and something beyond our human intervention: natural disasters and climate change. Cultural landscape management and conservation processes bring people together in caring for their collective identity and heritage, and provide a shared local vision within a global context. Local communities need, therefore, to be involved in every aspect of identification, planning and management of the areas as they are the most effective guardians of landscape heritage.

Most elements of living heritage are under threat of extinction due to neglect, modernisation, urbanisation, globalisation, and environmental degradation. Living heritage is at the centre of people's culture and identity, it is important to provide space for its continued existence. Living heritage must not be seen as merely safeguarding the past, but it must be seen as safeguarding the logic of continuity of what all communities or social groups regard as their valuable heritage, shared or exclusive.

In some instances, villages may capitalise on local landscape assets in order to promote tourism. Travel and tourism activities are built around the quest for experience, and the experience of place and landscape is a core element of that quest. It is a constant desire for new experiences that drives tourism, rather than a quest for authenticity. It is, therefore, important to engage actively with the tourism industry so that aspects of life and landscape important to cultural identity, including connection with place are maintained.

11.2. Archaeological Landscape

The area was once part of an ancient landscape inhabited by various families of the genus *Homo*. Various studies recording archaeological sites and occurrences within the wider region stretching from wider regions of the regions of the former Ciskei, have reported on the evidence of the presence of *Homo erectus* (Early Stone Age), *Homo sapiens* (Middle Stone Age), and *Homo sapiens* (Later Stone Age). The only remains dating to the Early and Middle Stone Ages are stone artefacts as the organic evidence and sites have not been

preserved. The influence of climatic conditions and the rising and falling of the sea levels may also attribute to much archaeological site information being lost.

The region has a rich and yet not fully explored pre-colonial landscape dynamics of social and economic interaction between groups of hunter-gatherers, Khoekhoen, and Iron Age agropastoralists. Relationships have reciprocal, devious and feuding, and these deductions can be evidenced in the cultural materials uncovered in archaeological excavations. The region also informs of a time that very little is known about, the transition from the archetype Middle Stone Age period into the Later Stone Age, providing a valuable reconstruction of a time not as yet represented everywhere in South Africa.

11.3. Historical and Contemporary Landscape

The archaeological interpretation of the cultural landscape relies solely on the presence and surface visibility of artefacts left behind on the landscape by the populations who occupied and migrated through the proposed development area. A more comprehensive historical layer is able to be fitted onto the cultural landscape owing to the availability of written documents and the continuing existence of the traces left behind by European Settlers and the moulding of these traces used to shape the contemporary communities that occupies and regards itself attached to its present cultural landscape.

The contemporary cultural landscape is the product of centuries of human interaction, more so when the European Settlers entered the area. Remnants of these cultural interactions remain on the landscape, such as the built environment, features, artefacts, and marked and unmarked graves / burials with only oral histories and stories handed down from one generation to the next to remain in the collective memory of the community/ies living on the landscape.

12. RECOMMENDATIONS

The area is considered as having a *low archaeological heritage significance*. The built environment structures are protected under Section 34 of the NHRA. Development may proceed as planned; however, the following recommendations must be considered during the planning phase for proposed development:

1. The bridge (BB_BE1) dated to 1948 is protected under Section 34 of the National Heritage Resources Act, therefore if the proposed pipeline is to impact on the bridge, the developer must apply for a permit to conduct such work. The permit application can be completed and submitted to the Eastern Cape Provincial Heritage Resources Authority (ECPHRA) Built Environment permitting committee.
2. It is unlikely that the ruins of the structure (BB_BE2) situated near the corner of Welkom Road will be negatively impacted during the construction activities for the proposed pipeline. The area must be identified and the construction managers and staff

must be made aware of its historical significance and informed that the area must be damaged during the construction phases.

3. The mound (BB_G1) identified in the open space between Breidbach and the N2 National Road falls outside the proposed development area and will therefore not be negatively impacted during the development and associated construction activities.
4. If concentrations of pre-colonial archaeological heritage material and/or human remains (including graves and burials) are uncovered during construction, all work must cease immediately and be reported to the Albany Museum (046 622 2312) and/or the Eastern Cape Provincial Heritage Resources Agency (ECPHRA) (043 745 0888) so that systematic and professional investigation/excavation can be undertaken. Phase 2 mitigation in the form of test-pitting/sampling or systematic excavations and collections of the pre-colonial shell middens and associated artefacts will then be conducted to establish the contextual status of the sites and possibly remove the archaeological deposit before development activities continue.
5. Construction managers/foremen and/or the Environmental Control Officer (ECO) should be informed before construction starts on the possible types of heritage sites and cultural material they may encounter and the procedures to follow when they find sites.
6. The developer / ECO / or construction manager must apply to the Eastern Cape Provincial Heritage Resources Agency (ECPHRA) for a destruction permit to disturb the stone artefact scatters prior to the commencement of the development.

13. CONCLUSION

The proposed area for development is of low archaeological cultural sensitivity. Taking into consideration the recommendations, the development may proceed as planned.

If any archaeological or heritage material were to be discovered it is very unlikely that it would be *in situ*. However, there is always a possibility that human remains or other archaeological and historical material may be uncovered during the development. Such material must be reported to the Eastern Cape Provincial Heritage Resources Agency (ECPHRA) (043 745 0888) or the Albany Museum (046 622 2312) if exposed.

14. REFERENCES

- Beinart, W. 2003. *The rise of conservation in South Africa*. Oxford University Press.
- Bester, . 1969. Transformation and Reconstitution of Khoe-San Identities: AAS Le Fleur 1, Griqua Identities and Post-Apartheid Khoe-San Revivalism (1894- 2004). PhD Thesis.
- Binneman, JNF. 1996. The symbolic construction of communities during the Holocene

- Later Stone Age in the south-eastern Cape. Unpublished D.Phil. thesis: University of the Witwatersrand.
- Binneman, JNF. 1997. Results from a test excavation at The Havens Cave, Cambria, south-Eastern Cape. *Southern African Field Archaeology* 6: 93-105.
- Binneman, JNF. 1998. Results from a test excavation at Kleinpoort Shelter in the Baviaanskloof, Eastern Cape Province. *Southern African Field Archaeology* 7: 90-97.
- Binneman, JNF. 1999a. Results from a test excavation at Groot Kommandokloof Shelter in the Baviaanskloof / Kouga region, Eastern Cape Province. *Southern African Field Archaeology* 8: 100-107.
- Binneman, JNF. 1999b. Mummified human remains from the Kouga Mountains, Eastern Cape. *The Digging Stick* 16: 1-12.
- Binneman, JNF. 2000. Results from two test excavations in the Baviaanskloof Mountains, Eastern Cape Province. *Southern African Field Archaeology* 9: 81-92.
- Binneman, JNF. 2001. An introduction to a Later Stone Age coastal research project along the south-eastern Cape coast. *Southern African Field Archaeology* 10: 75-87.
- Binneman, JNF. 2005. Archaeological research along the south-eastern Cape coast part 1: open-air shell middens. *Southern African Field Archaeology* 13 & 14: 49-77. 2004 / 2005.
- Binneman, JNF. 2007. Archaeological research along the south-eastern Cape Coast part 2, caves and shelters: Kabeljous River Shelter 1 and associated stone tool industries. *Southern African Field Archaeology* 15 & 16: 57-74.
- Binneman, J. & Hall, S. 1993. The context of four painted stones from the south-eastern Cape and Eastern Cape. *Southern African Field Archaeology*, 2:89-95.
- Broster, J. A. 2009. *Transkei Heritage*. Port Elizabeth: Downtown Printers.
- Deacon, H.J. 1970. The Acheulean occupation at Amanzi Springs, Uitenhage district, Cape Province. *Annals of the Cape Provincial Museums* 6:141-169.
- Collins, B. & Ames, C. 2015. Revisiting Grassridge Rockshelter in the Eastern Cape province of South Africa: results of the 2014 field season. Presented at the 80th Annual Meeting of the Society for American Archaeology, San Francisco, California. 2015 (tDAR ID: 396031)
- Deacon, H.J. 1995. Two late Pleistocene-Holocene Archaeological Depositories from the Southern Cape, South Africa. *Southern African Archaeological Bulletin*, 5:121-131.
- Deacon, J. 1965. Part 1: Cultural Material from the Gamtoos Valley Shelter (Andrieskraal). *The Southern African Archaeological Bulletin*, 20(80): 193-200.
- Deacon, H.J. 2008. The Context of the 1967-68 sample of human remains from Cave 1 KRM Main Site. *South African Archaeological Society, Goodwin Series*, 10: 143-149.
- Derricourt, R. M. 1977. *Prehistoric Man in the Ciskei & Transkei*. Johannesburg: C. Struik (Pty) Ltd.
- Dewar, G. & Pfeiffer, S. 2004. Postural Behaviour of Later Stone Age People in South Africa. *The South African Archaeological Bulletin*, 59(180): 52-58.
- Dondolo, L. 2005. Intangible Heritage: The Production of Indigenous Knowledge in Various Aspects of Social Life. *Ndilinga – African Journal of Indigenous Knowledge Systems* Vol 4 (1) 2005.

- Feely, J.M. 1987. The Early Farmers of Transkei, Southern Africa. *Bar International Series* 378, Cambridge Monographs in African Archaeology 24.
- Feely, J. M. & Bell-Cross, S. M. 2011. The Distribution of Early Iron Age Settlement in the Eastern Cape: Some Historical and Ecological Implications. *South African Archaeological Bulletin* 66(194): 105-112.
- Fischer, E. C.; Albert, R.; Botha, G.; Cawthra, H. C.; Esteban, I.; Harris, J.; Jacobs, Z.; Marean, C.; Neumann, F. H.; Pargeter, J.; Poupart, M. & Venter, J. 2013. Archaeological Reconnaissance for Middle Stone Age Sites along the Pondoland Coast, South Africa. *Palaeoanthropology* 2013: 104 – 137.
- Gess, W.H.R. 1969. Excavations of a Pleistocene bone deposit at Aloes near Port Elizabeth. *South African Archaeological Bulletin* 24:31-32.
- Green, M. 2006. A letter from 'the other side of silence': Dluclushe Sondzaba and the Trappist mission in East Griqualand. *Missionalia* 34:2/3182-200
- Hall, S. & Binneman, J. 1987. Later Stone Age Burial Variability in the Cape: A Social Interpretation. *The South African Archaeological Bulletin*, 42(146): 140-142.
- Henderson, Z. 1992. The context of some MSA hearths at Klasies River Shelter 1 B: Implications for understanding human behaviour. *Southern African Field Archaeology*, 1:14-26.
- Hine, P. Sealy, J. Halkett, D. & Hart, T. 2010. Antiquity of Stone Walled Tidal Fish Traps on the Cape Coast, South Africa. *The South African Archaeological Bulletin*, 65 (191): 35-44.
- Hollman, J. 2005. Using Behavioural Postures and Morphology to Identify Hunter-Gatherer Rock Paintings of Therianthropes in Western and Eastern Cape Provinces, South Africa. *The Southern African Archaeological Bulletin*, 60(182): 84-95.
- Huffman, T. N. 2004. The Archaeology of the Nguni Past. *Southern African Humanities* 16: 79-111.
- Klein, R. 1986a. A provisional statement on terminal Pleistocene Mammalian extinctions in the Cape Biotic Zone, Southern Cape Province, South Africa. *Goodwin Series*, No. 2, Progress in Later Cenozoic Studies in South Africa, pp 39-45.
- Klein, R.G. 1986b. The Prehistory of the Stone Age Herders in the Cape province of South Africa. *Goodwin Series*, Vol. 5, Prehistoric Pastoralism in Southern Africa, pp 5-12.
- Lester, A. 1998. Settlers, the State and Colonial Power: The Colonization of Queen Adelaide Province, 1834-37. *Journal of African History*, 39: 221-246
- Maggs, T. 1977. Some recent radiocarbon dates from Eastern and Southern Africa. *The Journal of African History*, 18(2): 161-191.
- Maggs, T. 1993. Three decades of Iron Age Research in South Africa: Some Personal Reflections. *South African Archaeological Bulletin* 48(158): 70-76.
- Masina, E.M. 2006. Zulu Perceptions and Reactions to British Occupation of Land in Natal Colony and Zululand, 1850-1887: Are Capitulation Based on Surviving Oral and Written Sources.
- Mazel, A. D. 1992. Early Pottery from the East of Southern Africa. *South African Archaeological Bulletin* 47: 3-7.

- Martens, J. 2015. Decentring Shepstone: The Eastern Cape Frontier and the Establishment of Native Administration in Natal, 1842–1849. *South African Historical Journal*, 67(2): 180-201.
- Mitchell, P.J. 1996. Prehistoric Exchange and Interaction in South-Eastern Southern Africa: Marine Shells and Ostrich Eggshell. *The African Archaeological Review*, 13(1): 36-76.
- National Heritage Resources Act 25 of 1999.
- Parkington, J. & Hall, M. 1987. Patterning in recent radiocarbon dates from Southern Africa as a reflection of prehistoric settlement and interaction. *The Journal of African History*, 28(1): 1-25.
- Pearce, D.G. 2005. Iconography and Interpretation of the Tierkloof Painted Stone. *Goodwin Series*, 9, Further Approaches to Southern African Rock Art, pp 45-53.
- Pfeiffer, S. & Harrington, L. 2011. Bioarchaeological evidence for the basis of small adult stature in Southern Africa. *Growth, mortality and small stature*. *Current Anthropology*, 52(3).
- Phillips, A. 1998. The nature of cultural landscapes – a nature conservation perspective. *Landscape Research* 23:1, 21-38.
- Plug, I. 1997. Late Pleistocene and Holocene hunter-gatherers in the Eastern Highlands of South Africa and Lesotho: A Faunal Interpretation. *Journal of Archaeological Science* 24: 715 – 727.
- Opperman, H. 1982. Some research results of excavations at Colwinton Rock Shelter, North-Eastern Cape. *South African Archaeological Bulletin* 37, 136: 51-56.
- Opperman, H. 1996. Strathalan Cave B, North Eastern Cape Province, South Africa: Evidence for human behaviour 29,000 – 26,000, *Quaternary International*, Vol 33 pp 45-53.
- Opperman, H. Hydenrych, B. 1990. A 22 000-year-old Middle Stone Age Camp Site with Plant Food Remains from the North-Eastern Cape. *South African Archaeological Bulletin* 45: 93-99, 1990.
- Prins, F. E. & Lewis, H. 1992. Bushmen as mediators in Nguni cosmology. *Ethnology* 31(2): 133-147.
- Prins, F. 1993. Aspects of Iron Age Ecology in Transkei. Master of Arts Thesis.
- Prins, F. E. & Granger, J. E. 1993. Early Farming Communities in Northern Transkei: The Evidence from Ntsitsana and Adjacent Areas. *Natal Museum Journal of Humanities* 5: 153-74.
- Prins, F. E. & Hall, S. 1994. Expressions of Fertility in the Rock Art of Bantu-speaking Agriculturalists. *African Archaeological Review* 12: 171-203.
- Prins, F. 1996. African Perceptions of Rock Paintings in the KwaZulu Natal and the Eastern Cape Provinces. *The Digging Stick* 13(1).
- Rapoport, A. 1992. On cultural landscapes. *TDSR* 3:3, 33-47.
- Rudner I J. 1968. Strandloper pottery from South and South West Africa. *Annals of the South African Museum* 49(2). Cape Town.
- Rudner, J. 1979. The use of stone artefacts and pottery among the Khoisan peoples in historic and protohistoric times. *The South African Archaeological Bulletin*, 34(129): 3-17.

- Sealy, J. & Pfeiffer, S. 2000. Diet, Body Size, and Landscape Use among Holocene People in the Southern Cape, South Africa. *Current Anthropology* 41(4): 642-655.
- Shrubsall, F. 1899. A Study of A-Bantu Skulls and Crania. *The Journal of the Anthropological Institute of Great Britain and Ireland*, Vol. 28, No. 1/2, pp. 55-94
- Steyn, M.; Binneman, J & Loots, M. 2007. The Kouga Mummified Human Remains. *South African Archaeological Bulletin*, 62(185): 3-8.
- South African Heritage Resources Agency (SAHRA): Minimum Standards for Archaeological Impact Assessments.
- South African History Online. 2011. British Kaffraria.
- South African History Online. Conquest of the Eastern Cape 1779-1878/www.sahistory.org.za
- South African History Online. Griqua Community. /www.sahistory.org.za
- South African History Online. 'Kraals of Guns' Fortifications in the Wars of Resistance and Dispossession in the Eastern Cape, 1780-1894. Chapter 6: Colonisation of the Remaining Independent Polities in the East of the Kei.
- Sparrman, A. 1785. *A voyage to the Cape of Good Hope towards the Antarctic polar circle and around the world, but chiefly into the country of the Hottentots and Caffres, from the year 1772 to 1776*. Vol. 1. London: Robinson.
- Stapleton, T.J. 2006. 'Him Who Destroys All': Reassessing the Early Career of Faku, King of the Mpondo, c.1818–1829. *South African Historical Journal*, 38:1, 55-78
- Steele, J. 2011. Potshards of Zig-Zag cave at Port St Johns, Eastern Cape, South Africa. Department of Fine Art, Walter Sisulu University, East London, Eastern Cape.
- Tankard, A.J. & Roger, J. 1978. Late Cenozoic palaeoenvironments on the west coast of Southern Africa. *Journal of Biogeography*, 5: 319-337.
- Taylor, K. 2008. Landscape and Memory: cultural landscapes, intangible values and some thoughts on Asia. In: 16th ICOMOS General Assembly and International Symposium: 'Finding the spirit of place between the tangible and intangible', 29 September – 4 October 2008, Quebec, Canada.
- Thackeray, F. & Feast, E.C. 1974. A Midden Burial from Cape St Francis, Eastern Cape Province. *The South African Archaeological Bulletin*, 29(115/116): 92.
- Turner, M. 1970. A Search for the Tsitsikamma Shelters. *The South African Archaeological Bulletin*, 28(98): 67-70.
- Vogel, J. C. & Fuls, A. Spatial Distribution and Radiocarbon Dates for the Iron Age in Southern Africa. *South African Archaeological Bulletin* 54(170): 97-101.
- Webb, D.A. 2013. Lords of All They Surveyed? The Royal Engineers, Surveying, Mapping and Development in South Africa's Eastern Cape. *African Historical Review* 45(1): 22-45.
- Whitelaw, G. 2006. An archaeology of colonization: excavations at a stonewalled site near Rosetta, KwaZulu-Natal. *Southern African Humanities* 26: 83–100
- Wurz, S. 2008. Modern Behaviour at Klasies River. *Goodwin Series*, 10, Current Themes in MSA Research, pp 150-156.
- www.artefacts.co.za/main/Buildings/bldgframes.php?bldgid=11701
- www.geni.com/projects/Germans-in-Kaffraria/163

Zipp, G.L. 2012. A History of the German Settlers in the Eastern Cape, 1857 – 1919. Unpublished Master's Thesis, Rhodes University.
The Royal Engineers and Settlement Planning in the Cape Colony 1806-1872

15. RELEVANT ARCHAEOLOGICAL AND HERITAGE IMPACT ASSESSMENTS

- Anderson, G. 2010. Heritage Desktop Survey of The Proposed Suntech Solar Farm, Berlin, Eastern Cape.
- Anderson, G. 2015a. Heritage Survey of The Kwatshatshu Pedestrian Bridge, King Williams Town, Eastern Cape.
- Anderson, G. 2015b. Heritage Survey of The N2-R61 Road Rehabilitation, King Williams Town, Eastern Cape.
- Anderson, G. 2015. Improvement of National Route N2 Section 14 & 15 From Green River (Km 60.0) To Zwelitsha Intersection (Km 6.00) & The New Breidbach Interchange (Km 9.8).
- Booth, C. 2015. Fibreco Repeater Sites Routes 3 And 4_heritage_2015 AIA Report
- CTS Heritage. 2017. Heritage Screener: Proposed Housing Development in Tshabo Village, King Williams Town.
- Gaigher, S. 2015 Heritage Impact Assessment Report for the Proposed Upgrade and Construction the Kei-Road Water Treatment Works and Conveyance.
- Halkett, D. 2009. A Report on the Discovery and Context of a Cache of Historic Weapons at a Construction Site on Erf 5217, the Lovedale Public College Campus, King Williams Town.
- Kruger, N. 2011. Phase 1 Archaeological Impact Assessment Report: Breidbach Cemetery Extension, Amatole Municipal Area, Eastern Cape Province.
- Van Ryneveld, K. 2008 Phase 1 Archaeological Impact Assessment: Proposed Construction of Commercial Offices & Retail Space, Erf 9582, Sweetwaters, King Williams Town, Eastern Cape, South Africa.
- Van Ryneveld, K. 2009. A Phase 1 Archaeological Impact Assessment: Extension to an Existing Quarry for the Nyathyora Internal Roads Project, King Williams Town, Eastern Cape, South Africa.
- Van Ryneveld, K. 2012. A Phase 1 Archaeological Impact Assessment: Killarney Dam, Portion 1 of Farm 1832, Division of King Williams Town, Eastern Cape, South Africa.
- Van Schalkwyk, J. 2008. Heritage Impact Survey Report for the Proposed Development South-West of Bisho, King Williams Town, Eastern Province.
- Van Schalkwyk, J. 2011. Heritage Impact Assessment for The Proposed Eskom 400kv Electricity Transmission Line, Neptune To Poseidon Substations, East London To Cookhouse, Eastern Cape Province.
- Van Schalkwyk, L. 2010. Heritage Impact Assessment of King Williams Town Bulk Regional Sewage Scheme Phase 2-7, Eastern Cape Province, South Africa.

16. GENERAL REMARKS AND CONDITIONS

NOTE: This report is a phase 1 archaeological impact assessment (AIA) only and does not include or exempt other required specialist assessments as part of the heritage impact assessments (HIAs).

The National Heritage Resources Act (Act No. 25 of 1999, Section 35 [Brief Legislative Requirements]) requires a full Heritage Impact Assessment (HIA) in order that all heritage resources including all places or objects of aesthetics, architectural, historic, scientific, social, spiritual, linguistic, or technological value or significance are protected. Thus, any assessment should make provision for the protection of all these heritage components including archaeology, shipwrecks, battlefields, graves, and structures older than 60 years, living heritage, historical settlements, landscapes, geological sites, palaeontological sites and objects.

It must be emphasized that the conclusions and recommendations expressed in this phase 1 archaeological impact assessment (AIA) are based on the visibility of archaeological remains, features and, sites and may not reflect the true state of affairs. Many archaeological remains, features and, sites may be covered by soil and vegetation and will only be located once this has been removed. In the event of such archaeological heritage being uncovered (such as during any phase of construction activities), archaeologists or the relevant heritage authority must be informed immediately so that they can investigate the importance of the sites and excavate or collect material before it is destroyed. The onus is on the developer to ensure that this agreement is honoured in accordance with the National Heritage Resources Act No. 25 of 1999 (NHRA 25 of 1999).

Archaeological Specialist Reports (desktops and AIA's) will be assessed by the relevant heritage resources authority. The final comment/decision rests with the heritage resources authority that may confirm the recommendations in the archaeological specialist report and grant a permit or a formal letter of permission for the destruction of any cultural sites.

APPENDIX A: HERITAGE LEGISLATIVE REQUIREMENTS

Sections 3, 34, 35, 36, 38, 48, 49 and 51 of the National Heritage Resources Act 25 of 1999 apply:

S3. National estate

(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 and 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 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 (Act No. 43 of 1996).

(3) Without limiting the generality of subsections (1) and (2), a place or object is to be considered part of national estate if it has cultural significance or other special value because of –

- (a) its importance in the community, or pattern of South Africa's history;
- (b) its possession of uncommon, rare or endangered aspects of South Africa's natural or cultural heritage;
- (c) its potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage;
- (d) its importance in demonstrating the principal characteristics of a particular class of South Africa's natural or cultural places or objects;
- (e) its importance in exhibiting particular aesthetic characteristics valued by a community or cultural group;
- (f) its importance in demonstrating a high degree of creative or technical achievement at a particular period;
- (g) its strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa; and
- (i) sites of significance relating to the history of slavery in South Africa.

S34. Structures

- (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.
- (2) Within three months of the refusal of the provincial heritage resources authority to issue a permit, consideration must be given to the protection of the place concerned in terms of one of the formal designations provided for in Part 1 of this Chapter.
- (3) The provincial heritage resources authority may at its discretion, by notice in the Provincial Gazette, make an exemption from the requirements of subsection (1) within a defined geographical area, provided that it is satisfied that heritage resources falling into the defined area or category have been identified and adequately provided for in terms of the provisions of Part 1 of this Chapter.
- (4) Should the provincial heritage resources authority believe it to be necessary if by, following a three-month notice period published in the Provincial Gazette, withdraw or amend a notice under subsection (3).

S35. Archaeology, palaeontology and meteorites

- (1) Subject to the provisions of section 8, the protection of archaeological and palaeontological sites and material and meteorites is the responsibility of a provincial heritage resources authority: Provided that the protection of any wreck in the territorial waters and maritime cultural zone shall be the responsibility of SAHRA.
- (2) Subject to the provisions of subsection (8)(a), all archaeological objects, palaeontological material and meteorites are the property of the State. The responsible heritage authority must, on behalf of the State, at its discretion ensure that such objects are lodged with a museum or other public institution that has a collation policy acceptable to the heritage resources authority and may in doing so establish such terms and conditions as it sees fit for the conservation of such objects.
- (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 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 assist 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 not 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.

- (5) The responsible heritage resources authority may, after consultation with the owner of the land on which archaeological or palaeontological site or a 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.
- (6)(a) Within a period of two years from the commencement of this Act, any person in possession of any archaeological or palaeontological material or object or any meteorite which was acquired other than in terms of a permit issued in terms of this Act, equivalent provincial legislation or the National Monuments Act, 1969 (Act No. 28 of 1969), must lodge with the responsible heritage resources authority lists of such objects and other information prescribed period shall be deemed to have been recovered after the date on which this Act came into effect.
 - (b) Paragraph (a) does not apply to any public museum or university.
 - (c) The responsible authority may at its discretion, by notice in the Gazette or the Provincial Gazette, as the case may be, exempt any institution from the requirements of paragraph (a) subject to such conditions as may be specified in the notice, and may by similar notice withdraw or amend such exemption.
- (8) and object or collection listed under subsection (7) –
 - (a) remains in the ownership of the possessor for the duration of his or her lifetime, and SAHRA must be notified who the successor is; and
- (9) must be regularly monitored in accordance with regulations by the responsible heritage authority.

S36. Burial grounds and graves

- (1) Where it is not the responsibility of any other authority, SAHRA must conserve and generally care for burial grounds and graves protected in terms of this section, and it may make such arrangements for their conservation as it sees fit.
- (2) SAHRA must identify and record the graves of victims of conflict and any other graves which it deems to be of cultural significance and may erect memorials associated with the grave referred to in subsection (1), and must maintain such memorials.
- (3)(a) 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.
- (3) SAHRA or provincial heritage resources authority may not issue a permit for the destruction or damage of any burial ground or grave referred to in subsection (3)(a) 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.
- (4) SAHRA or a provincial heritage resources authority may not issue a permit for any activity under subsection (3)(b) 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.
- (5) Subject to the provision of any other law, any person who in the course of development or any other activity discovers the location of a grave, the existence of which was previously unknown, must immediately cease such activity and report the discovery to the responsible heritage resources authority which must, in co-operation with the South African Police Service and in accordance with regulations of the responsible heritage resources authority –
 - (a) Carry out an investigation for the purpose of obtaining information on whether or not such grave is protected in terms of this Act or is of significance to any community; and
 - (b) If such grave is protected or is of significance, assist any person who or community which is the direct descendant to make arrangements for the exhumation and re-interment of the contents of such grave or, in the absence of such person or community, make any such arrangements as it deems fit.

(6)(a) SAHRA must, over a period of five years from the commencement of this Act, submit to Minister for his or her approval lists of graves and burial grounds of persons connected with the liberation struggle and who died in exile or as a result of the action of State security forces or agents provocateur and which, after a process of public consultation, it believes should be included among those protected under this section.

(c) The Minister must publish such lists as he or she approved in the Gazette.

(6) Subject to section 56(2), SAHRA has the power, with respect to the graves of victims of conflict outside the Republic, to perform any function of a provincial heritage resources authority in terms of this section.

(7) SAHRA must assist other State Departments in identifying graves in a foreign country of victims of conflict connected with the liberation struggle and, following negotiations with the next of kin, or relevant authorities, it may reinter the remains of that person in a prominent place in the capital of the Republic.

S.37 Public monuments and memorials

Public monuments and memorials must, without the need to publish a notice to this effect, be protected in the same manner as places which are entered in a heritage register referred to in section 30.

S38. Heritage resources management

(1) Subject to the provisions of subsections (7), (8) and (9), any person who intends to undertake a development categorized as –

(a) the construction of a road, wall, power line, pipeline, canal or other similar form of linear development or barrier exceeding 300 m in length;

(b) the construction of a bridge or similar structure exceeding 50 m in length;

(c) any development or other activity which will change the character of the site –

(i) exceeding 5 000 m² in extent, or

(ii) involving three or more erven or subdivisions thereof; or

(iii) involving three or more erven or divisions thereof which have been consolidated within the past five years; or

(iv) the costs of which will exceed a sum set in terms of regulations by SAHRA, or a provincial resources authority;

(d) the re-zoning of a site exceeding 10 000 m² in extent; or

(e) any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority, must as the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.

(2) The responsible heritage resources authority must, within 14 days of receipt of a notification in terms of subsection (1) –

(a) if there is a reason to believe that heritage resources will be affected by such development, notify the person who intends to undertake the development to submit an impact assessment report. Such report must be compiled at the cost of the person proposing the development, by a person or persons approved by the responsible heritage resources authority with relevant qualifications and experience and professional standing in heritage resources management; or

(b) notify the person concerned that this section does not apply.

(3) The responsible heritage resources authority must specify the information to be provided in a report required in terms of subsection (2)(a): Provided that the following must be included:

(a) The identification and mapping of all heritage resources in the area affected;

(b) An assessment of the significance of such resources in terms of the heritage assessment criteria set out in section 6(2) or prescribed under section 7;

(c) An assessment of the impact of development on such heritage resources;

(d) An evaluation of the impact of the development on heritage resources relative to the sustainable social and economic benefits to be derived from the development;

(e) The results of consultation with communities affected by the proposed development and other interested parties regarding the impact of the development on heritage resources;

- (f) If heritage resources will be adversely affected by the proposed development, the consideration of alternative; and
 - (g) Plans for mitigation of any adverse effects during and after the completion of the proposed development.
- (4) The report must be considered timeously by the responsible heritage resources authority which must, after consultation with the person proposing the development, decide –
- (a) whether or not the development may proceed;
 - (b) any limitations or conditions to be applied to the development;
 - (c) what the general protections in terms of this Act apply, and what formal protections may be applied, to such heritage resources;
 - (d) whether compensatory action is required in respect of any heritage resources damaged or destroyed as a result of development; and
 - (e) whether the appointment of specialists is required as a condition of approval of the proposal.
- (5) A provincial heritage resources authority may not make any decision under subsection (4) with respect to any development with impacts on a heritage resource protected at national level unless it has consulted SAHRA.
- (6) The applicant may appeal against the decision of the provincial heritage resources authority to the MEC, who –
- (a) must consider the views of both parties; and
 - (b) may at his or her discretion –
 - (i) appoint a committee to undertake an independent review of the impact assessment report and the decision of the responsible heritage resources authority;
 - And
 - (ii) consult SAHRA; and
 - (c) must uphold, amend or overturn such decision.
- (7) The provisions of this section do not apply to a development described in subsection (1) affecting any heritage resource formally protected by SAHRA unless the authority concerned decides otherwise.
- (8) The provisions of this section do not apply to a development as described in subsection (1) if an evaluation of the impact of such development on heritage resources is required in terms of the impact of such development of heritage resources is required in terms of the Environment Conservation Act, 1989 (Act No. 73 of 1989), or the integrated environmental management guidelines issued by the Department of Environmental Affairs and Tourism, or the Mineral Act, 1991 (Act No. 50 of 1991), or any other legislation: Provided that the consenting authority must ensure that the evaluation fulfils the requirements of the relevant heritage resources authority in terms of subsection (3), and any comments and recommendations of the relevant heritage resources authority with regards to such development have been taken into account prior to the granting of the consent.
- (9) The provincial heritage resources authority, with the approval of the MEC, may, by the notice in the Provincial Gazette, exempt from the requirements of this section any place specified in the notice.
- (10) Any person who has complied with the decision of a provincial heritage resources authority in subsection (4) or of the MEC in terms of subsection (6) or other requirements referred to in subsection (8), must be exempted from compliance with all other protections in terms of this part, but any existing heritage agreements made in terms of section 42 continue to apply.

S48. Permits

- (1) A heritage resources authority may prescribe the manner in which an application is made to it for any permit in terms of this Act and other requirements for permit applications, including –
- (a) any particulars or information to be furnished in the application and any documents, drawings, plans, photographs and fees which should accompany the application;
 - (b) minimum qualifications and standards of practice required of persons making application for a permit to perform specified actions in relation to particular categories of protected heritage resources;
 - (c) standards and conditions for the excavation and curation of archaeological and palaeontological objects and material and meteorites recovered by authority of a permit;

- (d) the conditions under which, bore a permit is issued, a financial deposit must be lodged and held in trust for the duration of the permit or such period as the heritage resources authority may specify, and conditions of forfeiture of such deposit;
 - (e) conditions for the temporary export and return of objects under section 32 or section 35;
 - (f) the submission of reports on work done under authority of a permit; and
 - (g) the responsibilities of the heritage resources authority regarding monitoring of work done under authority of a permit.
- (2) On application by any person in the manner prescribed under subsection (1), a heritage resources authority may in its discretion issue to such person a permit to perform such actions at such time and subject to such terms, conditions and restrictions or directions as may be specified in the permit, including a condition –
- (a) that the applicant give security in such form and such amount determined by the heritage resources authority concerned, having regard to the nature and extent of the work referred to in the permit, to ensure the satisfactory completion of such work or the curation of objects and material recovered during the course of the work; or
 - (b) providing for the recycling or deposit in a materials bank of historical building materials; or
 - (c) stipulating that design proposals be revised; or
 - (d) regarding the qualifications and expertise required to perform that actions for which the permit is issued.
- (3) A heritage resources authority may at its discretion, in respect of any heritage resource protected by it in terms of the provisions of Chapter II, by notice in the Gazette or the Provincial Gazette, as the case may be, grant an exemption from the requirement to obtain a permit from it for such activities or class of activities by such persons or class of persons in such circumstances as are specified in the notice.

S49. Appeals

- (1) Regulations by the Minister and the MEC must provide for a system of appeal to the SAHRA Council for a provincial heritage resources council against a decision of a committee or other delegated representative of SAHRA or a provincial heritage resources body authority.
- (2) Anybody wishing to appeal against a decision of the SAHRA Council or the council of a provincial heritage resources authority must notify the Minister or MEC in writing within 30 days. The Minister or MEC, must have due regards to –
- (a) the cultural significance of the heritage resources in question;
 - (b) heritage conservation principles; and
 - (c) any other relevant factor which is brought to its attention by the appellant or the heritage resources authority.

S51. Offences and penalties

- (1) Notwithstanding the provisions of any other law, any person who contravenes –
- (a) sections 27(18), 29(10), 32(13) OR 32(19) is guilty of an offence and liable to a fine or imprisonment or both such fine and imprisonment as set out in item 1 of the Schedule;
 - (b) sections 33(2), 35(4) is guilty of an offence and liable to a fine or imprisonment or both such fine and imprisonment as set out in item 2 of the Schedule;
 - (c) sections 28(3) or 34(1) is guilty of an offence and liable to a fine or imprisonment or both such fine and imprisonment as set out in item 3 of the Schedule;
 - (d) sections 27(22), 32(15), 35(6), or 44(3) is guilty of an offence and liable to a fine or imprisonment or both such fine and imprisonment as set out in item 4 of the Schedule;
 - (e) sections 27(23)(b), 32(17), 35(3) or 51(8) is guilty of an offence and liable to a fine or imprisonment or both such fine and imprisonment as set out in item 5 of the Schedule;
 - (f) sections 32(13), 32(16), 32(20), 35(7)(a), 44(2), 50(5) or 50(12) is guilty of an offence and liable to a fine or imprisonment or both such fine and imprisonment as set out in item 6 of the Schedule.
- (2) The Minister, with the concurrence of the relevant MEC, may prescribe a penalty of a fine or of imprisonment for a period not exceeding six months for any contravention or failure to comply with regulations by heritage resources authorities or by-laws by local authorities.
- (3) The Minister or the MEC, as the case may be, may make regulations in terms of which the magistrate of the district concerned may –

- (a) levy admission of guild fines up to a maximum amount of R10 000 for infringement of the terms of this Act for which such heritage resources authority is responsible; and
 - (b) serve a notice upon a person who is contravening a specified provision of this Act or has not complied with the terms of a permit issued by such authority, imposing a daily fine of R50 for the duration of the contravention, subject to a maximum period of 365 days.
- (4) The Minister may from time to time by regulation adjust the amounts referred to in subsection (3) in order to account for the effect of inflation.
- (5) Any person who-
- (a) fails to provide any information that is required to be given, whether or not on the request of a heritage resources authority, in terms of this Act;
 - (b) for the purpose of obtaining, whether for himself or herself or for any other person, any permit, consent or authority in terms of this Act, makes any statement or representation knowing it to be false or not knowing or believing it to be true;
 - (c) fails to comply with or perform any act contrary to the terms, conditions, restrictions or directions subject to which any permit, consent or authority has been issued to him or her in terms of this Act;
 - (d) obstructs the holder of a permit in terms of this Act in exercising a right granted to him or her by means of such a permit;
 - (e) damages, takes, or removes, or causes to be damaged, taken or removed from a place protected in terms of this Act any badge or sign erected by a heritage authority or a local authority under section 25(2)(j) or section 27(17), any interpretive display or any other property or thing.
 - (f) receives any badge, emblem or any other property or thing unlawfully taken or removed from a place protected in terms of this Act; and
 - (g) within the terms of this Act, commits or attempts to commit any other unlawful act, violates any prohibition or fails to perform any obligation imposed upon him or by its terms, or who counsels, procures, solicits or employs any other person to do so.
- shall be guilty of an offence and upon conviction shall be liable to such maximum penalties, in the form of a fine or imprisonment or both such fine and such imprisonment, as shall be specified in the regulations under subsection (3).
- (6) Any person who believes that there has been an infringement of any provision of this Act, may lay a charge with the South African Police Service or notify a heritage resources authority.
- (7) A magistrate's court shall, notwithstanding the provisions of any other law, be competent to impose any penalty under this Act.
- (8) When any person has been convicted of any contravention of this Act which has resulted in damage or to alteration of a protected heritage resource the court may -
- (a) order such person to put right the result of the act of which he or she was guilty, in the manner so specified and within such period as may be so specified, and upon failure of such person to comply with the terms of such order, order such person to pay to the heritage resources authority responsible for the protection of such resource a sum equivalent to the cost of making good; or
 - (b) when it is of the opinion that such a person is not in a position to make good damage done to a heritage resources by virtue of the offender not being the owner or occupier of a heritage resources or for any other reason, or when it is advised by the heritage resources authority responsible for the protection of such resource that it is unrealistic or undesirable to require that the results of the act be made good, order such person to pay the heritage resources authority a sum equivalent to the cost of making good.
- (9) In addition to other penalties, if the owner of a place has been convicted of an offence in terms of this Act involving the destruction of, or damage to, the place, the Minister on the advice of SAHRA or the MEC on the advice of a provincial heritage resources authority, may serve on the owner an order that no development of such place may be undertaken, except when making good the damage and maintaining the cultural value of the place, or for a period not exceeding 10 years specified in the order.
- (10) Before making the order, the local authority and any person with a registered interest in the land must be given a reasonable period to make submissions on whether the order should be made and for how long.
- (11) An order of no development under subsection (9) attaches to the land and is binding not only on the owner as at the date of the order, but also on any person who becomes an owner of the place while the order remains in force.
- (12) The Minister on the advice of SAHRA, may reconsider an order of no development and may in writing amend or repeal such order.

(13) In any case involving vandalism, and whenever else a court deems it appropriate, community service involving conservation of heritage resources may be substituted for, or instituted in addition to, a fine or imprisonment.

(14) Where a court convicts a person of an offence in terms of this Act, it may order for forfeiture to SAHRA or the provincial heritage resources authority concerned, as the case may be, of a vehicle, craft, equipment or any other thing used or otherwise involved in the committing of the offence.

(15) A vehicle, craft, equipment or other thing forfeited under subsection (14) may be sold or otherwise disposed of as the heritage resources authority concerned deems fit.

APPENDIX B: GRADING SYSTEM

The National Heritage Resources Act 25 of 1999 stipulates the assessment criteria and grading of archaeological sites. The following categories are distinguished in Section 7 of the Act and the South African Heritage Resources Agency:

- National: This site is suggested to be considered of Grade 1 significance and should be nominated as such. Heritage resources with qualities so exceptional that they are of special national significance.
- Provincial: This site is suggested to be considered of Grade II significance and should be nominated as such. Heritage resources which, although forming part of the national estate, can be considered to have special qualities which make them significant within the context of a province or a region
- Local: This site is suggested to be Grade IIIA significance. This site should be retained as a heritage register site (High significance) and so mitigation as part of the development process is not advised.
- Local: This site is suggested to be Grade IIIB significance. It could be mitigated and (part) retained as a heritage register site (High significance).
- 'General' Protection A (Field Rating IV A): This site should be mitigated before destruction (usually High/Medium significance).
- 'General' Protection B (Field Rating IV B): This site should be recorded before destruction (usually Medium significance).
- 'General' Protection C (Field Rating IV C): This site has been sufficiently recorded (in the Phase 1). It requires no further recording before destruction (usually Low significance).

APPENDIX C: IDENTIFICATION OF ARCHAEOLOGICAL FEATURES AND MATERIAL FROM COASTAL AND INLAND AREAS: guidelines and procedures for developers

1. Stone artefacts

Stone artefacts are the most common and identifiable precolonial artefacts occurring on the South Africa landscape. Early Stone Age, Middle Stone Age and Later Stone Age stone artefacts occur in various concentrations on the South Africa landscape. Stone artefacts are very commonly found occurring on flat floodplains in a mostly secondary or disturbed context. However, they can be also be found in an *in situ* or undisturbed context in areas where little human or animal impact happens such as open sites mostly near rocky outcrops, amongst boulders and caves.

These may be difficult for the layman to identify. However, large accumulations of flaked stones which do not appear to have been distributed naturally should be reported. If the stone tools are associated with bone remains, development should be halted immediately and archaeologists notified.



Early Stone Age (ESA) stone artefact
(1.5 million years ago – 250 000 years ago)



Middle Stone Age stone artefacts
(250 000 – 30 000 years ago)



Later Stone Age stone artefacts
(30 000 years ago – historical times)

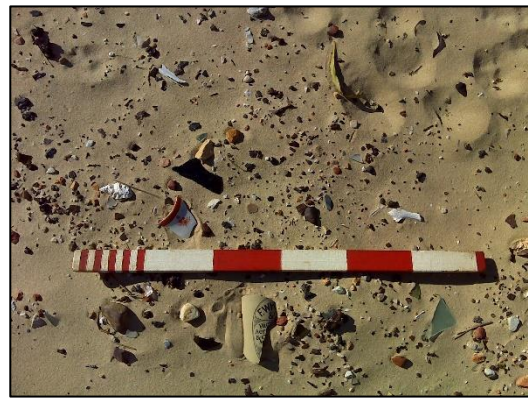
2. Pottery scatters

Pottery scatters can be associated with either Khoekhoen pastoralists, the Nguni first farming communities (referred to as the South African Iron Age) or colonial settlement and can be dated to within the last 2 000 years which occur both at the coast and inland. Pottery associated with Bushmen / hunter-gatherers is generally thought to occur in the Karoo region. The most obvious difference between Khoekhoen and Nguni pottery are the decorations, shapes, sizes and wall thickness. Khoekhoen pottery is generally thinner than the thicker walled and robust Nguni pottery. Colonial ceramics ranges from earthenware, stoneware, porcelain and European glazed and unglazed ceramics.

Precolonial pottery and Colonial ceramics are more easily identifiable by the layman and should be reported.



**Khoekhoen earthenware pottery
(last 2 000 years)**



**Iron Age earthenware pottery
(last 2 000 years)**



Examples of 19th century European ceramics

3. Historical artefacts and features

These are easy to identify and include colonial artefacts (such as ceramics, glass, metal, etc.), foundations of buildings or other construction features and items from domestic and military activities associated with early travellers' encounters on the landscape and European settlement.



**Example of a Fortified Structure
(Fort Double Drift)**



Ruin of stone packed dwelling



Glass artefacts

4. Shell middens (marine and freshwater)

Shell middens can be defined as an accumulation of marine or freshwater shell deposited by past human populations rather than the result of natural or animal activity. Marine shell middens occur all along the coast and may extend within 5 km of the coastline. This area is generally regarded as being archaeologically sensitive. The shells are concentrated in a specific locality above the high-water mark and frequently contain various edible and sometimes inedible marine shells, stone tools, pottery, bone (fish and animal) and occasionally also human remains. Shell middens may be of various sizes and depths, but an accumulation which exceeds 1 m² in extent, should be reported to an archaeologist. Freshwater shell middens occur along river banks and comprise freshwater shell, fish and animal bone, stone tools, pottery, and sometimes human remains.



Examples of the occurrence of coastal shell middens

5. Large stone features

They come in different forms and sizes, but are easy to identify. The most common are roughly circular stone walls (mostly collapsed) and may represent stock enclosures, remains of wind breaks or cooking shelters. Others consist of large piles of stones of different sizes and heights and are known as *isisivane*. They are usually near river and mountain crossings. Their purpose and meaning are not fully understood; however, some are thought to represent burial cairns while others may have symbolic value.



Examples of stone packed features

6. Graves, Burials and Human Skeletal material

Formal historical graves are easily identifiable as they are in most cases fenced off or marked with engraved headstones. Informal stone packed graves in several instances also occur within these fenced off areas.

It is difficult to detect the presence of archaeological human remains on the landscape as these burials, in most cases, are not marked at the surface. Human remains are usually observed when they are exposed through erosion or construction activities for development. Several human remains have been rescued eroding out of the dunes along this coastline and dongas in inland areas. In some instances, packed stones or rocks may indicate the presence of informal pre-colonial burials.

Human remains, whether the complete remains of an individual buried during the past, or scattered human remains resulting from disturbance of the grave, should be reported. In general, the remains are buried in a flexed position on their sides, but are also found buried in a sitting position with a flat stone capping and developers are requested to be on the alert for this.



Exposed human remains eroding out a coastal shell midden.



Exposed human remains eroding out an inland donga