

A PHASE 1 ARCHAEOLOGICAL IMPACT ASSESSMENT (AIA) FOR A PROPOSED FUEL STATION AND ASSOCIATED INFRASTRUCTURE AT THE UMZIMVUBU BRIDGE, NEAR MOUNT FRERE, UMZIMVUBU LOCAL MUNICIPALITY, ALFRED NZO DISTRICT MUNICIPALITY, EASTERN CAPE PROVINCE.

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CONTENTS

1.	EXECUTIVE SUMMARY	4.
1.1.	Purpose of the Study	4.
1.2.	Brief Summary of Findings	4.
1.3.	Recommendations	5.
1.3.1.	<i>SITE ALTERNATIVE OPTION 1</i>	5.
1.3.2.	<i>SITE ALTERNATIVE OPTION 2</i>	5.
2.	BACKGROUND INFORMATION	6.
2.1.	Applicant	6.
2.2.	Consultant	6.
2.3.	Terms of Reference	7.
3.	HERITAGE LEGISLATIVE REQUIREMENTS	7.
4.	BRIEF ARCHAEOLOGICAL BACKGROUND	10.
4.1.	Early Stone Age (ESA) - 1.5 million to 250 000 years ago	10.
4.2.	Middle Stone Age (MSA) – 250 000 – 30 000 years ago	11.
4.3.	Later Stone Age (LSA) – 30 000 years ago – recent (100 years ago)	13.
4.4.	Last 2 000 years – Khoekhoen Pastoralism	15.
4.5.	Last 2 000 years – The Iron Age	16.
4.6.	Human Remains	18.
4.7.	Rock Art (Paintings and Engravings)	19.
4.8.	Historical Background	19.
5.	DESCRIPTION OF THE PROPERTY	22.
5.1.	Location data	22.
5.2.	Map	22.
6.	ARCHAEOLOGICAL INVESTIGATION	26.
6.1.	Methodology	26.
6.2.	Results of the Archaeological Investigation	26.
6.2.1.	MOUNT FRERE STATION: OPTION 1	26.
6.2.2.	MOUNT FRERE STATION: OPTION 2	33.
7.	DESCRIPTION OF SITES: SITE ALTERNATIVES OPTION 1 AND OPTION 2 FOR THE PROPOSED FUEL STATION AND ASSOCIATED INFRASTRUCTURE	38.
7.1.	Stone Artefact Scatters (MF1 SA1 and isolated occurrences over the proposed development sites)	38.
7.2.	Earthenware pottery sherds, upper grinding stones, and wooden posts (MF1 PS1)	38.
7.3.	Scatter and midden of historical cultural material (MF1 MS1 and MF2 MS1)	39.
7.4.	Analysis and conclusion of the proposed development and cultural material identified during the survey.	39.
8.	COORDINATES AND SITES FOR A PROPOSED FUEL STATION AND ASSOCIATED INFRASTRUCTURE AT THE UMZIMVUBU BRIDGE, NEAR MOUNT FRERE, UMZIMVUBU LOCAL MUNICIPALITY, ALFRED NZO DISTRIC MUNICIPALITY, EASTERN CAPE PROVINCE.	41.
9.	CULTURAL LANDSCAPE	41.
9.1.	Concept of Cultural Landscape	41.
9.2.	Archaeological Landscape	44.
9.3.	Historical and Contemporary Landscape	44.
10.	CONCLUSION	46.
11.	RECOMMENDATIONS	49.
11.1.	<i>SITE ALTERNATIVE OPTION 1</i>	48.
11.2.	<i>SITE ALTERNATIVE OPTION 2</i>	48.

12. REFERENCES	49.
13. RELEVANT ARCHAEOLOGICAL AND HERITAGE IMPACT ASSESSMENTS	53.
14. GENERAL REMARKS AND CONDITIONS	55.

LIST OF APPENDICES

APPENDIX A: GRADING SYSTEM	56.
APPENDIX B: IDENTIFICATION OF ARCHAEOLOGICAL FEATURES AND MATERIAL FROM INLAND AREAS: guidelines and procedures for developers	57.

LIST OF FIGURES

Figure 1. 1:50 000 topographic map 3029 CC RODE showing the location of the alternative sites for the proposed fuel station and associated infrastructure.	23.
Figure 2. Aerial view showing the location of the alternative sites for the proposed fuel service station and associated infrastructure.	24.
Figure 3. Aerial view showing the proposed area for development and the location of the nearby towns and surrounding villages (insert).	25.
Figure 4. Close-up aerial view of site Option 1 north of the N2 national road showing the findings of the archaeological investigation.	26.
Figure 5. View of the general landscape of the site Option 1 proposed development area facing south-east towards the Umzimvubu River and Umzimvubu River Bridge.	28.
Figure 6. View of the general landscape of the proposed development area facing north.	28.
Figure 7. View of the general landscape of the site Option 1 proposed development area facing east towards the kuMakhola Village.	29.
Figure 8. View of the general landscape of the site Option 1 proposed development area facing south-west towards the Umzimvubu River.	29.
Figure 9. View of the disturbed and eroded area at the area marked MF1 SA1, located 100 m east of the Umzimvubu River outside of the site Option 1 proposed development area.	30.
Figures 10-11. Examples of stone artefacts occurring within the site Option 1 proposed development area.	30.
Figure 12. View of the area where the pottery sherds and upper grinding stones occurred on the site Option 1 proposed development area.	31.
Figures 13-14. Examples of upper grinding stones occurring within the site Option 1 proposed development area.	31.
Figures 15. Example of a pottery sherd occurring within the site Option 1 proposed development area.	32.
Figure 16. View of the erect wooden posts situated slightly east of the area where the pottery sherds and upper grinding stones were located on the site Option 1 proposed development area.	32.
Figure 17. Close-up aerial view of site Option 2 south of the N2 national road showing the findings of the archaeological investigation.	33.
Figure 18. View of the general landscape of the site Option 2 proposed development area facing north towards the kuMakhola Village.	34.
Figure 19. View of the general landscape of the site Option 2 proposed development area facing east.	35.
Figure 20. View of the general landscape of the site Option 2 proposed development area facing south east.	35.
Figure 21. View of the eroding midden containing late nineteenth and early twentieth centuries' material culture situated on site Option 2 (MF MS2).	36.
Figure 22. Scatter of pottery and glass fragments and an example of a "SUSPENDER" metal button found (insert) at the site MF MS2 on site Option 2.	36.
Figures 23-24. Examples of ceramic fragments occurring within the midden at the site MF MS2 on site Option 2.	37.
Figures 25-26. Examples of ceramic fragments occurring within the midden at MF MS2 on site Option 2.	37.

LIST OF TABLES

Table 1. Coordinates and sites for the Proposed Fuel Station and Associated Infrastructure at the Umzimvubu Bridge, near Mount Frere, Umzimvubu Local Municipality, Alfred Nzo District, Eastern Cape Province. 41.

A PHASE 1 ARCHAEOLOGICAL IMPACT ASSESSMENT (AIA) FOR A PROPOSED FUEL STATION AND ASSOCIATED INFRASTRUCTURE AT THE UMZIMVUBU BRIDGE, NEAR MOUNT FRERE, UMZIMVUBU LOCAL MUNICIPALITY, ALFRED NZO DISTRICT 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)(i):

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 5000 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 (AIA).

1. EXECUTIVE SUMMARY

1.1. Purpose of the Study

The purpose of the study was to conduct a phase 1 archaeological impact assessment (AIA) for the proposed fuel station and associated infrastructure at the Umzimvubu Bridge, near Mount Frere, Umzimvubu Local Municipality, Alfred Nzo District Municipality, Eastern Cape Province. The survey was conducted to establish the range and importance of the exposed and *in situ* archaeological heritage material remains, sites and features; to establish the potential impact of the development; and to make recommendations to minimize possible damage to the archaeological heritage.

1.2. Brief Summary of Findings

Two alternative sites have been proposed for the development of the fuel station and associated infrastructure. Site Option 1 is situated north of the N2 national road and about 250 m east of the Umzimvubu River. Both sites have mostly been heavily disturbed by water erosion. Isolated occurrences of weathered Middle Stone Age stone artefacts occur *ex situ* context within the proposed development areas and surrounding extended area. Three upper grinding stones and a few sherds of earthenware pottery were documented within the same area on Site Option 1. A scatter of ceramics was documented at the entrance road to the Site Option 1 area off the N2 national road and extends to Site Option 2. Site Option 2 is situated south of the N2 national road also about 250 m east of the Umzimvubu River. A midden (rubbish dump) comprising the same types of ceramic fragments as the scatter documented in site Option 1 is located near the entrance road to Site Option 2.

1.3. Recommendations

The overall area is considered as having a low archaeological significance, however, the following recommendations must be considered before development continues:

1.3.1. SITE ALTERNATIVE OPTION 1:

1. It cannot be determined whether the erect wooden posts may be an identity marker for a possibly informal burial, no formal graves have been recorded in this area, and no informal burials have been reported, this could be included in the social impact report or during public participation meetings / consultation. Caution should be taken during the excavation and construction of this area and if human remains are uncovered the appropriate procedures must be followed so that the human remains can be systematically removed (see point 4).
2. If the current layout is changed outside of the boundary of the current footprint, an archaeological walk-through survey of the changes must be conducted and further mitigatory recommendations may be made if necessary.
3. A person must be trained as a site monitor to report any archaeological sites found during the development. 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.
4. If concentrations of historical and 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 and/or the Eastern Cape Provincial Heritage Resources Agency (ECPHRA) so that systematic and professional investigation/excavation can be undertaken. Phase 2 mitigation in the form of test-pitting/sampling or systematic excavations and collections of the pre-colonial shell middens and associated artefacts will then be conducted to establish the contextual status of the sites and possibly remove the archaeological deposit before development activities continue.

1.3.2. SITE ALTERNATIVE OPTION 2:

1. Although it is difficult to determine whether the historical cultural material on Site Option is an intact *in situ* midden (rubbish dump) a destruction permit for the area must be obtained from the Eastern Cape Heritage Resources Agency (ECPHRA). However, caution should be taken during the excavation and construction phases of the possibility that a cache of historical cultural material may be uncovered. Therefore, a person must be trained as a site monitor to report any accumulation of historical cultural material is found during the development. 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. If the current layout is changed outside of the boundary of the current footprint, an archaeological walk-through survey of the changes must be conducted and further mitigatory recommendations may be made if necessary.
3. A person must be trained as a site monitor to report any other archaeological sites found during the development. 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.
4. If concentrations of historical and 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 and/or the Eastern Cape Provincial Heritage Resources Agency (ECPHRA) so that systematic and professional investigation/excavation can be undertaken. Phase 2 mitigation in the form of test-pitting/sampling or systematic excavations and collections of the pre-colonial shell middens and associated artefacts will then be conducted to establish the contextual status of the sites and possibly remove the archaeological deposit before development activities continue.

2. BACKGROUND INFORMATION

Two alternative sites near the Umzimvubu River on either side of the N2 national road are being considered for the development of the fuel service station and associated infrastructure. It is anticipated that the proposed development will include the following components:

- **Underground Storage Tanks (UST's) with a total capacity of more than 80 m³;**
- Associated underground pipework;
- Convenience store and take-way shop;
- Parking and Truck Stop facilities; and
- Rest rooms.

2.1. Developer:

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2.2. Consultant:

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2.3. Terms of reference

The purpose of the study was to conduct a phase 1 archaeological impact assessment (AIA) for the proposed fuel station and associated infrastructure at the Umzimvubu Bridge, near Mount Frere, Umzimvubu Local Municipality, Alfred Nzo District Municipality, Eastern Cape Province:

- 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.

3. HERITAGE LEGISLATIVE REQUIREMENTS

Parts of sections 3(1)(2)(3), 34(1), 35(4), 36(3) and 38(1)(8) of the National Heritage Resources Act 25 of 1999 apply:

S3. National estate

3. (1) For the purposes of this Act, those heritage resources of South Africa which are of cultural significance or other special value for the present community and for future generations must be considered part of the national estate and fall within the sphere of operations of heritage resources authorities.

3. (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. (3) Without limiting the generality of subsections (1) and (2), a place or object is to be considered part of the 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

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

S35. Archaeology, palaeontology and meteorites

35 (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;
- (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.

S36. Burial grounds and graves

36. (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.

S38. Heritage resources management

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

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

4. ARCHAEOLOGICAL BACKGROUND

Little systematic archaeological research has been conducted within the immediate area of the proposed development. Most archaeological research that has been conducted in the wider regions of the regions of the former Transkei in the north-eastern Cape to the west of the proposed development, east towards the coast, and south towards the Great Kei River Valley and into the former Ciskei. Beyond the borders of the Eastern but usually related to the north-eastern Cape research has been conducted in the Drakensberg Mountains in KwaZulu Natal and the eastern portion of Lesotho and the Free State.

Several relevant archaeological and heritage impact assessments have been conducted within the wider region. These impact assessments have identified several Early, Middle, and Later Stone Age artefact scatters and sites as well as evidence of Iron Age agropastoralist occupation and/or interaction by the presence of broken earthenware pot sherds and associated material culture and settlement patterns.

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

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

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

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

The location of Early Stone Age sites are biased by several factors, the change in land surface, so that the evidence of coastal exploitation is absent, the survival of Early Stone Age material either *in situ* or sealed within Pleistocene deposits is limited by soil and water activities and numerous processes in environmental change over time and research interests of professional archaeologists. Early Stone Age materials are the earliest evidence for human ancestors occupying the Transkei and Ciskei regions and typically occur on floodplains of perennial rivers and along drainage lines and water courses. The occurrence of Early Stone Age stone artefacts have been recorded by cultural heritage practitioners around Mount Ayliff and along the Umzimvubu River (Anderson 1996).

Museum collections have handaxes mixed collections and other collections attributed to the Early Stone Age. Sites of convincing Early Stone Age date are indicated in most areas of the Ciskei and are present in the Transkei districts of Kentani, Butterworth, Nqamakwe, St. Mark's, Engcobo, Matatiele, Mount Frere, Mount Ayliff, Bizana, Idutywa, Lusikisiki, Mount Currie and Umtata (Derricourt 1977).

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

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

The Middle Stone Age is distinguished from the Early Stone Age by the smaller-sized and distinctly different stone artefacts and *chaîne opératoire* (method) used in manufacture, the introduction of other types of artefacts and evidence of symbolic behaviour. The prepared core technique was used for the manufacture of the stone artefacts which

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

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

Middle Stone Age material is known to occur in the districts of Kentani, Tsomo, St. **Mark's**, Qumbu, Mount Frere, Matatiele, Mount Currie, Mount Fletcher, Elliotdale, Willowvale and Umtata (Derricourt 1977). The majority of Middle Stone Age material occurs on flood plains and within rock shelters and caves where the site would have been used for occupation.

Systematic archaeological research has been conducted on several sites yielding evidence of Middle Stone Age occupation occurring within the foothills of the Drakensburg situated west of the proposed development area and extending into Lesotho and KwaZulu Natal. Strathalan Cave B situated about 10 km north-east of Maclear and about 100 - 110 km east of the proposed development area, shows evidence of human behaviour between 29 000 and 22 000 years ago. This period highlights the final years of the Middle Stone Age and is considered transient between the Middle and Late Stone Ages. Excavations at the site revealed that the small cave may have been used as a camp site during cold winter nights and that the people occupying the cave behaved like Late Stone Age hunter-gatherers in some respects, but not all (Opperman, 1996; Opperman & Heydenrych 1990). During 1978 an archaeological research programme was initiated in the north-eastern Cape to gain information on the end Pleistocene and Holocene hunter-gatherer populations and the palaeoecology along a gradient transecting the extension of the Drakensberg escarpment into the Cape. Excavations were conducted at a series of sites in the Dordrecht-Elliot-Ugie-Barkley East area which was usually well-known for its painted sites. The only excavations that were previously carried were at Belleview (Drakensburg), Moshebi's Shelter and Sehonghong (in eastern Lesotho) and Merino Walk within the Barkley East region. Below the escarpment two rock shelters were excavated at Bonawe and Te Vrede

(Elliot and Ugie Districts) above the escarpment excavations have been undertaken in the Barkley East District at Colwinton, Prospect, Wartrail and Ravenscraig. In addition to this an excavation has been conducted at a site on the farm Grassridge near Dordrecht. All sites included end-Pleistocene and Holocene material except Wartrail (entirely Holocene) and Grassridge (Earlier late Pleistocene occupation). Additional sites that also contain late / terminal Pleistocene and Holocene deposits in the eastern highlands of South Africa and Lesotho include Rose Cottage Cave and Melikane, Ha Soloja Shelter does not show evidence of any Late Stone Age occupation (Plug 1996).

Several archaeological research projects are currently ongoing within the wider former Transkei and north-eastern Cape / southern Drakensburg region. In 2011, the Pondoland Paleoenvironment, Paleoclimate, Paleoecology, and Paleoanthropology Project (P5) **began a search for new research areas along South Africa's coast** (the eastern seaboard and Pondoland) where long-term and continuous records of modern human evolution and coastal foraging may be found (Fischer *et al.* 2013). In the Stormberg Mountains near Dordrecht, renewed excavations and investigation into Grassridge site, with particular interest in the Middle Stone Age sequence, are currently ongoing. An underlying Middle Stone Age (MSA, ~300-30 ka) sequence containing abundant typologically MSA lithic material, well-preserved faunal remains, and charcoal was identified during the 1979 excavations which focused primarily on the Later Stone Age sequence (Collins & Ames 2015).

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. These areas include Mount Ayliff where materials were identified in erosion gullies and the Eastern Cape Highlands where they occur along erosion dongas, minor and major river courses in exposed and disturbed areas such as quarries, gravel farm roads and 'manmade' dams.

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

The Later Stone Age (LSA) spans the period from about 20 000 years ago until the colonial era, although some communities continue making stone tools today. The period between 30 000 and 20 000 years ago is referred to as the transition from the Middle Stone Age to Later Stone Age; generally there is a lack of crucial sites and evidence that represent this change, however, several sites to the west of the proposed development in the eastern Cape Highlands, north in eastern Lesotho and the Drakensburg in KwaZulu Natal have been dated to this time period. By the time of the Later Stone Age the genus *Homo*, in southern Africa, had developed into *Homo sapiens*, and in Europe, had already replaced *Homo neanderthalensis*.

The Later Stone Age is marked by a series of technological innovations, new tools and artefacts, the development of economic, political and social systems, and core symbolic beliefs and rituals. The stone toolkits changed over time according to time-specific needs

and raw material availability, from smaller microlithic Robberg (20/18 000-14 000 ya), Wilton (8 000-the last 500 years) Industries and in between, the larger Albany/Oakhurst (14 000-8 000ya) and the Kabeljous (4 500-the last 500 years) Industries. Bored stones were used as part of digging sticks, grooved stones for sharpening and grinding, and stone tools fixed to handles with mastic also become more common. Fishing equipment such as hooks, gorges and sinkers also appear within archaeological excavations. Polished bone tools such as eyed needles, awls, linkshafts and arrowheads also become a more common occurrence. Most importantly bows and arrows revolutionized the hunting economy. It was only within the last 2 000 years that earthenware pottery was introduced, before then tortoiseshell bowls were used for cooking and ostrich eggshell (OES) flasks were used for storing water. Decorative items like ostrich eggshell and marine/fresh water shell beads and pendants were made.

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

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

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

Several cave and rock shelter sites have been recorded west of the proposed development area into the north-eastern Cape and the foothills of the southern Drakensberg. Several of the sites mentioned in the Middle Stone Age section show evidence of Later Stone Age occupation. Later Stone Age deposits dating from the terminal Pleistocene to 100BP include Rose Cottage Cave (eastern Free State) and **Melikane, Sehonghong and Moshebi's Shelter in eastern Lesotho. In the foothills of the Drakensberg** recent Later Stone Age assemblages have been documented in the Phuthiatsana-ea-Thaba Basin and include 17 large rock shelters, 32 small rock shelters and cliff edge, 8 large rocks and 8 open sites. Later Stone Age assemblages have also been documented at Mhlwazini Cave and Collingham Shelter (Plug 1996). **Colwinton's** formal stone tool assemblage was dominated by the scrapers which is consistent with a majority of Later Stone Age assemblages in southern Africa. Potsherds and bone fish hooks were also recorded at the site as well as at Bellevue and Driel (Opperman 1982). Strathalan Cave B situated about 10 km north-east of Maclear and about 100 – 110 km east of the proposed development area, shows evidence of human behaviour between 29 000 and 22 000 years ago. However, radiocarbon dating indicates a hiatus of 10 000 years between the final Middle Stone Age date and first Later Stone Age occupation of the adjacent Strathalan Cave A. Ravenscraig was noted for the occurrence of chalcedony bladelets and stone artefacts resembling the Robberg Industry of the southern and eastern Cape. The lowest stratigraphic layer at Colwinton contained stone artefacts resembling those of the Albany Industry of the southern and eastern Cape (Opperman 1982).

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. Many other Later Stone Age open sites are known from museum collections and some from references in the publications such as at **St. Mark's** and Willowvale.

Scatters of Later 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 around the Mount Fletcher area. Stone artefacts that have been documented include cores, flakes, a unifacial point, a naturally backed knife, a thumbnail scraper and a side scraper occurring just below a sandstone outcrop. Open Later Stone Age sites as well as caves and rock shelters containing rock paintings have also been reported from the greater Matatiele region.

4.4. Last 2 000 years – Khoekhoen Pastoralism

Until 2 000 years ago, hunter-gatherer communities traded, exchanged goods, encountered and interacted with other hunter-gatherer communities. From about 2 000 years ago the social dynamics of the southern African landscape started changing with

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

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

Pre-agriculturalist pottery have been documented at some of the sites mentioned above. Pottery within the wider region of the proposed development area, from Swaziland to the north-eastern Cape, dates between 2 100 and 2 200 years and could possibly be earlier, predating the arrival of the of the agriculturalists by 400 years. No sheep remains have been found in association with the pottery which is stylistically different from those of the later agriculturalists (Iron Age populations) and a mean thickness of 7-8 mm Pottery has been documented at Driel Shelter, **Clarke's Shelter** and Mhlwazini Cave in the northern Drakensberg with dates ranging between of $2\ 160 \pm 50\text{BP}$ and $1\ 775 \pm 40\text{BP}$; at Collingham Shelter and Good Hope Shelter with dates ranging between $2\ 160\ \text{BP}$ and $1\ 770\ \text{BP}$; and at **Moshebi's Shelter in eastern Lesotho with a date of $2\ 180 \pm 45\text{BP}$** . To the west of the proposed development area in the Barkley East district the dates for the pottery documented at Colwinton Shelter and Bonawe Shelter in the north-eastern Cape, Barkley East District, range between $2\ 250 \pm 80\text{BP}$ and $920 \pm 50\text{BP}$ (Mazel 1992).

4.5. 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 owner-ship and their political organization was slightly more hierarchical than that of the Khoekhoen.

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

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

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

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

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

In relation to the proposed development site, Early Iron Age sites occur as far inland as the limit of the woodland (savanna) vegetation mainly in the Eastern Valley Bushveld in deeply incised river valleys in the basins of the Mzimvubu and Mzintlana Rivers up to 100

km (Feely & Bell-Cross 2011). Ntsitsana is a first millennium farming site (AD 650 - 950) located on alluvial flats on the outer bend of a meander of the Mzimvubu River (situated near Tanbankula 70 km inland from the coast and 30 km south of the current development site). Surface scatters of potsherds indicated that the site belonged to the oldest known phase of farming settlement in Transkei (Prins 1993). The pottery associated with the site is of the Msuluzi and Ndongwane facies (Huffman 2007).

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

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

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

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

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

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

4.6. Human Remains

It is difficult to detect the presence of archaeological human remains on the landscape as these burials, in most cases, are not marked at the surface. Human remains are usually observed when they are exposed through erosion or construction activities for

development. Several human remains have been rescued eroding out of the dunes along this coastline. In some instances packed stones or rocks may indicate the presence of informal pre-colonial burials.

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

4.7. Rock Art (Paintings and Engravings)

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

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

Rock painting sites have been recorded during a heritage assessment survey within the Mount Fletcher area to the north-east of the proposed development site (Anderson 2012).

4.8. Historical Background

The wider region emulates a dynamic landscape of historical cultural interaction between hunter-gatherer groups, Khoekhoen and Nguni groups, early travellers, the Dutch and later the British Settlers as well as conflict between these groups.

Very little historical archaeological research has been conducted in the area and most information is known from documentary evidence of events. The historical documentation is extensive within the former Transkei and Ciskei regions, therefore a select text has been included as part of the historical background of the area.

A group of small independent tribes welded together by the military system of Chaka at the beginning the nineteenth century transformed into the dominant nation of South Africa. The AmaFingo (literally wanderers), composed of the remnants of various tribes who took refuge in the British colony of Natal, after a crushing defeat by Chaka. The AmaXesibe and AmaBhaca, remnants of tribes, formerly of considerable importance, settled between the Umzimkhulu and Umzimvubu rivers (Shrubsall 1899). The mountain Thaba Ntsizwa, between Mount Ayliff and Mount Frere is a living heritage and a historic battlefield site associated with a battle between the amaBhaca and Zulu which took place around 1820.

Other tribes that inhabited the surrounding area of the former Transkei during the nineteenth century include the AmaMpondo, who inhabited the district known as Pondoland, along the bank of the lower Umzimvubu and the AmaMpondomisi, east of Umtata. The AbaTembu, occupied the district between the Umtata and Kei rivers and the AmaXhosa were driven into the Transkei during the Kaffir Wars and inhabited the district between the Kei and Fish rivers (Shrubsall 1899). Faku (AmaMpondo) had allowed the Bhaca to settle near the coast at Intafufu. However, owing to problems with ticks the region was not conducive for cattle keeping. Despite the fertility of the region the Bhaca, under the leadership of Ncapayi, migrated towards the middle reaches of Mzimvubu River. The Great Place of the Bhaca was established at Isilindini (Wilson 1943). In AD 1845 the Bhaca were driven out of the area by the Mpondo and they finally settled in the Mount Frere district (Scully 1909, Wilson 1943, Hammond-Tooke 1962). The present inhabitants of the area are Cwera and although related to the Xesibe are Mpondo subjects (Jackson 1975) according to local informants interviewed in 1988 the Cwera aided the Mpondo in their fight against the Bhaca and the area was given to them by Chief Faku as a sign of goodwill and in order to create a buffer zone between the Bhaca and Mpondo.

Prins (1993) places the Ngosi area and by extension the site (as mentioned above in section 4.5.) in a historical context whereby the original inhabitants could be identified from ethno historical sources and oral tradition. Local informants mentioned that the site was originally occupied by the Bhaca and Cwera inhabitants of the area maintained that the homestead had not been reoccupied after the Bhaca were driven away by the **Mpondo in the 1840's although the lands were cultivated**. The Great Place of the Bhaca at Isilindini is situated 8 km south of the Ngosi site. The Ngosi site can be identified therefore with some certainty from historical sources as a Bhaca homestead which was occupied sometime between AD 1820 and AD 1845.

The Bhaca people or amaBhaca are an ethnic group in South Africa, mainly found in the small towns of the former Transkei homeland, Mount Frere and Umzimkhulu, and surrounding areas (a region that the amaBhaca call kwaBhaca, or "place of the Bhaca").

The village of Mount Frere (Kwa Bhaca) situated about halfway between Umtata and Kokstad came into being in 1877. Broster (2009) describes life in the village of Mount Frere:

In 1876 a large contingent of the Cape Mounted Rifles was billeted in Mount Frere. The military always were a civilizing factor, enlivening the lives of the residents with their entertainment and military band.

In 1878 the Magistrate was J. C. Garner. The usual village grew up around the magistracy. It was one of the most elegant and pleasant villages in the Transkei. Mr Garner was the son of the famous Wesleyan missionary who founded Shawbury in 1842. Garner was followed in 1884 by Captain H. Whindus.

In 1890 with the help of the C.M.R. a church was built and priest sent.

The traders and their wives were a strong component of the village.

The Methodist and Anglican Missionaries were always very active in the Mount Frere district. In 1955 the Anglicans had twenty-six out-stations and the Wesleyans sixty-nine.

From 1928 Mount Frere had its own resident priest.

The last Mass was celebrated in the old church in October 1965. The white and coloured community helped towards the building of a new church with many successful bazaars.

Precious Blood Sister Alphonsa was asked in 1961 to act as principal of the local European school. As the number of whites dwindled The Chronicler of Mount Frere sadly stated that on 29 June 1974 the last white wedding took place (Judy Jessop and Michael Sparg) and that on 29 July the last white Catholic left Mount Frere.

Umzimkulu (a district named after the major river in the region) is situated in East Griqualand, a small pocket of land between Natal and the Transkei. The Griquas, a Dutch-speaking community descended from Khoi, slaves, settlers, and Africans, trekked to this region in the early 1860s after losing their land in the southern Orange Free State (West Griqualand) to emigrant Boers. Prior to the Griqua occupation, the region was **dubbed 'Nomansland'** by colonial travellers and officials, as its high, harsh climate gave it a short crop-growing season and prevented year-round grazing which made it an unattractive area to the major African chiefdoms of the eastern seaboard. Still, Nomansland was not the empty territory beloved of settler mythology. The Griquas were given colonial permission to take possession of it primarily to establish indirect colonial authority over the Mpondo and Sotho who had settled there along with a number of smaller chiefdoms made up of groups that had fled Zululand and Natal in the 1840s and 50s. Beinart says that **'by 1860, Natlangweni and Bhaca chiefs, with their followers, were well entrenched in what was to become the Umzimkulu district'** (Beinart and Bundy 1987: 48) (Green 2006).

In 1860, Adam Kok III trekked from the vicinity of Philippolis, where they had lost their lands to the emigrant Boers, to find a new home. They arrived in 1862 in the territory known **as No Man's Land, between the Cape and Natal. They lived in a laager for** some ten years before founding their town of Kokstad. Insecure and distrustful, in 1869 Adam Kok requested that the territory of Griqualand East be annexed by the British, with the specific stipulation that it should not be brought under the direct rule of Natal even though he was granted full title to the land and total autonomy of government. Accordingly Griqualand was taken over in 1874, and although the Act of Annexation was

passed by the Cape Parliament in 1877, it was not promulgated until 17 September 1879. The territory was initially divided into four magisterial districts centred at Matatiele, Mount Frere, Umzimkulu and Kokstad, later renamed Mount Currie.

Throughout the 1870s, Griqualand East, and its surrounding territories, were the object of competing tribal interests and complex political alliances. As a result, the British found it difficult to implement effective colonial rule over the region until the remainder of Pondoland was also brought under their control. The lands of the Xesibe, centred at Mount Ayliff, were brought under their administration in 1878, but were not annexed to the Cape Colony until 25 October 1886.

In 1886, a small pocket of land called the Rode Valley was purchased from the Mpondo chief Umquikela, and was added to Mount Ayliff by Act No 45 of 1887, which was confirmed on 15 September 1888. The annexation of Pondoland to the Cape was completed under Act No 5 of 1894, provisions of which also ceded a portion of western Pondoland to Griqualand East. As a result of this transfer the divisions of Mount Fletcher, Qumbu, Tsolo and Maclear were brought under its administration. The Griquas soon became a minority in the area and soon began to sell their properties to both European settlers and Pondo farmers, who were beginning to prosper there. The census of 1891 indicated that Griqualand East had a population of 152 618 persons, of whom 9 071 were literate. By 1904, these figures had risen to 222 685 and 21 146 respectively. By 1917, the surviving Griqua people, highly demoralized by their loss of independence, once more trekked to a site near Touws River in the Karoo but their attempt to find a new community failed and most returned to Kokstad. (South African History Online).

5. DESCRIPTION OF THE PROPERTY

5.1. Location data

The proposed development areas are located about 10 km east of Mount Frere and about 35 km west of Mount Ayliff. The proposed sites are surrounded by several villages including kuMakhola situated within the vicinity of the proposed development alternatives, and Sibhozweni, eMzinto, Madamini and Chane within the wider region.

The alternative sites for the proposed development of the fuel station and associated infrastructure are located east of the Umzimvubu River Bridge adjacent to the N2 national road. Site alternative Option 1 is located north of the N2 national road and site alternative Option 2 is situated south of the N2 national road, both are situated about 250 m east of the Umzimvubu River.

5.2. Map

1:50 000 Map: 3029 CC RODE



Figure 2. Aerial view showing the location of the alternative sites for the proposed fuel service station and associated infrastructure.



Figure 3. Aerial view showing the proposed area for development and the location of the nearby towns and surrounding villages (insert).

6. ARCHAEOLOGICAL INVESTIGATION

6.1. Methodology

An archaeological desktop study was conducted and has been included within this report. Various literature sources, historical and contemporary maps were consulted. Very little systematic archaeological research has been conducted within the immediate area of the proposed fuel station development therefore the literature research was extended to include vast areas of the former Transkei. Several sites have been systematically researched and archaeological and heritage impact assessments have been conducted within these areas and were included as part of the literature review.

The survey of the two site alternatives for the proposed fuel station and associated infrastructure was conducted on foot. GPS co-ordinates and photographs were taken using a Garmin Oregon 550 GPS unit.

The archaeological investigation and results of the survey of the two site alternatives will be discussed separately.

6.2. Results of the Archaeological Investigation

6.2.1. MOUNT FRERE FUEL STATION: OPTION 1:



Figure 4. Close-up aerial view of site Option 1 north of the N2 national road showing the findings of the archaeological investigation.

Site Option 1 is situated north of the N2 national road and about 250 m east of the banks of the Umzimvubu River on a slight gradient slope. The area has been heavily modified by erosion caused by water runoff owing the slope and lack of vegetation cover (Figures 5-6) creating disorderly water courses across the site. Archaeological visibility was very good over most of the site except for relatively dense grass and shrub vegetation occurring north-south down the middle of the site (Figures 7-8). The erosion gullies were investigated as these areas, especially the deeper gullies, proved beneficial in the possible observance of any archaeological material culture that may occur below the surface and possibly in situ or eroding out of the sides of the deeper dongas which would generally be invisible at the surface. No such occurrences of below the surface *in situ* or disturbed deposits were recorded along the sides of the deeper erosion gullies.

Middle Stone Age stone artefacts were documented about 100 m from the banks of the Umzimvubu River within an area that is heavily disturbed by erosion, outside of the proposed development area (MF1 SA1, Figure 4) (Figure 9). The stone artefacts have been manufactured on fine-grained black raw material, usually referred to as hornfels, indurated shale or lydianite and include flakes and cores (Figures 10-11). The stone artefacts are weathered and patinated and most likely occur *ex situ* owing to modification of the landscape over time. Isolated occurrences of probably later stone artefacts, indicated by lack of weathering and patination, as well as similar stone artefacts identified at MF1 SA occur sporadically mainly within the western half the proposed development site.

Three upper grinding stones and a few sherds of earthenware pottery were documented within the same area on the northern boundary of the proposed Option 1 Site development area. The area is less disturbed by the effects of water erosion. The upper grinding stones show evidence of relatively long-term for consistent utilization by the flat and pitted surfaces of these stones. The earthenware pottery fragments are burnished black and red with no decoration that could assist in the relative dating of the site. It is also difficult to make a probable date in the upper grinding stones as these tools are still used in contemporary activities of the local communities. Erect wooden poles occurred to the east of the pottery and grinding stone finds. These types of encounters would generally be regarded as informal burials, however, in personal communication with the local chief who accompanied on the survey, was not aware of any graves within the proposed development area for Site Option 1.

A sporadic scatter of ceramics was documented at the entrance road to the area off the N2 national road. The ceramic and glass sherds occurred in a very disturbed context and at first glance seemed that they may have been recently dumped in the area.



Figure 5. View of the general landscape of the site Option 1 proposed development area facing south-east towards the Umzimvubu River and Umzimvubu River Bridge.



Figure 6. View of the general landscape of the site Option 1 proposed development area facing north.



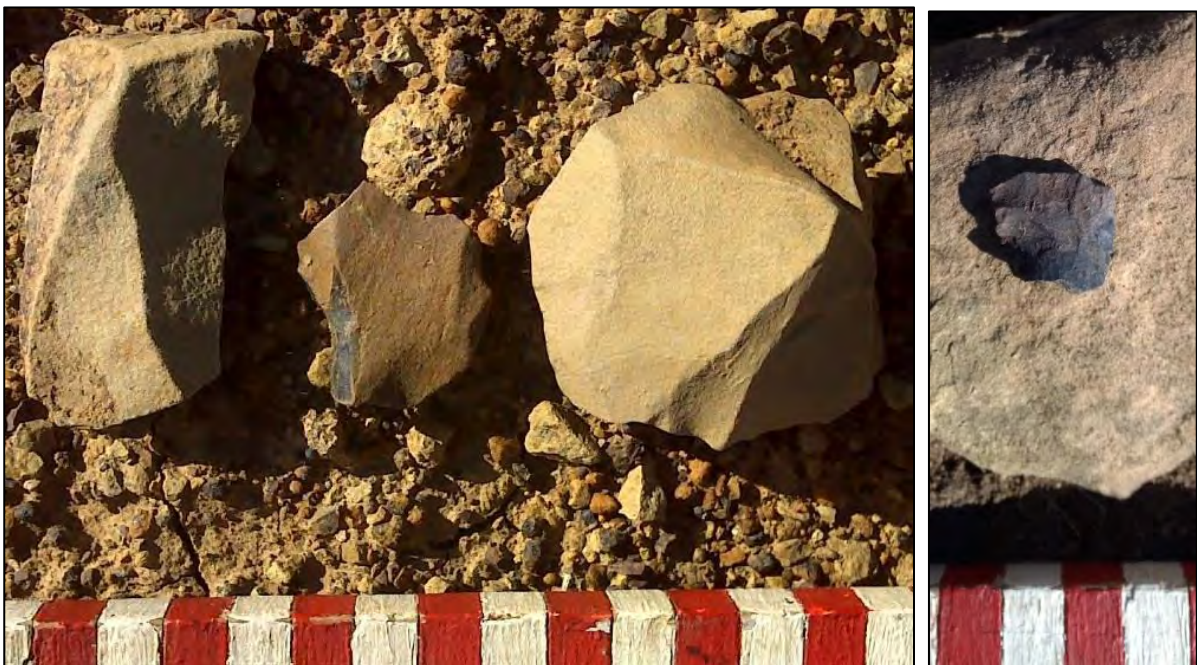
Figure 7. View of the general landscape of the site Option 1 proposed development area facing east towards the KuMakhola Village.



Figure 8. View of the general landscape of the site Option 1 proposed development area facing south-west towards the Umzimvubu River.



Figure 9. View of the disturbed and eroded area at the area marked MF1 SA1, located 100 m east of the Umzimvubu River outside of the site Option 1 proposed development area.



Figures 10-11. Examples of stone artefacts occurring within the site Option 1 proposed development area.



Figure 12. View of the area where the pottery sherds and upper grinding stones occurred on the site Option 1 proposed development area.



Figures 13-14. Examples of upper grinding stones occurring within the site Option 1 proposed development area.



Figures 15. Example of a pottery sherd occurring within the site Option 1 proposed development area.



Figure 16. View of the erect wooden posts situated slightly east of the area where the pottery sherds and upper grinding stones were located on the site Option 1 proposed development area.

6.2.2. MOUNT FRERE FUEL STATION: OPTION 2:



Figure 17. Close-up aerial view of site Option 2 south of the N2 national road showing the findings of the archaeological investigation.

Site Option 2 is situated south of the N2 national road and about 200 m east of the Umzimvubu River. The area in the centre of the proposed site for development has been heavily modified by erosion caused by water runoff owing to the slight gradient slope and lack of vegetation cover (Figures 18-20). The area situated in the middle of the proposed development site, situated diagonally from north to south, has been badly eroded. Archaeological visibility was very good over most of the site. The erosion gullies were investigated as these areas proved beneficial in the possible observance of any archaeological cultural material that may occur below the surface, generally, invisible at the surface. No such occurrences of below the surface *in situ* or disturbed deposits were recorded along the sides of the deeper erosion gullies.

A building is situated in the centre of the proposed development site on the flat ground (Figure 20). The structure may have been erected in association with a possible previous community development project. The structure is not recorded on the 3029 CC RODE 1: 20 000 topographic map (1984 Edition) and is not more than 60 years of age, which would be protected by S34 of the National Heritage Resources Act 25 of 1999 and require further assessment.

The ceramic and glass scatter continues from the entrance to the proposed development site off the N2 national road. A midden (rubbish dump) comprising the same types of ceramic fragments as the scatter documented in site Option 1 is located near the entrance road to Site Option 2 (Figure 21). The midden is situated next to the gravel

road that leads to the old Umzimvubu River Bridge. The midden includes fragments of ceramics, glass and some relative whole glass bottles, as well as bone fragments (Figures 22). **A metal button engraved with the words "Suspender"** on it was also documented within the midden scatter (Figure 22, insert). **The "Suspender" buttons date** to late Victorian fashion and were generally used on the inside of the waist of trousers to which suspenders or buttons were attached. The ceramic scatter resembles late nineteenth and early twentieth centuries' Victorian ceramics and include lined slipware, slip decorated and painted decorated styles of British porcelain ceramics (Figures 23-26).

Isolated occurrences of Middle Stone Age stone artefacts similar to those documented in Site Option 1 were observed over the eastern half of the proposed development area. These stone artefacts occur *ex situ* owing to natural and human disturbances over time.



Figure 18. View of the general landscape of the site Option 2 proposed development area facing north towards the kuMakhola Village.



Figure 19. View of the general landscape of the site Option 2 proposed development area facing east.



Figure 20. View of the general landscape of the site Option 2 proposed development area facing south east.



Figure 21. View of the eroding midden containing late nineteenth and early twentieth centuries' material culture situated on site Option 2 (MF MS2).



Figure 22. Scatter of pottery and glass fragments and an example of a "SUSPENDER" metal button found (insert) at the site MF MS2 on site Option 2.



Figures 23-24. Examples of ceramic fragments occurring within the midden at the site MF MS2 on site Option 2.



Figures 25-26. Examples of ceramic fragments occurring within the midden at MF MS2 on site Option 2.

7. DESCRIPTION OF SITES: SITE ALTERNATIVES OPTION 1 AND OPTION 2 FOR THE PROPOSED FUEL STATION

7.1. Stone Artefact Scatters (MF1 SA1 and isolated occurrences over the proposed development sites):

Mostly isolated surface occurrences of Middle Stone Age stone artefacts occur across both proposed development sites. The stone artefacts have been manufactured on fine-grained black raw material, usually referred to as hornfels, indurated shale or lydianite and include flakes and cores. The stone artefacts are weathered and patinated and most likely occur *ex situ* owing to modification and disturbance of the landscape over time. Isolated occurrences of probably later stone artefacts, indicated by lack of weathering and patination, as well as similar stone artefacts identified at MF1 SA occur sporadically mainly within the western half the site Option 2 proposed development area.

No other organic or cultural archaeological remains occurred in association with the stone artefact scatters. The stone artefacts scatters are considered as having a low archaeological significance. It is unlikely that the stone artefacts occur *in situ* and are regarded as being in a secondary and out of context position as they have been washed into the exposed areas and have been disturbed by domestic animal and human activities. It is also possible that stone artefacts may occur below the vegetation cover between the surface and 50 – 80 cm below the ground.

The stone artefact scatters are considered as having a low cultural significance and have been allocated a heritage grading of:

'General' Protection C (Field Rating IV A): These sites have been sufficiently recorded (in the Phase 1). It requires no further recording before destruction (usually Low significance).

7.2. Earthenware pottery sherds, upper grinding stones, and wooden posts (MF1 PS1):

Three upper grinding stones show evidence of relatively long-term for consistent utilization by the flat and pitted surfaces of these stones. It is also difficult to make a probable date in the upper grinding stones as these tools are still used in contemporary activities of the local communities.

The earthenware pottery fragments are burnshed black and red with no decoration that could assist in the relative dating of the site.

Erect wooden poles occurred to the east of the pottery and grinding stone finds. These types of encounters would generally be regarded as informal burials, however, in personal communication with the local chief who accompanied on the survey, was not aware of any graves within the proposed development area for Site Option 1.

The earthenware pottery sherds, upper grinding stones, and wooden posts are considered as having a low cultural significance and have been allocated a heritage grading of:

'General' Protection C (Field Rating IV A): These sites have been sufficiently recorded (in the Phase 1). It requires no further recording before destruction (usually Low significance).

7.3. Scatter and midden of historical cultural material (MF1 MS1 and MF2 MS1):

A sporadic scatter of ceramics was documented at the entrance road to the site Option 2 proposed development area off the N2 national road. The ceramic and glass sherds occurred in a very disturbed context and at first glance seemed that they may have been recently dumped in the area.

A midden (rubbish dump) comprising the same types of ceramic fragments as the scatter documented in site Option 1 is located near the entrance road to Site Option 2. The midden is situated next to the gravel road that leads to the old Umzimvubu River Bridge. The midden includes fragments of ceramics, glass and some relative whole glass bottles, as well as bone fragment. A metal button engraved with the words "Suspender" on it was also documented within the midden scatter. The "Suspender" buttons date to late Victorian fashion and were generally used on the inside of the waist of trousers to which suspenders or buttons were attached. The ceramic scatter resembles late nineteenth and early twentieth centuries' Victorian ceramics and include lined slipware, slip decorated and painted decorated styles of British porcelain ceramics (Figures 23-26).

The scatter and midden of historical cultural material are considered as having a low cultural significance and have been allocated a heritage grading of:

'General' Protection C (Field Rating IV A): These sites have been sufficiently recorded (in the Phase 1). It requires no further recording before destruction (usually Low significance).

7.4. Analysis and conclusion of the proposed development and cultural material identified during the survey

The site alternatives Site Option 1 and Site Option 2 situated north and south on either side of the N2 national should be viewed holistically. It is highly likely that the possible settlement and or activities that occurred within the area of the proposed site development alternatives has been disturbed and possibly destroyed by the construction of the existing N2 national road.

Historical maps of the area that were accessible were consulted to attempt to piece together when the road may have been developed in order to date the historical

activities in the area. No roads / routes through this area are visible on the 1851 map Natal and Kaffraria map (J. & F. Tallis), the coastal to Port Natal, however, had been well-established by this time. The Cape Province, Transvaal and c. eastern section map published in 1922 (Bartholomew and Son) shows the route passing Mount Frere to Mount Ayliff. It is known that the well renowned engineer Joseph Newey oversaw the building of numerous trunk route and passes in the Eastern Cape, including the cuttings through the Kei and Umzimvubu River valley. The site is situated at the beginning of the Umzimvubu cuttings in the south. It not clear when the cuttings / pass were constructed or whether the route shown on the 1922 map was overseen by Newey, but it would **definitely have been constructed during Newey's work in the Cape Colony between 1873 and 1903**. The town of Mount Frere was established in 1879 after the area, East Griqualand was annexed to the Cape Colony in 1879. So it is possible that the route would have been active around this time owing to documentary evidence of trading stations along the Mount Frere and Mount Ayliff to Kokstad.

The existing N2 national route was first commissioned in 1936 and finally completed in 1946. Since 1946 several upgrades to the road have been conducted. The major upgrade and construction of the existing Umzimvubu Bridge may have been conducted after 1984 as only one bridge is visible on the 3029 CC RODE 1: 50 000 topographic map (1984 Edition).

It is difficult to date the earthenware pottery sherds and upper grinding stones documented as it may possibly date to Late Iron Age occupations, probably prior to the construction of this route / road. The presence of the late nineteenth and early nineteenth century material may be difficult to associate with any one culture. The availability of ceramics during this time would determine what was available and what would have been economically affordable and or what travelled best. It could be speculated that it is possible that the historical material culture could have been deposited within the area by local indigenous communities who once settled on this area and acquired the material through trade or purchase, it could also have been deposited by travellers / soldiers through the area who may have camped along the Umzimvubu River, it could also have been deposited during the earliest construction of the route being before 1903.

It can, however, be confirmed that the remains of what may have been a possible settlement has been completely disturbed or destroyed by the construction and continuous maintenance and upgrade of the eventual N2 national route road. Therefore, it cannot be confirmed that midden identified occurs *in situ* and may have been deposited as it is currently by the construction of the N2 national road.

8. COORDINATES AND SITES FOR A PROPOSED FUEL STATION AND ASSOCIATED INFRASTRUCTURE AT THE UMZIMVUBU BRIDGE, NEAR MOUNT FRERE, UMZIMVUBU LOCAL MUNICIPALITY, ALFRED NZO DISTRICT MUNICIPALITY, EASTERN CAPE PROVINCE.

Table 1. Coordinates and sites for the Proposed Fuel Station and Associated Infrastructure at the Umzimvubu Bridge, near Mount Frere, Umzimvubu Local Municipality, Alfred Nzo District, Eastern Cape Province.

REFERENCE	DESCRIPTION	CO-ORDINATE	HERITAGE GRADING
Fuel Station Site Option 1:			
MF1 SA1	Stone artefact scatter	30°50'53.10"S; 29°04'14.50"E	General Protection C (Field Rating IV C)
MF1 PS1	Stone artefact scatter and pottery scatter	30°50'48.30"S; 29°04'16.50"E	General Protection C (Field Rating IV C)
MF1 MS1	Midden scatter	30°50'52.20"S; 29°04'18.30"E	General Protection C (Field Rating IV C)
Fuel Station Site Option 2:			
MF2 MS1:	Midden scatter	30°50'56.70"S; 29°04'19.70"E	General Protection C (Field Rating IV C)
MF2 SA1:	Stone artefact scatter	30°50'59.34"S; 29°04'22.06"E	General Protection C (Field Rating IV C)

9. CULTURAL LANDSCAPE

Cultural landscapes are increasingly becoming a significant considering factor when conducting various archaeological and heritage impact assessments for proposed developments. The areas investigated for the proposed fuel station and associated infrastructure at the Umzimvubu Bridge, near Mount Frere, Umzimvubu Local Municipality, Alfred Nzo District Municipality, Eastern Cape Province, are considered as having a low cultural heritage significance.

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

9.1. Concept of Cultural Landscape

Cultural landscapes can be interpreted as complex and rich extended historical records conceptualised as organisations of space, time, meaning, and communication moulded through cultural process. The connections between landscape and identity and, hence, memory are fundamental to the understanding of landscape and human sense of place. Cultural landscapes are the interface of culture and nature, tangible and intangible

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

The impact of human action on 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.

9.2. Archaeological Landscape

The area was once part of an ancient landscape inhabited by various families of the genus *Homo*. Various studies recording archaeological sites and occurrences within the wider region stretching from wider regions of the regions of the former Transkei in the north-eastern Cape to the west of the proposed development, east towards the coast, and south towards the Great Kei River Valley and into the former Ciskei, as well as beyond the borders of the Eastern Cape but usually related to the north-eastern Cape research has been conducted in the Drakensberg Mountains in KwaZulu Natal and the eastern portion of Lesotho and the eastern Free State area have reported on the evidence of the presence of *Homo erectus* (Early Stone Age), *Homo sapiens* (Middle Stone Age), and *Homo sapiens* (Later Stone Age). The only remains dating to the Early and Middle Stone Ages are stone artefacts as the organic evidence and sites have not been preserved. The influence of climatic conditions and the rising and falling of the sea levels may also attribute to much archaeological site information being lost.

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

9.3. 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.

The historical landscape has moulded this area of former Transkei into what it represents today, rural and undeveloped, the lack of tourism hotspots, and most recently the threat of less traffic travelling through the area. The traffic along the existing N2 national road allows for a constant relative economic stability for local businesses and tourism. However, with the recently approved N2 Wild Coast Toll Road the N2 national route will be rerouted to continue to Port St Johns from Mthatha.

However, the effects of historical events have shaped **the former Transkei's current** landscape from the very first interaction between the hunter-gatherers and the Khoekhoen pastoralists 2 000 years ago and their interaction with the first groups of Iron Age agropastoralist immigrants around AD 600. The AmaZulu King Shaka played a huge part in his quest for an Empire by driving a group of people into the area who called themselves the AmaBhaca and who over the last 200 years have established through colourful cultural identity on the landscape where even the town of Mount Frere is referred to Kwa Bhaca. The British Colonialists themselves played a huge part in establishing the cultural landscape as it is with their laws and display of self-superiority and brokering of deals with several local indigenous communities including the Griqua in the Griqualand East. Despite the development of the cultural landscape by these various cultural groups and several more that have not been mentioned, it was the establishment of the Bantustans by the Apartheid government that stagnated the possibility of change of the cultural landscape since 1948.

In the case of clan names as one example, it can be understood how **the 'territories' of** the cultural landscape have been forged and can so be identified. Dondolo (2005) explains: Clans such as the AmaHlubi (and AmaBhaca) and their clan name, particularly in the Eastern Cape, are associated with historical events and have sociocultural and historical value. **During the time of the 'Mfecane/Defaqana' or so-called 'tribal wars', a** group of AmaHlubi migrated southwards, to the south-eastern region of South Africa. **They met the AmaXhosa, 'AmaBhaca', AbaThembu and AmaMpondo. The AmaXhosa gave them the name 'Ama- Mfengu' because they could not understand the language of these people. They were called 'AmaMfengu' because they were saying "Sikhamba simfenguza" meaning 'We are looking for land/space to live'. They were given land to live on, resulting in the Eastern Cape being predominantly inhabited by AmaHlubi. A large number of them moved to the area that later became known as Ciskei to form their kingdom.**

All clan names have socio-cultural value for their people and are the focus of cultural practices and rituals (umsebenzi/umcimbi). For instance, when there is umsebenzi/umcimbi, a person (usually an old man) from that house or clan name would praise that clan name – clan name praise – (ukuzithutha), the living, and the dead ancestors. Some aspects are reserved for the people of that particular clan name such as **ibhekile yekhaya nezinye izinto zekhaya, which are not for 'outsiders', people from other** clan names. This helps to forge a common cultural heritage, personal and group cultural identity while reinforcing the heritage and history of the people of the same clan and clan name. Clan names dictate ways of practising culture, rituals, and other forms of traditions. For instance, the oRhadebe practise their culture, rituals and customs differently from those clans that form AmaXhosa such as oTshawe, AbaThembu, AmaMpondo, and so on. Culture, rituals, and other traditions are practised slightly differently among the clans that constitute Ama-Xhosa. For cultural practices and rituals, all clans that form AmaXhosa slaughter goats, whereas AmaHlubi slaughter a sheep, indicating that clan names shape the way people observe their culture.

Clan names play an imperative role in forging a sense of common cultural and tribal identity. Clans, clan names and chieftaincy have their own politics and complexity, **making it difficult for 'outsiders' to understand them. The politics of ethnicity, tribalism,** clan, clan names and clan name praise demonstrate that people have overlapping multiple identities and cultural identities. The knowledge inherent in clan names and clan name praises is important as it helps the practising communities to forge their cultural identity, sense of togetherness, and to understand their genealogy (Dondolo 2005).

10. CONCLUSION

The survey was conducted by investigating the two site alternatives, Option 1 and Option 2, on foot. A Garmin Oregon 550 GPS unit was used to take photographs and points of location of heritage and cultural material identified during the survey. Unfortunately **the unit's batteries** were faulty and photographs of the eastern half of the area proposed for Site Option 2 could not be taken, nor of the stone artefacts occurring within the area. Archaeological visibility was generally very good over most of the areas for both Site Options owing to possible over grazing or solely caused by unmaintained soil erosion. The dongas and disturbances caused by the erosion allowed insight into the possible observance of cultural material occurring below the surface, however, no such occurrences of below the surface *in situ* or disturbed deposits were recorded along the sides of the deeper erosion gullies in either of the site alternatives.

Mostly isolated surface occurrences of Middle Stone Age stone artefacts occur across both proposed development sites. No other organic or cultural archaeological remains occurred in association with the stone artefact scatters. The stone artefacts scatters are considered as having a low archaeological significance. It is unlikely that the stone artefacts occur *in situ* and are regarded as being in a secondary and out of context position as they have been washed into the exposed areas and have been disturbed by

domestic animal and human activities. It is also possible that stone artefacts may occur below the vegetation cover between the surface and 50 – 80 cm below the ground.

Three upper grinding stones and a few sherds of earthenware pottery were documented within the same area on the northern boundary of the proposed development area. Erect wooden poles occurred to the east of the pottery and grinding stone finds. These types of encounters would generally be regarded as informal burials, however, in personal communication with the local chief who accompanied on the survey, was not aware of any graves within the proposed development area for Site Option 1.

A midden (rubbish dump) containing materials situated next to the gravel road that leads to the old Umzimvubu River Bridge on Site Option 2. The midden includes fragments of ceramics, glass, metal buttons and some relative whole glass bottles, as well as bone fragment.

It is difficult to date the earthenware pottery sherds and upper grinding stones documented as it may possibly date to Late Iron Age occupations, probably prior to the construction of this route / road. The presence of the late nineteenth and early nineteenth century material may be difficult to associate with any one culture. The availability of ceramics during this time would determine what was available and what would have been economically affordable and or what travelled best. It could be speculated that it is possible that the historical material culture could have been deposited within the area by local indigenous communities who once settled on this area and acquired the material through trade or purchase, it could also have been deposited by travellers / soldiers through the area who may have camped along the Umzimvubu River, it could also have been deposited during the earliest construction of the route being before 1903.

It can, however, be confirmed that the remains of what may have been a possible settlement has been completely disturbed or destroyed by the construction and continuous maintenance and upgrade of the eventual N2 national route road. Therefore, it cannot be confirmed that midden identified occurs *in situ* and may have been deposited as it is currently by the construction of the N2 national road. Therefore the cultural material identified during the survey has been allocated a low cultural significance.

The proposed development would have negative implications on the archaeological heritage remains documented within both the proposed site alternatives Option 1 and Option 2 during the excavation and construction phases of the development. The negative implications include the destruction of the surface scatters of stone artefacts, historical cultural material and further occurrences that are not immediately visible. Site alternative Option 1 would be the preferred site for the development of the Fuel Station despite the archaeological cultural significance being considered low for both site alternatives Option 1 and Option 2.

The recommendations must be considered as appropriate mitigation measures to protect and conserve the archaeological heritage remains observed within the proposed development area and further archaeological remains that may occur and are not immediately visible on the surface.

11. RECOMMENDATIONS

The overall area is considered as having a low cultural significance, however, the following recommendations must be considered before development continues:

11.1. SITE ALTERNATIVE OPTION 1:

1. It cannot be determined whether the erect wooden posts may be an identity marker for a possibly informal burial, no formal graves have been recorded in this area, and no informal burials have been reported, this could be included in the social impact report or during public participation meetings / consultation. Caution should be taken during the excavation and construction of this area and if human remains are uncovered the appropriate procedures must be followed so that the human remains can be systematically removed (see point 4).
2. If the current layout is changed outside of the boundary of the current boundaries, an archaeological walk-through survey of the changes must be conducted and further mitigatory recommendations may be made if necessary.
3. A person must be trained as a site monitor to report any archaeological sites found during the development. 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.
4. If concentrations of historical and 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 and/or the Eastern Cape Provincial Heritage Resources Agency (ECPHRA) so that systematic and professional investigation/excavation can be undertaken. Phase 2 mitigation in the form of test-pitting/sampling or systematic excavations and collections of the pre-colonial shell middens and associated artefacts will then be conducted to establish the contextual status of the sites and possibly remove the archaeological deposit before development activities continue.

11.2. SITE ALTERNATIVE OPTION 2:

1. Although it is difficult to determine whether the historical cultural material on Site Option 2 is an intact *in situ* midden (rubbish dump) a destruction permit for the area must be obtained from the Eastern Cape Heritage Resources Agency (ECPHRA). However, caution should be taken during the excavation and construction phases of the possibility that a cache of historical cultural material may be uncovered. Therefore, a person must be trained as a site monitor to report any accumulation of historical cultural material is found during the development. 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. If the current layout is changed outside of the boundary of the current footprint, an archaeological walk-through survey of the changes must be conducted and further mitigatory recommendations may be made if necessary.
3. A person must be trained as a site monitor to report any other archaeological sites found during the development. 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.
4. If concentrations of historical and 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 and/or the Eastern Cape Provincial Heritage Resources Agency (ECPHRA) so that systematic and professional investigation/excavation can be undertaken. Phase 2 mitigation in the form of test-pitting/sampling or systematic excavations and collections of the pre-colonial shell middens and associated artefacts will then be conducted to establish the contextual status of the sites and possibly remove the archaeological deposit before development activities continue.

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14. GENERAL REMARKS AND CONDITIONS

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

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

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

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

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

1. Human Skeletal material

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.

2. Freshwater mussel middens

Freshwater mussels are found in the muddy banks of rivers and streams and were collected by people in the past as a food resource. Freshwater mussel shell middens are accumulations of mussel shell and are usually found close to rivers and streams. These shell middens frequently contain stone tools, pottery, bone, and occasionally 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.

3. Stone artefacts

These are 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

4. Fossil bone

Fossil bones may be found embedded in geological deposits. Any concentrations of bones, whether fossilized or not, should be reported.

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 is not fully understood, however, some are thought to represent burial cairns while others may have symbolic value.

6. Historical artefacts or features

These are easy to identified and include foundations of buildings or other construction features and items from domestic and military activities.