

**A PHASE 1 ARCHAEOLOGICAL IMPACT ASSESSMENT (AIA) FOR BUSH CLEARING
ON BOSFONTEIN FARM TRADING AS "JUST MILK", ALEXANDRIA MAGISTERIAL
DISTRICT, NDLAMBE MUNICIPALITY, EASTERN CAPE PROVINCE.**

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A PHASE 1 ARCHAEOLOGICAL IMPACT ASSESSMENT (AIA) FOR BUSH CLEARING ON BOSFONTEIN FARM TRADING AS "JUST MILK", ALEXANDRIA MAGISTERIAL DISTRICT, NDLAMBE MUNICIPALITY, EASTERN CAPE PROVINCE.

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

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

The Department of Economic Development, Environmental Affairs and Tourism (DEDEAT) issued a Compliance Notice in terms of Section 31 L of the National Environmental Management Act for commencing with listed activities under the EIA Regulations without environmental approval. More than 1 ha of natural vegetation was cleared for pastures, which triggered Activity 27 under Listing Notice 1 of the EIA Regulations:

"The clearance of an area of 1 hectares or more, but less than 20 hectares of indigenous vegetation".

The phase 1 archaeological impact assessment was conducted as part of a Section 24G application for the rectification of the unlawful commencement of clearing of natural vegetation for submission to the Department of Economic Development, Environmental Affairs and Tourism according to the National Environmental Management Act (NEMA).

1. EXECUTIVE SUMMARY

1.1. Purpose of the Study

The purpose of the study was to conduct and compile a retrospective phase 1 archaeological impact assessment (AIA) for the bush clearing on Bosfontein Farm trading as "Just Milk", Alexandria Magisterial District, Ndlambe municipality, Eastern Cape Province.

The survey was conducted to identify whether any archaeological heritage resources may have been negatively impacted by the vegetation clearing activities and establish the range and importance of the exposed and *in situ* archaeological heritage material remains, sites and features; establish the potential impact of the development; and make recommendations to minimize possible damage to the archaeological heritage.

1.2. Brief Summary of Findings

Isolated surface scatters of Middle Stone Age (MSA) stone artefacts were observed outside the vegetation cleared areas within a 150 m section of the recently constructed internal gravel road running along the southern boundary of the Farm Bosfontein. The road seems to have been constructed around 2018. The stone artefacts were manufactured on quartzite raw material and comprised mainly of cores and flakes. The surface scatters of stone artefacts are probably not *in situ* and therefore occur in a secondary context. No other archaeological organic or material remains were observed in association with the stone artefacts. However, it is possible that stone artefacts may occur between the surface and 50-80 cm below ground.

The remains of a foundation of what may have been a dwelling was noted on the hilltop along the north-eastern boundary of the Farm Bosfontein. The foundation is all that remains of the structure and some building rubble on the side of hill.

1.3. Recommendations

The area is considered as having a *low archaeological heritage significance*. Development may proceed as planned; however, the following recommendations must be as part of the environmental management plan for the project:

1. 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 findings will then be conducted to establish the contextual status of the sites and remove the archaeological deposit before development activities continue.
2. 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.

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 office development.

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 twelve (12) 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

The commencement of a listed activity without an environmental authorization was informed after a site inspection by officials from this department on the 12 September 2017 on the premises known as "Just Milk" in the Bosfontein farming area, Alexandria Magisterial District. The farm is being managed by Allan Brotherton who was present during the site inspection. The officials observed that:

- An area of approximately 6,2 hectares or more of indigenous vegetation was cleared using a bulldozer,
- Another area of approximately 2 hectares on a hillside had also been cleared progressively.

The manager alleges that all cleared areas were previously pastures utilized by the previous owner a few years ago and were infested with prickly pear and thorn trees, *Vachellia karao*. The cleared areas were immediately planted with pasture grasses for grazing cattle, and at the time of the visit the remnants of heaps of bulldozed indigenous forest consequent of the clearing activities were being burned by fire.

A desktop study using aerial images was also undertaken. It was determined that clearing of indigenous vegetation has taken place on the said properties (Figures 4 – 7). This was confirmed to have been done without the required environmental authorisation. The total extent of the clearing of indigenous vegetation amounts to approximately 86ha on the farm. The clearing of "indigenous vegetation" includes selective clearing using artificial means that changes the structure and composition of the vegetation type.

DEDEAT instructed that vegetation clearing immediately stop and desist from the further undertaking of the aforementioned activities. The terms of reference provided for the appointment of a suitably qualified person to compile a rehabilitation plan whereby the

site that was impacted on as a consequence of the said clearing of indigenous vegetation, is rehabilitated

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 and compile a retrospective phase 1 archaeological impact assessment (AIA) for the bush clearing on Bosfontein Farm trading as "Just Milk", Alexandria Magisterial District, Ndlambe municipality, Eastern Cape Province.

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 –
- (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 Phase 1 Archaeological Impact Assessment. The phase 1 archaeological impact assessment was conducted as part of a Section 24G application for non-compliance according to the National Environmental Management Act (NEMA) and the National Heritage Resources Act (NHRA).

7. ARCHAEOLOGICAL BACKGROUND

Little systematic archaeological research has been conducted within the immediate area of the proposed development. Several relevant archaeological and heritage impact assessments have been conducted within the wider region including the area between the Greater Addo Elephant National Park (GAENP), Gqeberha (formerly Port Elizabeth), the coastal areas, and Makhanda (formerly Grahamstown). These impact assessments have identified several Early, Middle, and Later Stone Age artefact scatters and sites as well as evidence of Khoekhoen pastoralist and Iron Age agropastoralist occupation and/or interaction by the presence of broken earthenware pot sherds and associated material culture and settlement patterns. Archaeological sites in the form of shell middens and scatters have been reported along the surrounding coastline and within the 5 km archaeologically sensitive coastal zone. Archaeological sites in this area predominantly date to the various Stone Ages as no evidence of early black farmer settlements, referred to as Iron Age communities, has been documented within wider area. Historical ruins, dwellings and homesteads established by colonial settlement are distributed across the

wider regions under discussion. Nineteenth century ceramics, glass, and other artefacts are usually found in association with these historical settlements. Archaeological sites have been excavated near Addo, within the Greater Addo Elephant National Park, these research excavations have yielded evidence of occupation over the last 1 million years.

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 Sneeuwerge Mountains (in Prins 2011).

Early Stone Age tools is the earliest evidence for human ancestors occupying the Sundays River Valley and surrounding area and occur throughout the region in river gravels that cap hilltops and slopes and on the palaeosols / calcrete floors in the dune systems like those at Geelhoutboom and Brandewynkop (Butzer 1978; Deacon & Geleijnse 1988). Large hand axes have been reported from Coega Kop and along the Coega and Sundays Rivers. Archaeological research has been recently been carried out near Kirkwood and Addo.

The Albany Museum Database holds records and archaeological collections of sites researched within the region.

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 is 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.

The Klasies River Cave complex (caves 1-5), situated 55 km west of Jeffreys Bay, is the most significant archaeological site with evidence of occupation and human development over the last 120 000 years. Previous excavations at the Klasies River main site exposed anatomically modern human remains dating to about 110 000 years old (Singer & Wymer 1982; Rightmire & Deacon 1991; Deacon 1992, 1993, 1995, 2001; Deacon, H.J. & Shuurman, R. 1992; Henderson 1992; Deacon & Deacon 1999).

Archaeological sites excavated within the wider region have revealed evidence of occupation during the Middle Stone Age period. Scatters of Middle Stone Age stone artefacts are also known to occur within the surrounding area where these have been recorded in archaeological and heritage impact assessments within the region.

The Albany Museum Data Recording Centre holds records of sites and artefacts in its collections. Middle Stone Age scatters are known to occur along the Port Alfred coastline and within the wider region (Albany Museum Archaeological database).

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; although there is a lack of crucial sites and evidence that represent this change. By the time of the Later Stone Age the genus *Homo*, in southern Africa, had developed into *Homo sapiens 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 archaeological sites found in the area would 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. There are many San hunter-gatherer sites in the interior mountainous region north of the study site. Here, caves and rock shelters were occupied by the San during the Later Stone Age and 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.

Extensive Later Stone Age research has been conducted along the coastline south of the proposed development site and it is thought that these past communities may have moved between the mountainous areas and the coast according to excavated remains. Later Stone Age stone artefact scatters and sites are known to occur within region, along the coastal areas, Uitenhage and Port Elizabeth, as well as within the Greater Addo Elephant National Park and towards Jansenville where these have been recorded in archaeological and heritage impact assessments.

Later Stone Age middens and archaeological scatters are known to occur along the coastline (Albany Museum Archaeological database)

The Albany Museum Data Recording Centre holds records of sites and artefacts in its collections.

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. Relevant to the study area, 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. Khoi 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. Many sites were found along the Cape St Francis coast during archaeological and heritage impact assessments, with the oldest dating to 1 500 years old (Binneman 1996, 2001, 2005).

Khoi groups who lived in the area during the seventeenth and eighteenth centuries include the Inqua around the Aberdeen area, the Damaqua between the Gamtoos and Swartkops Rivers and the Gonaqua extending from the Sundays River to the Fish River by the middle of the eighteenth century. Many of these communities were eventually absorbed into the eighteenth-century colonial lifestyle and several became farmworkers for the Dutch and British or clients of the amaXhosa engages in elephant hunting. A few groups settled at Mission Stations such as Enon, Bethelsdorp and Theopolis.

The Albany Museum Database holds records of sites and artefacts in its collections. Khoekhoen shell middens are known to occur along the Port Alfred and extended coastline (Albany Museum Archaeological database).

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);
- Ndongondwane (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;

Iron Age sites have been recorded as far south as Port Alfred (Albany Museum Archaeological database).

7.5. Human Remains and Unmarked Burials

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. Several human remains have been rescued eroding out of the dunes along this coastline.

Graves with rich grave goods were uncovered during excavations at the sites of Melkhoutboom and Vygeboom in the Greater Addo Elephant National Park. Stapleton and Hewitt apparently recovered a number of human remains from under circles of cairns on a farm near Kirkwood in 1928. The cairns were located near to the Sundays River.

The Albany Museum Database holds records of human remains that have been exposed and collected for conservation and curation within the wider region from the coastal areas to the south and east as well as inland around to Graaff Reinet and within the Greater Addo Elephant National Park. Cultural Resource Management practitioners whilst conducting archaeological heritage impact assessments have also recorded formal historical cemeteries and informal burials.

7.6. Rock Art (Paintings and Engravings)

Rock art is generally associated with the Later Stone Age period mostly dating from the last 5 000 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. Rock engravings, however, are generally distributed on the semi-arid central plateau, with most of the engravings found in the Orange-Vaal basin, the Karoo stretching from the Eastern Cape (Cradock area) into the Northern Cape as well as the Western Cape, and Namibia. At some sites both paintings and engravings occur in close proximity to one another especially in the Karoo and Northern Cape. The greatest concentrations of engravings occur on the andesite basement rocks and the intrusive Karoo dolerites, but sites are also found on about nine other rock types including dolomite, granite, gneiss, and in a few cases on sandstone (Morris 1988). Substantial research has also been conducted in the Western Cape Karoo area around Beaufort West (Parkington 2008). Rock paintings are prolific in the inland mountainous regions situated north of the site.

There are several San hunter-gatherer sites in the Elandsberg and Groot Winterhoekberg Mountains, as well as within the Groendal area to the east and the Zuurberg Mountains. Here caves and rock shelters were occupied by the San during the Later Stone Age and contain paintings along the walls.

The Albany Museum Database holds records of sites and collections of rock painting sites of the wider regions and there are several that that remain undocumented.

8. DESCRIPTION OF THE PROPERTY

8.1. Location data

The site includes the Farms Bosfontein 321/325, Alexanria RD 405, Die Kamp 26, and Portion 258, as well as Boshhoek, Glen Hope and Turiam. Access to the site is situated south of the R72 regional at the Boshhoek turn-off, approximately 7.5 km from Alexandria, and 3.5 km from the turn-off. The Addo Elephant National Park (Boxwood Nature Reserve) borders Bosfontein Farm to the east and to the west The Addo Elephant National Park (Boschhoek Nature Reserve) is separated by the neighbouring farm, Hopefield, in between (Figures 1 – 2).

The site is located between 7 km and 11 km of the nearest coastline immediately south, taking into consideration that the width of this particular coastline is approximately 2.7 km (Figure 3). The coastline is part of the eastern end Woody Cape Section of the Addo Elephant National Park and comprises the sandy beaches and undulating dunes of the Alexandria Dune Fields. The area is known to contain an abundance of archaeological sites associated with Khoekhoen pastoralists depicted by the evidence of pottery.

8.2. Map

1:50 000 map: 3326 CB & CD ALEXANDRIA (Figure 1)

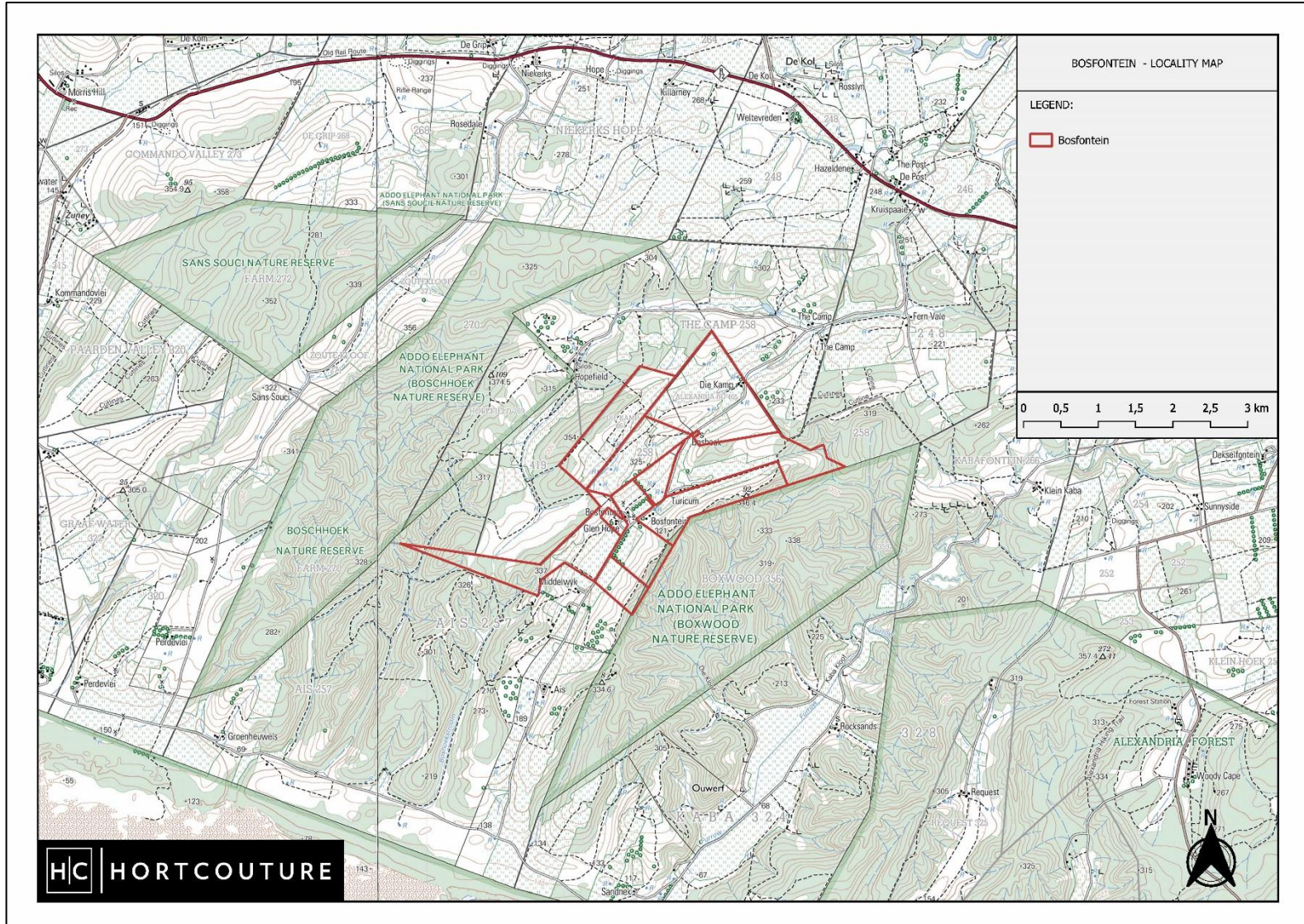


Figure 1. 1:50 000 CB & CD ALEXANDRIA topographic map showing the location of Bosfontein Farm (courtesy of Hortcouture).

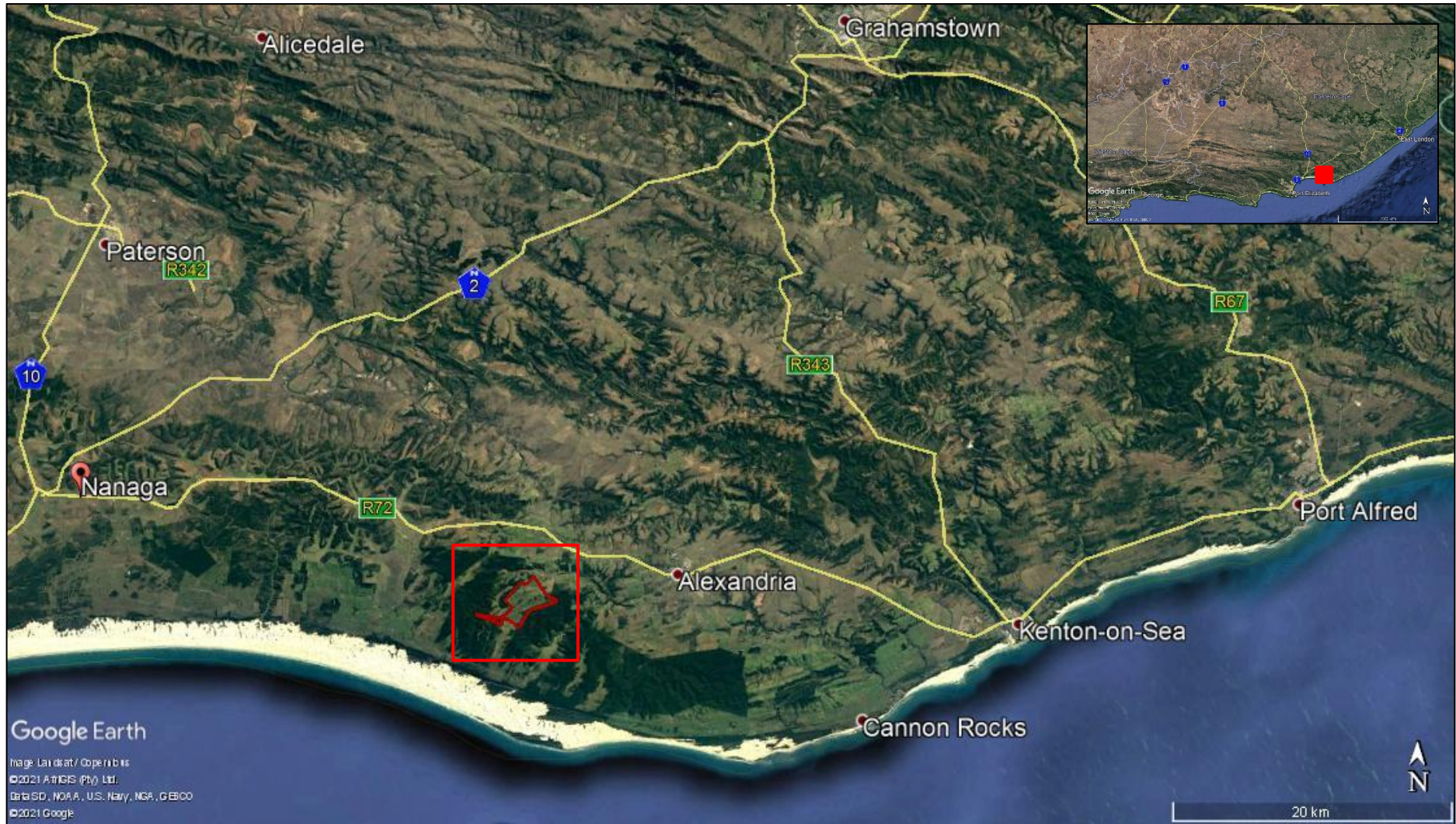


Figure 2. Aerial view of the location of Bosfontein Farm showing the nearby towns.



Figure 3. Close-up aerial view of Bosfontein Farm showing its proximity to the nearest coastline to the south and Alexandria to the east.

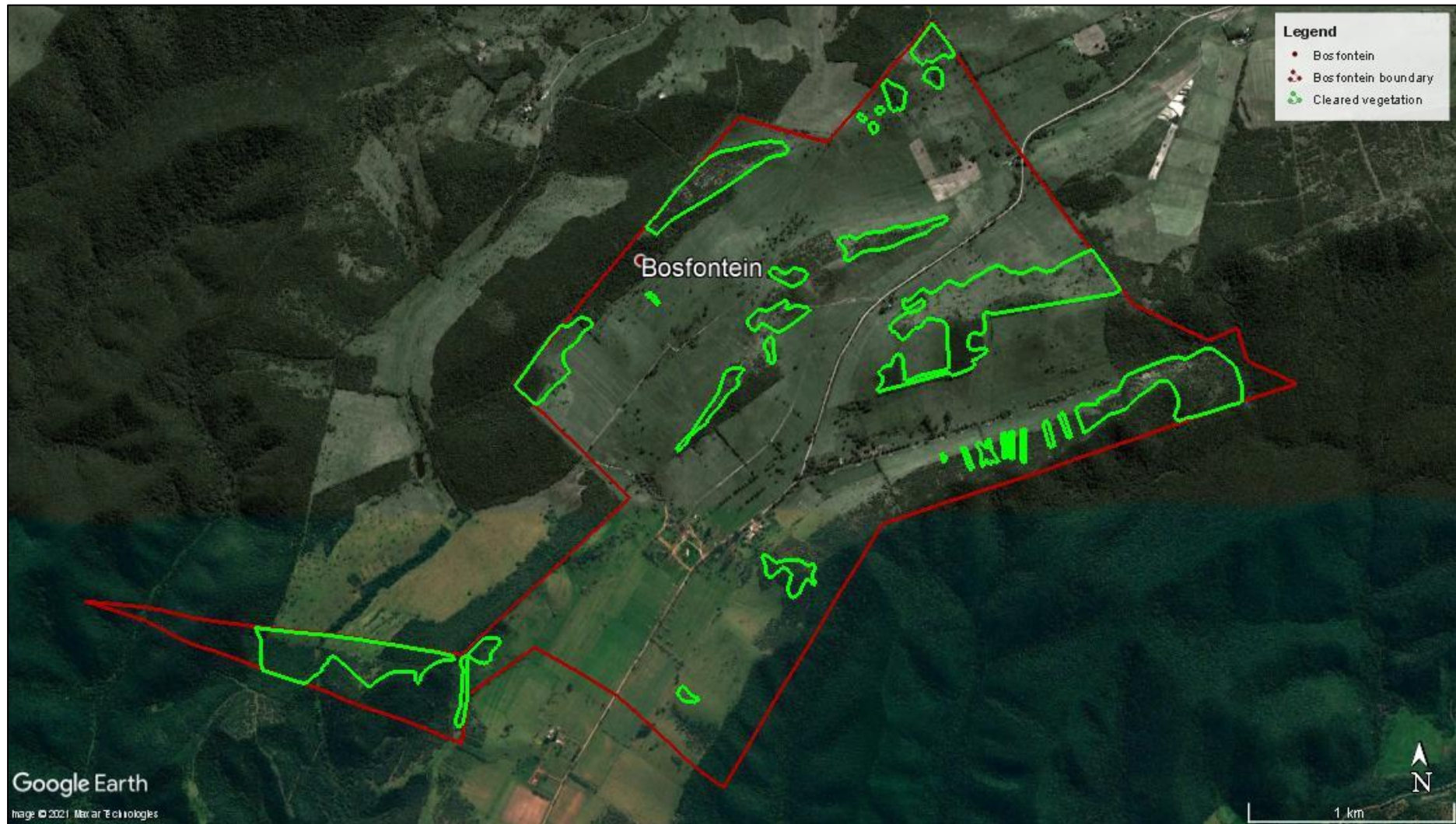


Figure 4. View of Bosfontein Farm and the vegetation cleared areas identified for the S24G application (2012).



Figure 5. View of Bosfontein Farm and the vegetation cleared areas identified for the S24G application (2016).



Figure 6. View of Bosfontein Farm and the vegetation cleared areas identified for the S24G application (2018).

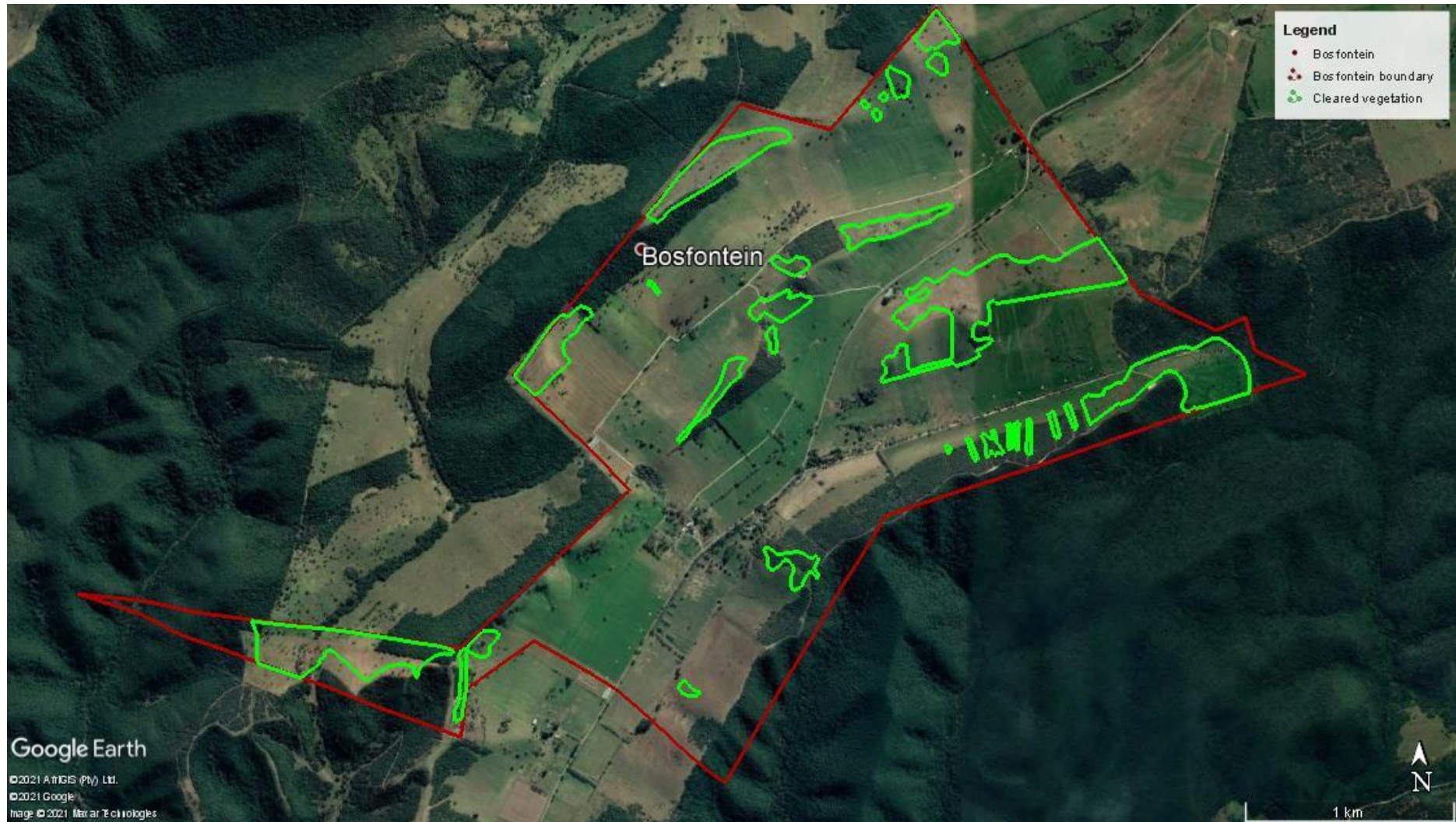


Figure 7. View of Bosfontein Farm and the vegetation cleared areas identified for the S24G application (current).

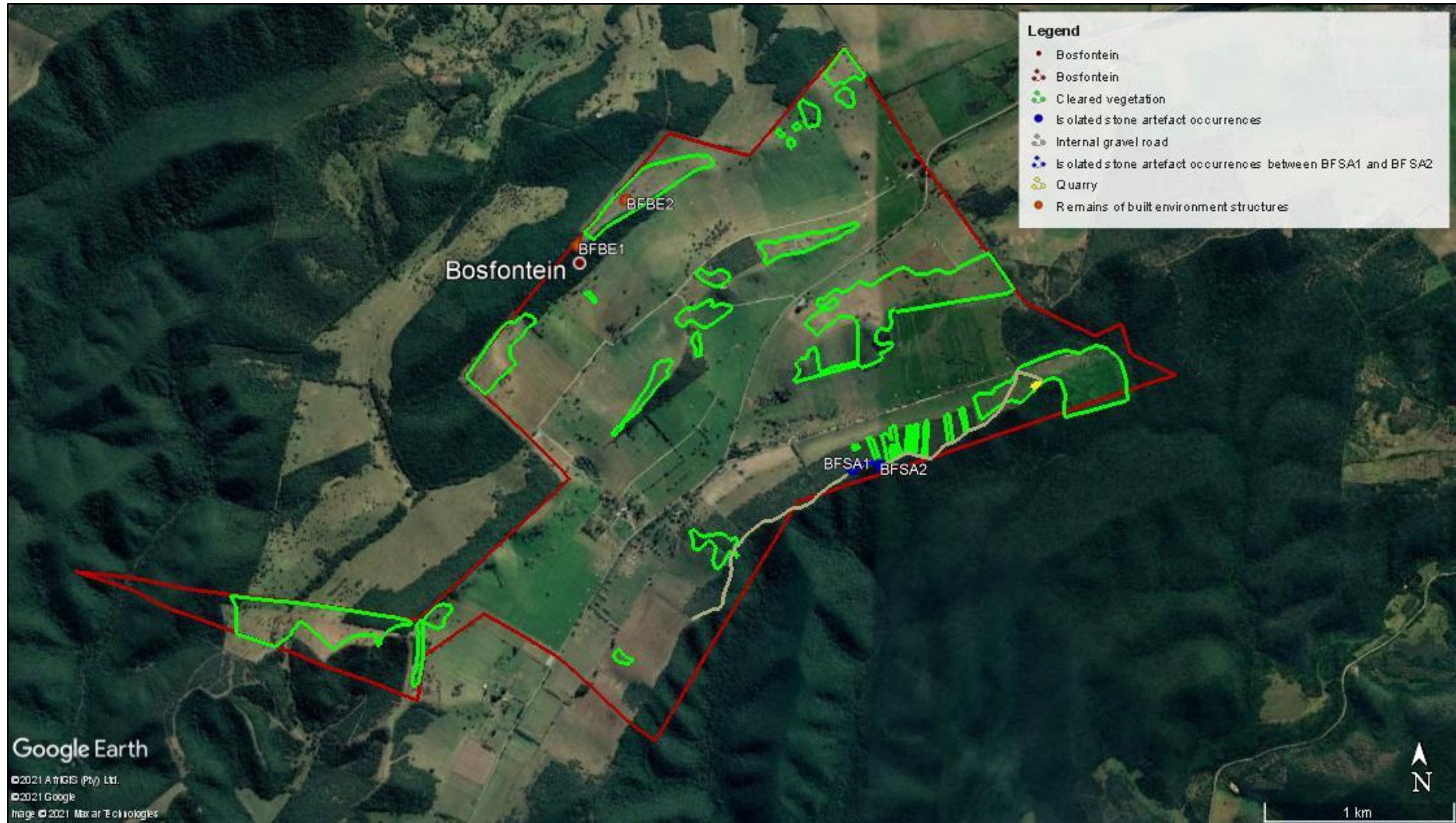


Figure 8. View of Bosfontein Farm, the vegetation cleared areas identified for the S24G application, as well as the isolated stone artefact occurrences and remains of the built environment structures (current).

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 immediate area of the proposed development. Several archaeological, heritage and cultural impact assessments have been conducted within the wider region. An archaeological background section has been included as part of the literature review. The survey was conducted on foot. GPS coordinates and photographs were taken using a Garmin Oregon 650 GPS unit.

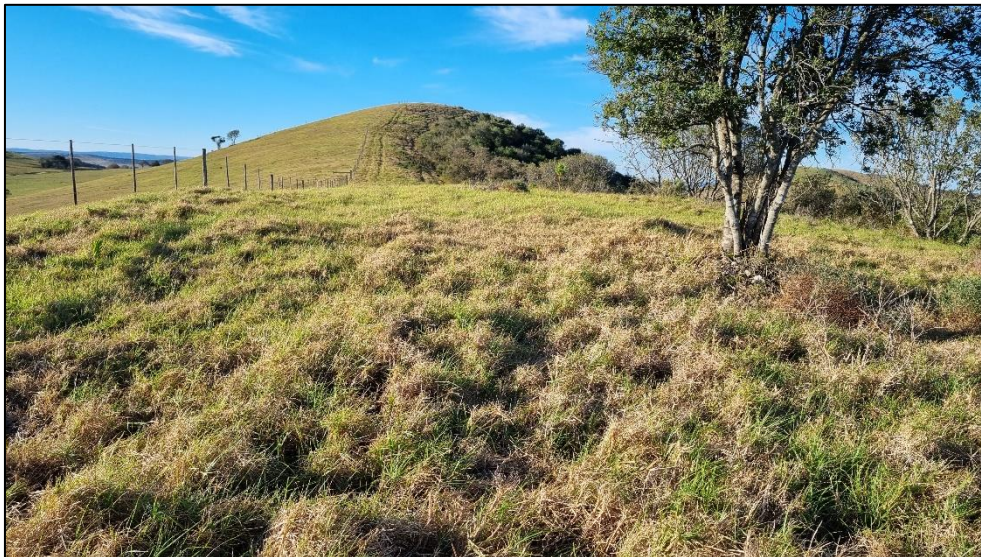
9.2 Results of the Archaeological Investigation

The retrospective archaeological investigation was conducted on foot by surveying the cleared vegetation areas identified for the S24G application. Archaeological visibility varied across the areas (Figures 9 – 18). Areas cleared during 2017 comprised mainly dense grass and shrub vegetation due to regrowth of the vegetation over the years and limited archaeological visibility within those areas. Areas that have been recently cleared, mainly along the southern boundary of the Farm Bosfontein north of the internal gravel road seems to have been cleared more recently and allowed for relatively good archaeological visibility. However, no archaeological heritage resources were identified within these areas, this may be due to minimal depth of surface disturbance. Very limited surface disturbed and eroded areas occurred within the vegetation cleared areas that limited possible observance of displaced and / or disturbed subsurface archaeological heritage remains. The internal gravel roads, posthole diggings, and the quarry were investigated for possible archaeological heritage remains (Figures 19 – 20).

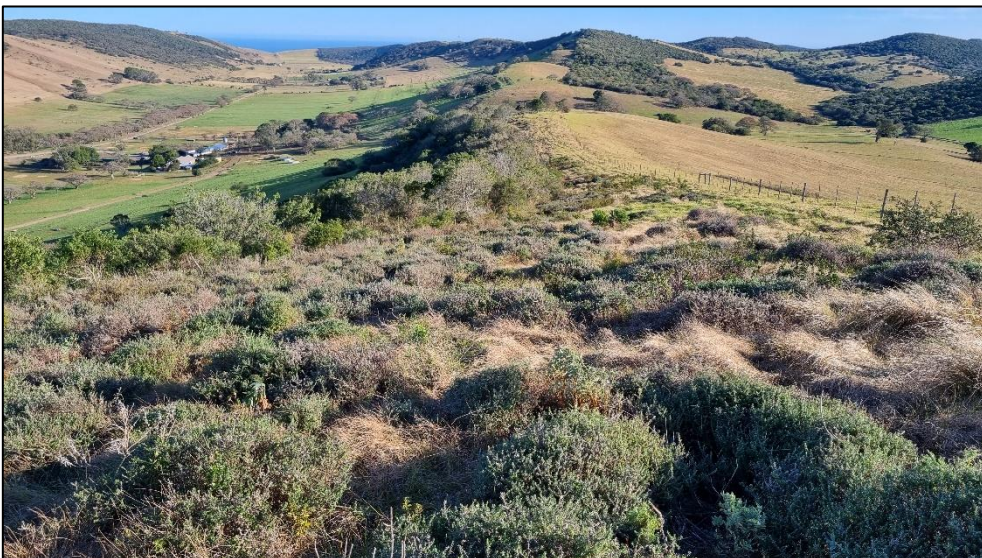
The remains of a foundation of what may have been a dwelling was noted on the hilltop along the north-eastern boundary of the Farm Bosfontein (BFBE1, Figure 8 and 21). The foundation is all that remains of the structure and some building rubble on the side of hill (BFBE2, Figure 8 and 22). It is most likely that the remains of the built environment are younger than 60 years and require protection under S34 of the National Heritage Resources Act (NHRA 25 of 1999).

Isolated surface scatters of Middle Stone Age (MSA) stone artefacts were observed outside the vegetation cleared areas within a 150 m section of the recently constructed internal gravel road running along the southern boundary of the Farm Bosfontein (Figure 8 and 23). The road seems to have been constructed around 2018. The stone artefacts were manufactured on quartzite raw material and comprised mainly of cores and flakes (Figures 24 – 26). The surface scatters of stone artefacts are probably not *in situ* and therefore occur in a secondary context. No other archaeological organic or material remains were

observed in associated with the stone artefacts. However, it is possible that stone artefacts may occur between the surface and 50-80 cm below ground.



Figures 9-11. General landscape showing the vegetation cleared areas.



Figures 12-14. General landscape showing the vegetation cleared areas.



Figures 15-17. General landscape showing the vegetation cleared area.



Figure 18. General landscape showing the vegetation cleared area.



Figure 19. Example of an exposed surface disturbed area investigated for possible archaeological heritage remains.



Figure 20. Example of an exposed surface disturbed area investigated for possible archaeological heritage remains.



Figure 21. View of the remains of the foundation situated at BFBE1.



Figure 22. View of the built environment structure situated at BFBE2.



Figure 23. View of the area within the internal gravel road yielding isolated occurrences of stone artefacts.



Figures 24-26. Examples of stone artefacts identified between BFSA1 and BFSA2 within the internal gravel road.

10. CO-ORDINATES AND SITES FOR THE FOR BUSH CLEARING ON BOSFONTEIN FARM TRADING AS "JUST MILK", ALEXANDRIA MAGISTERIAL DISTRICT, NDLAMBE MUNICIPALITY, EASTERN CAPE PROVINCE.

Table 1. Co-ordinates and sites for bush clearing on Bosfontein Farm trading as "Just Milk", Alexandria Magisterial District, Ndlambe Municipality, Eastern Cape Province.

REFERENCE	DESCRIPTION	CO-ORDINATES	HERITAGE GRADING
BFSA1	Isolated occurrences of Middle Stone Age stone artefacts	33°40'34.82"S; 26°17'55.63"E	'General' Protection C (Field Rating IV C)
BFSA2	Isolated occurrences of Middle Stone Age stone artefacts	33°40'34.82"S; 26°17'55.63"E	'General' Protection C (Field Rating IV C)
BFBE1	The remains of the foundation	33°39'56.96"S; 26°16'59.74"E	N/A
BFBE2	Building rubble on side of hill	33°39'49.21"S; 26°17'09.47"E	N/A

11. DESCRIPTION AND GRADING OF SITES

11.1. Stone Artefacts Scatters (BFSA1 AND BFSA2)

Stone artefact scatters, mostly isolated occurrences, were observed within the recently constructed internal gravel road situated along the western boundary of the Farm Bosfontein. The vegetation cleared areas are situated north of this road. The surface scatters of stone artefacts are probably not in situ and therefore occur in a secondary context. No other archaeological organic or material remains were observed in associated with the stone artefacts. However, it is possible that stone artefacts may occur between the surface and 50-80 cm below ground.

The stone artefact occurrences are considered as having a *low archaeological significance* and has been allocated a heritage grading of (see Appendix B):

'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). (see Appendix B).

12. CULTURAL LANDSCAPE

Cultural landscapes are increasingly becoming a significant considering factor when conducting various archaeological and heritage impact assessments for proposed developments. The area investigated proposed development is considered as having a *low cultural heritage significance* despite the isolated surface occurrences of Middle Stone Age archaeological stone artefacts.

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.

12.1. 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 is 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.

12.2. 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 the surrounding coastal areas (Gqeberha / Port Elizabeth to Port Alfred) and the inland areas (Uitenhage, Addo and the Sunday River Valley, Alicedale and Grahamstown) have reported on the evidence of the presence of *Homo erectus* (Early Stone Age), *Homo sapiens* (Middle Stone Age), and *Homo sapiens 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 Alexandria Dune Field to the south is also rich in Later Stone Age and Khoekhoen Pastoralist occupation. The mountains between the coast and the inland areas, although not comprehensively documented, is known to contain several rock art sites.

Pre-colonial human remains are mostly unmarked and invisible on the landscape, however, in some instances, they may be marked by organised piles of stones.

12.3. 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.

Bosfontein Farm currently trading as "Just Milk" is a functioning dairy farm that serves the consumer market and provides the Eastern Cape with a valuable food source.

13. ASSESSMENT OF IMPACTS ON THE ARCHAEOLOGICAL HERITAGE RESOURCES.

The phase 1 archaeological survey is limited to surface and exposed observations of archaeological and historical heritage resources that are identified and recorded. Heritage resources that may have been surface covered or exposed over time and those occurring below the surface may also be negatively impacted during the proposed development. Most importantly, archaeological and heritage resources are a non-renewable resource that cannot be replaced once lost or destroyed, therefore, every effort should be taken to preserve or conserve the most significant of heritage resources.

Mitigation measures have been recommended by the author that should be respected and implemented prior to and during the duration of the development's lifespan.

14. RECOMMENDATIONS

The area is considered as having a *low archaeological heritage significance*. Development may proceed as planned; however, the following recommendations must be as part of the environmental management plan for the project:

1. 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 findings will then be conducted to establish the contextual status of the sites and remove the archaeological deposit before development activities continue.
2. 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.

15. CONCLUSION

The vegetation cleared areas yielded no archaeological and historical heritage resources and is considered as having a *low archaeological heritage significance*. This is likely due to the lack of depth of disturbance of the surface areas.

Isolated occurrences of Middle Stone Age stone artefacts were identified outside the vegetation cleared areas within the recently constructed internal gravel road. Therefore, it is possible that stone artefacts may occur below the surface if deeper disturbances of the surface are conducted as evidenced by the internal gravel road. These artefact scatters are considered as low archaeological significance.

The recommendations must be considered as appropriate mitigation measures to protect and conserve the archaeological heritage remains that may occur and are not immediately visible on the surface during any further vegetation clearing.

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17. RELEVANT ARCHAEOLOGICAL AND HERITAGE IMPACT ASSESSMENTS

Very little systematic archaeological research has been conducted within the immediate and surrounding areas for the proposed project, therefore, Cultural Resource Management (CRM) Reports, such as archaeological and heritage impact assessments, assist in attempting to predict the archaeological and heritage resources that may be found within the proposed development areas. The following reports are considered relevant to the current project:

- Anderson, G. 2009. Heritage Survey of the Proposed Waainek Wind Farm, Grahamstown, Eastern Cape.
- Binneman, J. & Booth, C. 2008. A Phase 1 Archaeological Impact Assessment of the Proposed Subdivision and Rezoning of Portions off Garden Lot, Portion 20 of Farm No. 397, South Gorah, Kenton-on-Sea, Ndlambe Municipality, Eastern Cape.
- Booth, C. 2011. A Phase 1 Archaeological Impact Assessment for the Golf Course Development on Portions 1 and 2 of the Farm Willow Glen and Portion 6 of Belmont Valley Farm, Grahamstown, Makana Municipality, Cacadu District Municipality, Eastern Cape Province.
- Booth, C. 2013. A Phase 1 Archaeological Impact Assessment (AIA) for the Proposed Mining Right Application for the Mining of Dolomite, Limestone, Sand (General), Stone Aggregate, Gravel and Sand on Portions of Portion 17 and the Remainder of the Farm Lombard's Post 289, Bathurst, Eastern Cape Province.
- Booth, C. 2014. A Letter of Recommendation (With Conditions) for the Exemption of a Phase 1 Archaeological Impact Assessment (AIA) for the Proposed Kwanonkqubela Alexandria Community Health Centre on Erf 623, Alexandria, Ndlambe Local Municipality, Eastern Cape Province.
- Booth, C. 2015. A Letter of Recommendation (With Conditions) For the Exemption of a Full Phase 1 Archaeological Impact Assessment (AIA) For the Proposed Fuel Service Station and Associated Infrastructure on Erf 3139, Kariega Heights, Kenton-On-Sea, Ndlambe Local Municipality, Eastern Cape Province.
- Booth, C. 2019. Phase 1 Archaeological Impact Assessment for The Proposed Sand Mining Activities on The Farm No. 258, Fairview, In the Port Alfred District, Ndlambe Local Municipality, Eastern Cape Province.
- Booth, C. 2019. Phase 1 Archaeological Impact Assessment for The Proposed Proposed Marseille Bulk Water and Sewerage Upgrade, Nldambe Local Municipality, Eastern Cape.
- Booth, C. 2018. A Phase 1 Archaeological Impact Assessment (AIA) for the Proposed Raising Main Pipeline Between Boknes Strand and Cannon Rocks, Ndlambe Local Municipality, Sarah Baartman District, Eastern Cape Province.
- Nilssen, P. 2011. Scoping Archaeological Impact Assessment: Proposed Development of the Plan 8 Grahamstown Wind Energy Facility Project: Including farms Gilead 361, Peynes Kraal 362 and Tower Hill, Grahamstown, Makana Municipality, Eastern Cape Province.

- Van Ryneveld, K. 2008. Phase 1 Archaeological Impact Assessment – the Albany Regional Water Supply Scheme, Eastern Cape, South Africa. Unpublished report by Archaeomaps on file at SAHRA as 2008-SAHRA-0136.
- Van Ryneveld, K. 2010. Graves Discovered During Upgrading of the R72 from Port Elizabeth to Port Alfred, Eastern Cape, South Africa.
- Van Ryneveld, K. 2012a. Phase 1 Archaeological Impact Assessment: Lamin Lime Prospecting Application: Farm 101, Farm 102-1, Farm 206-2 & Farm 206-5, Ndlambe Municipality, Eastern Cape, South Africa.
- Van Ryneveld, K. 2012b. Phase 1 Archaeological Impact Assessment: Refurbishment, Operation and Maintenance of the Port Alfred East Bank Dube Well Water Supply Scheme.
- Van Schalkwyk, L.O. & Wahl, B. 2008. Heritage Impact Assessment of Ndlambe and Makana Borrow Pits, Greater Cacadu Region, Eastern Cape Province, Eastern Cape Province, South Africa. Unpublished report by Ethembeni Cultural Heritage on file at SAHRA as 2008-SAHRA-0543.

18. 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 relative heritage resources authority. The final 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)



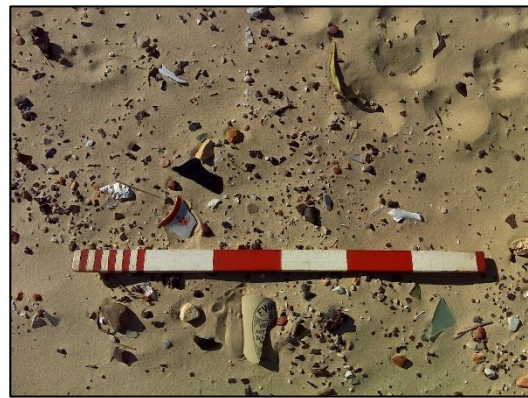
2. Pottery scatters

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)**



3. Historical artefacts and features

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



Examples of 19th century European ceramics

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