

**CULTURAL HERITAGE IMPACT ASSESSMENT
OF THE PROPOSED QUARRY, ACCESS ROAD
AND BORROW PITS ON THE R61 SECTION 8,
EASTERN CAPE**



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Frans was employed as a junior research associate at the then University of Transkei, Botany Department in 1988-1990. Although attached to a Botany Department he conducted a palaeoecological study on the Iron Age of northern Transkei - this study formed the basis for his MA thesis in Archaeology. Frans left the University of Transkei to accept a junior lecturing position at the University of Stellenbosch in 1990. He taught mostly undergraduate courses on World Archaeology and research methodology during this period.

From 1991 – 2001 Frans was appointed as the head of the department of Historical Anthropology at the Natal Museum, Pietermaritzburg. His tasks included academic research and publication, display conceptualization, and curating the African ethnology collections of the Museum. He developed various displays at the Natal Museum on topics ranging from Zulu material culture, traditional healing, and indigenous classificatory systems. During this period Frans also developed a close association with the Departments of Fine Art, Psychology, and Cultural and Media Studies at the then University of Natal. He assisted many post-graduate students with projects relating to the cultural heritage of South Africa. He also taught post-graduate courses on qualitative research methodology to honours students at the Psychology

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Frans left the Natal Museum in 2001 when approached by a Swiss funding agency to assist an international NGO (Working Group for Indigenous Minorities) with the conceptualization of a San or Bushman museum near Cape Town. During this period he consulted extensively with various San groupings in South Africa, Namibia and Botswana. During this period he also made major research and conceptual contributions to the Kamberg and Didima Rock Art Centres in the Ukhahlamba Drakensberg World Heritage Site.

Between 2003 and 2007 Frans was employed as the Cultural Resource Specialist for the Maloti Drakensberg Transfrontier Project – a bilateral conservation project funded through the World Bank. This project involved the facilitation with various stakeholders in order to produce a cultural heritage conservation and development strategy for the adjacent parts of Lesotho and South Africa. Frans was the facilitator for numerous heritage surveys and assessments during this project. This vast area included more than 2000 heritage sites. Many of these sites had to be assessed and heritage management plans designed for them. He had a major input in the drafting of the new Cultural Resource Management Plan for the Ukhahlamba Drakensberg World Heritage site in 2007/2008. A highpoint of his career was the inclusion of Drakensberg San indigenous knowledge systems, with San collaboration, into the management plans of various rock art sites in this world heritage site. He also liaised with the tourism specialist with the drafting of a tourism business plan for the area.

During April 2008 Frans accepted employment at the environmental agency called Strategic Environmental Focus (SEF). His main task was to set-up and run the cultural heritage unit of this national company. During this period he also became an accredited heritage impact assessor and he is rated by both Amafa and the South African Heritage Resources Agency (SAHRA). He completed almost 50 heritage impact assessment reports nation-wide during an 18th month period.

Frans left SEF and started his own heritage consultancy called “Active Heritage cc” in July 2009. Although mostly active along the eastern seaboard his clients also include international companies such as Royal Dutch Shell through Golder Associates, and UNESCO. He has now completed almost 100 heritage conservation and management reports for various clients since the inception of “Active Heritage cc”. Amongst these was a heritage study of the controversial fracking gas exploration of the Karoo Basin and various proposed mining developments in South Africa and proposed developments adjacent to various World Heritage sites. Apart from heritage impact assessments (HIA's) Frans also assist the National Heritage Council (NHC) through Haley Sharpe Southern Africa, with heritage site data capturing and analysis for the proposed National Liberation Route World Heritage Site and the national intangible heritage audit. In addition, he is has done background research and conceptualization of the proposed Dinosaur Interpretative Centre at Golden Gate National Park and the

proposed Khoi and San Interpretive Centre at Camdeboo, Eastern Cape Province. During 2009 he also produced the first draft dossier for the nomination of the Sehlabathebe National Park, Lesotho as a UNESCO inscribed world heritage site.

Frans was appointed as temporary lecturer in the department of Heritage and Tourism, UKZN in 2011. He is also a research affiliate at the School of Cultural and Media Studies in the same institution.

Frans's research interests include African Iron Age, paleoecology, rock art research, San ethnography, traditional healers in South Africa, and heritage conservation. Frans has produced more than forty publications on these topics in both popular and academic publications. He is frequently approached by local and international video and film productions in order to assist with research and conceptualization for programmes on African heritage and culture. He has also acted as presenter and specialist for local and international film productions on the rock art of southern Africa. Frans has a wide experience in the fields of museum and interpretive centre display and made a significant contribution to the conceptual planning of displays at the Natal Museum, Golden Horse Casino, Didima Rock Art Centre and !Khwa tu San Heritage Centre. Frans is also the co-founder and active member of "African Antiqua" a small tour company who conducts archaeological and cultural tours world-wide. He is a Thetha accredited cultural tour guide and he has conducted more than 50 tours to heritage sites since 1992.

Declaration of Consultants independence

Frans Prins is an independent consultant to SRK and has no business, financial, personal or other interest in the activity, application or appeal in respect of which he was appointed other than fair remuneration for work performed in connection with the activity, application or appeal. There are no circumstances whatsoever that compromise the objectivity of this specialist performing such work.

EXECUTIVE SUMMARY

An archaeological survey of a quarry site and relevant access road as well as three borrow pits located on the R61 Section 8 near Thombo and Majola in the Eastern Cape Province identified no heritage sites on the footprint. Previous surveys on the R61 Section 8 has identified potential Iron Age and modern grave sites but none of these are associated with the quarry site and the borrow pits. They are all located in the general vicinity of the R61 but none of them occur on or within 1.5km from the footprint. There is no archaeological reason why the proposed development may not proceed as planned. Although not situated on the footprint it is nevertheless still suggested that a buffer of at least 20 m must be strictly maintained around each heritage site identified previously along this section of the R61. Attention is drawn to the South African Heritage Resources Act, 1999 (Act No. 25 of 1999) which, requires that operations that expose archaeological or historical remains should cease immediately, pending evaluation by the provincial heritage agency.

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LIST OF ABBREVIATIONS AND ACRONYMS

ESA	Early Stone Age
HISTORIC PERIOD	Since the arrival of the white settlers - c. AD 1820 in this part of the country
IRON AGE	Early Iron Age AD 200 - AD 1000 Late Iron Age AD 1000 - AD 1830
EIA	Early Iron Age
LIA	Late Iron Age
LSA	Late Stone Age
MSA	Middle Stone Age
NEMA	National Environmental Management Act, 1998 (Act No. 107 of 1998 and associated regulations (2010).
NHRA	National Heritage Resources Act, 1999 (Act No. 25 of 1999) and associated regulations (2000)
SAHRA	South African Heritage Resources Agency
STONE AGE	Early Stone Age 2 000 000 - 250 000 BP Middle Stone Age 250 000 - 25 000 BP Late Stone Age 30 000 - until c. AD 200

1 INTRODUCTION

1.1 Background and Brief

The South African National Roads Agency Limited (SANRAL) proposes to upgrade and rehabilitate the R61 Section 8 from Majola Tea at Km 51 to Tombo at Km 66 between Mthatha and Port St Johns in the Port St John's Local Municipality. SRK Consulting has been appointed by SANRAL as the independent consultants to assess the environmental impacts and requirements in terms of the National Environmental Management Act (Act 107 of 1998)(NEMA) and the Mineral and Petroleum Resources Development Act (Act 28 of 2002)(MPRDA). This includes the submission of an application to the Department of Mineral Resources for a mining right for the use of two borrow pits (i.e. Borrow Pit 6 and Borrow Pit 7) and one quarry (i.e. Quarry 9). The material from these proposed borrow pits and quarry will be used to upgrade and rehabilitate the Route R61 Section 8 between Mthatha and Port St Johns from Majola Tea in the west (km 51) to Tombo in the east (km 66). An archaeological specialist input is required as part of an application to the Department of Mineral Resources for a mining right for the use of two borrow pits and quarry.

Active Heritage cc was subsequently appointed by SRK to a) complete the archaeological impact assessment (AIA) for the present phase of the project. A brief synopsis of the background to this Basic Assessment is provided in Table 1.

Table 1. Background information

Type of development:	The R61 Section 8 is an existing surface road which serves as a link between Mthatha and Port St Johns. The road has some sections in poor condition and as such requires rehabilitation.
Rezoning or subdivision:	na
Terms of reference	To carry out an Archaeological Impact Assessment (AIA) of Quarry Pit 9 and the relevant access road, and Borrow Pits 1, 6, and 7. This includes a buffer of approximately 40m associated with all these features.
Legislative requirements:	The Archaeological Impact Assessment was carried out in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA) and following the requirements of the National Heritage Resources Act, 1999 (Act No. 25 of 1999)

1.2. The Study Area:

The R61 Section 8 is located between Mthatha and Port St Johns in the Port St John's Local Municipality in the Eastern Cape (Fig 1). This project includes the proposed upgrading and rehabilitation from the Majola Tea at Km 51 to Tombo at Km 66. The R61 Section 8 connects the N2 at Mthatha in the West and Port St John's in the East. The GPS coordinates for the starting point is given as: S 31° 35' 1.349" E 29° 15' 36.146" and the end point as: S 31° 37' 18.014" E 29° 23' 29.755". The upgrading includes this section of the R61. The proposed quarry pit, relevant access roads, and borrow pits are situated near this section of the R61 (Fig 1). Only these features were investigated in this study. The relevant section of the R61 has already been covered in a previous archaeological impact assessment (Prins 2012). The GPS coordinates for the surveyed features are as follows:

Quarry Pit 9: S 31° 34' 36.39" E 29° 07' 47.31" (Figs 1, 2 & 5)
 Access Road: S 31° 34' 21.46" E 29° 07' 23.15" (Figs 1, 2 & 6)
 Borrow Pit 1: S 31° 34' 15.27" E 29° 14' 16.83" (Figs 1, 3, & 8)
 Borrow Pit 6: S 31° 36' 13.82" E 29° 19' 23.64" (Figs 1, 3 & 6)
 Borrow Pit 7: S 31° 34' 17.03" E 29° 14' 03.01" (Figs 1, 3 & 8)

1.3. Cultural Heritage legislation

According to Section 3 (2) of the NHRA, the heritage resources of South Africa 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.
 - ancestral graves;
 - ii. royal graves and graves of traditional leaders;
 - iii. graves of victims of conflict;
 - iv. graves of individuals designated by the Minister by notice in the Gazette;
 - v. historical graves and cemeteries; and
 - vi. other human remains which are not covered in terms of the Human Tissue Act,

1983 (Act No. 65 of 1983);

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

In terms of section 3 (3) of the NHRA, 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 a particular community or cultural group for social, cultural or spiritual reasons;
- h. 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 the history of slavery in South Africa.”

The NHRA regulations of 2000 refer for the most part to the processes allowing for permits to be issued for the alteration, destruction or modification of heritage sites and features. These include the following:

- Protected areas
- Burial grounds and graves
- Wrecks
- Exportation of heritage objects
- Reproduction of national heritage sites
- Archaeological and palaeontological sites
- National heritage sites, provincial heritage sites, provisionally protected place, structures older than 60 years

2 BACKGROUND TO HERITAGE AND HISTORY OF AREA

The archaeological history of the Eastern Cape Province dates back to about 2 million years and possibly older, which marks the beginning of the Stone Age. The Stone Age in the Eastern Cape Province was extensively researched by archaeologists attached to the Albany Museum in Grahamstown, the University of Stellenbosch, the then University of Transkei (UNITRA), and Fort Hare University and more recently by rock art researchers attached to the Rock Art Research Institute at the University of the Witwatersrand.

The Stone Age period has been divided in to three periods namely: Early Stone Age dating between 2 million years ago to about 200 000 years ago, Middle Stone Age dating between 200 000 years ago to about 30 000 years ago, and the Later Stone Age which dates from 30 000 to about 2 000 year ago. The Stone Age period ends around approximately 2 000 years ago when Bantu speaking Age farmers from the north arrived in southern Africa.

2.1 Stone Age

2.1.1 Early Stone Age (ESA)

The ESA is considered as the beginning of the stone tool technology. It dates back to over 2 million years ago until 200 000 years ago. This period is characterised by the Oldowan and Acheulean industries. The Oldowan Industry, dating to approximately

between over 2 million years and 1.7 million years predates the later Acheulean. The Oldowan Industry consists of very simple, crudely made core tools from which flakes are struck a couple of times. To date, there is no consensus amongst archaeologists as to which hominid species manufactured these artefacts. The Acheulean Industry lasted from about 1.7 million years until 200 thousand years ago. Acheulean tools were more specialized tools than those of the earlier industry. They were shaped intentionally to carry out specific tasks such as hacking and bashing to remove limbs from animals and marrow from bone. These duties were performed using the large sharp pointed artefacts known as hand axes. Cleavers, with their sharp, flat cutting edges were used to carry out more heavy duty butchering activities (Esterhuysen, 2007). The ESA technology lasted for a very long time, from early to middle Pleistocene and thus seems to have been sufficient to meet the needs of early hominids and their ancestors. Although not identified on the footprint, ESA tools occurrence have been reported in other sites in the Transkei (Derricourt 1977; Feely 1987). Apart from stone artefacts, the ESA sites in the Transkei have produced very little as regards other archaeological remains. This has made it difficult to make inferences pointing to economical dynamics of the ESA people in this part of the world (Mazel 1989).

2.1.2 Middle Stone Age (MSA)

The MSA dates to between 200 000 and 30 000 years ago, and is generally associated with the emergence of anatomically modern humans. The MSA technology is therefore believed to have been manufactured by fully modern humans known as *Homo sapiens* who emerged around 250 000 years ago. While some of the sites belonging to this time period occur in similar contexts as those of ESA, most of the MSA sites are located in rock shelters. Palaeoenvironmental data suggest that the distribution of MSA sites in the high lying Drakensberg and surrounding areas was influenced by the climate conditions, specifically the amount and duration of snow (Carter, 1976). In general, the MSA stone tools are smaller than those of the ESA. Although some MSA tools are made from prepared cores, the majority of MSA flakes are rather irregular and are probably waste material from knapping exercises. A variety of MSA tools include blades, flakes, scrapers and pointed tools that may have been hafted onto shafts or handles and used as spearheads. Between 70 000 and 60 000 years ago new tool types appear known as segments and trapezoids. These tool types are referred to as backed tools from the method of preparation. Residue analyses on the backed tools from South African MSA sites including those in KZN indicate that

these tools were certainly used as spear heads and perhaps even arrow points (Wadley, 2007). Derricourt (1977) reported a few MSA sites in the Transkei and some sites investigated by Opperman (1987) in the 1970's and 1980's occur near Maclear directly to the east of the project area.

2.1.3 Late Stone Age (LSA)

Compared to the earlier MSA and ESA, more is known about the LSA which dates from around 30 000 to 2 000 (possibly later) years ago. This is because LSA sites are more recent than ESA and MSA sites and therefore achieve better preservation of a greater variety of organic archaeological material. The Later Stone Age is usually associated with the San (Bushmen) or their direct ancestors. The tools during this period were even smaller and more diverse than those of the preceding Middle Stone Age period. LSA tool technology is observed to display rapid stylistic change compared to the slower pace in the MSA. The rapidity is more evident during the last 10 000 years. The LSA tool sequence includes informal small blade tradition from about 22 000 – 12 000 years ago, a scraper and adze-rich industry between 12 000 – 8 000 years ago, a backed tool and small scraper industry between 8 000 – 4 000 years and ending with a variable set of other industries thereafter (Wadley, 2007). Adzes are thought to be wood working tools and may have also been used to make digging sticks and handles for tools. Scrapers are tools that are thought to have been used to prepare hides for clothing and manufacture of other leather items. Backed tools may have been used for cutting as well as tips for arrows. It was also during Later Stone Age times that the bow and arrow was introduced into southern Africa – perhaps around 20 000 years ago. Because of the extensive use of the bow and arrow and the use of traps and snares, Later Stone Age people were far more efficient in exploiting their natural environment than Middle Stone Age people. Up until 2 000 years ago Later Stone Age people dominated the southern African landscape. However, shortly after 2 000 years ago the first Khoi herders and Bantu-speaking agro pastoralists immigrated into southern Africa from the north. This led to major demographic changes in the population distribution of the subcontinent. San hunter-gatherers were either assimilated or moved off to more marginal environments such as the Kalahari Desert or some mountain ranges unsuitable for small-scale subsistence farming and herding. The San in the coastal areas of the Eastern Cape Province were the first to have been displaced by incoming African agro pastoralists. However, some independent and sometimes hybrid groups continue to practice their hunter gatherer lifestyle in the foothills of the Drakensberg until the period of white colonisation around the 1840's

(Opperman 1987; Wright & Mazel, 2007; Mallen 2008; Henry 2010). Later Stone Age artefacts have been reported from the coastal areas near Port St Johns (Derricourt 1977; Feely 1987), however, none are known from the project area. Nevertheless, a suite of rock shelters with Later Stone Age deposits and even rock paintings are known to occur on the coastal areas to the north of Port St Johns close to the Msikaba and Mkambati Rivers. More recently rock shelters with typical LSA artefacts and rock paintings were found in the Mnyameni and Kulumbé river valleys (Van Schalkwyk 2008). These discoveries suggest that LSA hunter-gatherers may have been exploiting intertidal resources close to the project area as recently as the 16th, 17th and 18th centuries.

2.2 Iron Age

2.2.1 Early Iron Age

Unlike the Stone Age people whose life styles were arguably egalitarian, Iron Age people led quite complex life styles. Their way of life of greater dependence on agriculture necessitated more sedentary settlements. They cultivated crops and kept domestic animals such as cattle, sheep, goats and dogs. Pottery production is also an important feature of Iron Age communities. Iron smelting was practised quite significantly by Iron Age society as they had to produce iron implements for agricultural use. Although Iron Age people occasionally hunted and gathered wild plants and shellfish, the bulk of their diet consisted of the crops they cultivated as well as the meat of the animals they kept. EIA villages were relatively large settlements strategically located in valleys beside rivers to take advantage of the fertile alluvial soils for growing crops (Maggs 1989. Huffman 2007). The EIA sites in the Eastern Cape Province dates back between AD 600 to AD 900. Based on extensive research on EIA sites in the eastern seaboard they can be divided along the following typological criteria and time lines according to ceramic styles (Maggs, 1989; Huffman 2007):

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

However, no known Early Iron Age sites occur in the immediate vicinity of the footprint as this area has never been systematically surveyed for archaeological sites. Nevertheless Early Iron Age sites are known to occur along the middle reaches of the Umzimvubu River about 80km upstream from the project area. Here, as in KwaZulu-Natal the vast majority of Early Iron Age sites occur below the 1000m contour along

areas in the large river valleys with a rainfall of less than 700mm a year (Prins 1992; Feely 2011). Two coastal cave sites with typical Early Iron Age pottery have been located by Derricourt in the 1970's about 20km from the project area (Derricourt 1977). It is therefore most likely that Early Iron Age sites will occur in the close vicinity of the project area along the Umzimvubu River Valley.

2.2.2 Late Iron Age (LIA)

The LIA is not only distinguished from the EIA by greater regional diversity of pottery styles but is also marked by extensive stone wall settlements. However, in this part of the world, stone walls were not common as the Nguni people used thatch and wood to build their houses (Derricourt 1977). This explains the failure to obtain sites from the aerial photograph investigation of the study area. Trade played a major role in the economy of LIA societies. Goods were traded locally and over long distances. The main trade goods included metal, salt, grain, cattle and thatch. This led to the establishment of economically driven centres and the growth of trade wealth. Keeping of domestic animals, metal work and the cultivation of crops continued with a change in the organisation of economic activities (Maggs, 1989; Huffman 2007).

LIA sites in the Eastern Cape Province occur adjacent to the major rivers in low lying river valleys but also along ridge crests above the 800m contour. The LIA in the project area can be ascribed to the Mphondo or their immediate predecessors (Feely 1987). A feature which distinguished Mphondo architecture during the historical period of the LIA, was the use of clay plaster on the interior of their hemi-spherical, thatch-on wooden-frame dwellings (Hunter 1979; Shaw & Van Warmelo 1972). Feely (1987) reported archaeological traces of this practise on sites to the north and west of the project area where dwellings had been fired. Such a fate was a widespread occurrence during the Zulu raids on Pondoland around the 1820's (Hunter 1979) and subsequent raids by Bhaca and Xesibe peoples (Stanford 1962).

No Later Iron Age sites are known from existing data bases to occur in the immediate vicinity of the project area. However, the inhabitants of this area has been known to be Mphondo since at least 1687 (Wilson 1959), if not earlier. They fall under the paramouncy of East Pondoland which came under Cape colonial rule in 1894 (Stanford 1962). Interestingly, the "great place" of the Mphondo Paramount chief Faku, who was a prominent local leader during colonial times, was located by an

archaeological consulting company in 2007 (Van Schalkwyk pers com). This site occurs near the Mngazi River approximately 40km from the project area.

2.3 Historic Period

Oral tradition is the basis of the evidence of historical events that took place before written history could be recorded. This kind of evidence becomes even more reliable in cases where archaeology could be utilised to back up the oral records. Sources of evidence for socio political organization during the mid-eighteenth to early nineteenth century in the study area and the Transkei suggest that the people here existed in numerous small-scale political units of different sizes, population numbers and political structures (Feely 1987; Wright & Hamilton, 1989). This period was largely characterised by rage and instability as political skirmishes broke due to the thirst for power and resources between chiefdoms. During the 2nd half of the eighteenth century, stronger chiefdoms and paramuncies emerged. However, these were not fully grown states as there was no proper formal central political body established. This changed in the 1780's when a shift towards a more centralized political state occurred in parts of northern KwaZulu-Natal. The Zulu kingdom, established by King Shaka however became the most powerful in KwaZulu-Natal in the early years of the 19th century and had a marked influence on the local Southern Nguni chiefdoms of the project area (Feely 1987). Refugees from north of the Umtavuna River such as the Bhaca and Qwabe tribes moved into the Transkei and asked the Mphondo paramount chief Faku for permission to settle in adjacent parts. These refugees were collectively called amaMfengu and many of these people were settled near Umtata, Qumbu and Mount Frere to the west of the project area. English traders who settled at Port Natal (Durban) during the 1820's also visited Faku and traded with him for elephant ivory. Chief Faku was well known to the colonial authorities in Cape Town and Port Natal. He outlived most of his adversaries such as King Shaka and King Dingane of the amaZulu. Despite being harassed by the expansionistic Zulu kingdom for many decades the Mphondo were never subjugated by the former.

3 STUDY APPROACH

3.1 Methodology

A desktop study was conducted of the archaeological databases housed in the KwaZulu-Natal Museum, the available records of the Albany Museum in Grahamstown and the SAHRA inventory of heritage sites in the Eastern Cape Province. The SAHRIS website was consulted to obtain information from previous heritage and archaeological surveys in the region. In addition, the available archaeological and historical literature covering the Eastern Cape was also consulted.

Prior to the ground survey aerial photographs of the study area was studied to indicate any potential heritage hot spots. A ground survey, following standard and accepted archaeological procedures, was conducted during the site visit. The study area was surveyed by foot. All indicated Borrow Pits (no 1, 6 & 7) and Quarry Pit 9 as well as the relevant access road were investigated (Fig 1). A buffer of 40m was also systematically surveyed around each feature as indicated in the brief.

3.2 Restrictions encountered during the survey

3.2.1 Visibility

The vegetation along the road is rank grass with scrubby *Acacia karroo*. Archaeological visibility was compromised by the dense vegetation.

3.2.2 Disturbance

No disturbance of any heritage features was noted.

3.3 Details of equipment used in the survey

GPS: Garmin Etrek

Digital cameras: Canon Powershot A460

All readings were taken using the GPS. Accuracy was to a level of 5 m.

4 DESCRIPTION OF SITES AND MATERIAL OBSERVED

4.1 Locational data

Province: Eastern Cape Province

Towns: Port St Johns and Mthatha

4.2 Description of the general area surveyed

Much of the footprint is situated in disturbed land or in road reserves. The R61 Section 8 is located on a higher lying ridge and effectively forms a watershed along this section of the road (Fig 1). The road lies along or is situated very close to the divide between the Mngazi (northward) and Mngazana (southward) Rivers, in the sector examined. The area to the immediate east of Quarry Pit 9 comprises blind curves and rises with high cuttings into the hill-sides. Rural homesteads are situated along most of the existing access roads, including the 1km access road to Quarry Pit 9, but not along the steep grades. The area demarcated for Quarry Pit 9 covers an area of approximately 250m x 80m and comprises mostly disturbed grasslands with some individual trees and bushes (Figs 2, 5 & 6). The proposed Borrow Pits 1 and 7 are situated in an open piece of land, characterised by grasslands and some indigenous trees and bushes, directly adjacent to the R16 (Figs 3 & 8). This open piece of land covers an area of approximately 400m x 130m. The land demarcated for Borrow Pit 6 covers an area of approximately 400m x 300m. This area has been disturbed by previous diggings and rural activities (Figs 4 & 7).

5 HERITAGE SITES AND THEIR SIGNIFICANCE (HERITAGE VALUE)

Given the topography and layout of the study area the implication is that most relevant cultural sites, such as graves, are situated some distance from the R61 and from the associated borrow pits. Although modern graves were observed in the environs of the R 61 none of these occur closer than 800m to the footprint and they were therefore not recorded. Several archaeological and heritage impact assessments have been undertaken along parts of the R 61 or nearby it (Kruger 2011; eThembeni 2008, 2012; Prins 2012; Anderson 2013). None of these surveys located heritage sites on the footprint. Prins (2012) located two potential Later Iron Age sites as well as an *isivivane* along the R61 but all these potential sites are situated more than 1.5 km

from any of the identified footprint features (i.e. borrow pits, quarry pit and associated access road). No archaeological sites and features were observed on the footprint during the ground survey.

5.1 Field Rating

A rating method developed by SAHRA was applied to evaluate the significance of each heritage site (Table 2). However, no archaeological sites or features occur on the footprint or in close association with Quarry Pit 9 and associated access road, and Borrow Pits 1, 6 & 7.

Table 2. Field rating and recommended grading of sites (SAHRA 2005)

Level	Details	Action
National (Grade I)	The site is considered to be of National Significance	Nominated to be declared by SAHRA
Provincial (Grade II)	This site is considered to be of Provincial significance	Nominated to be declared by Provincial Heritage Authority
Local Grade IIIA	This site is considered to be of HIGH significance locally	The site should be retained as a heritage site
Local Grade IIIB	This site is considered to be of HIGH significance locally	The site should be mitigated, and part retained as a heritage site
Generally Protected A	High to medium significance	Mitigation necessary before destruction
Generally Protected B	Medium significance	The site needs to be recorded before destruction
Generally Protected C	Low significance	No further recording is required before destruction

6 RECOMMENDATIONS

There is no archaeological reason why the proposed development may not proceed as planned. However, It should be pointed out that the South African National Heritage Act requires that operations exposing palaeontological, archaeological, and historical residues should cease immediately pending an evaluation by the heritage authorities

7 RISK PREVENTATIVE MEASURES ASSOCIATED WITH CONSTRUCTION

Only use existing access roads. All new roads must first be surveyed by a heritage specialist.

8 MAPS AND FIGURES

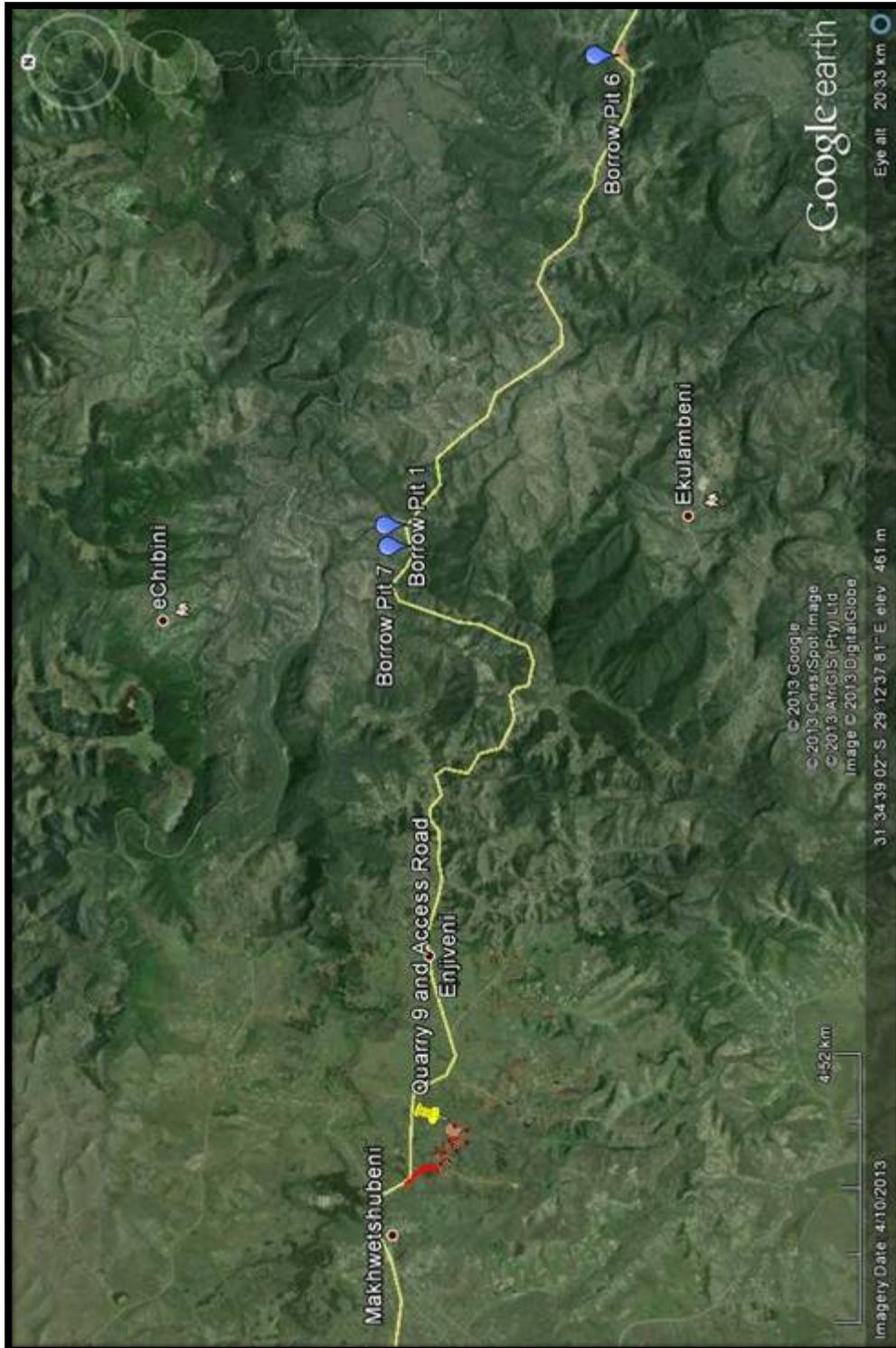


Figure 1. Google aerial photograph showing the locality of the various features surveyed adjacent to the R61.

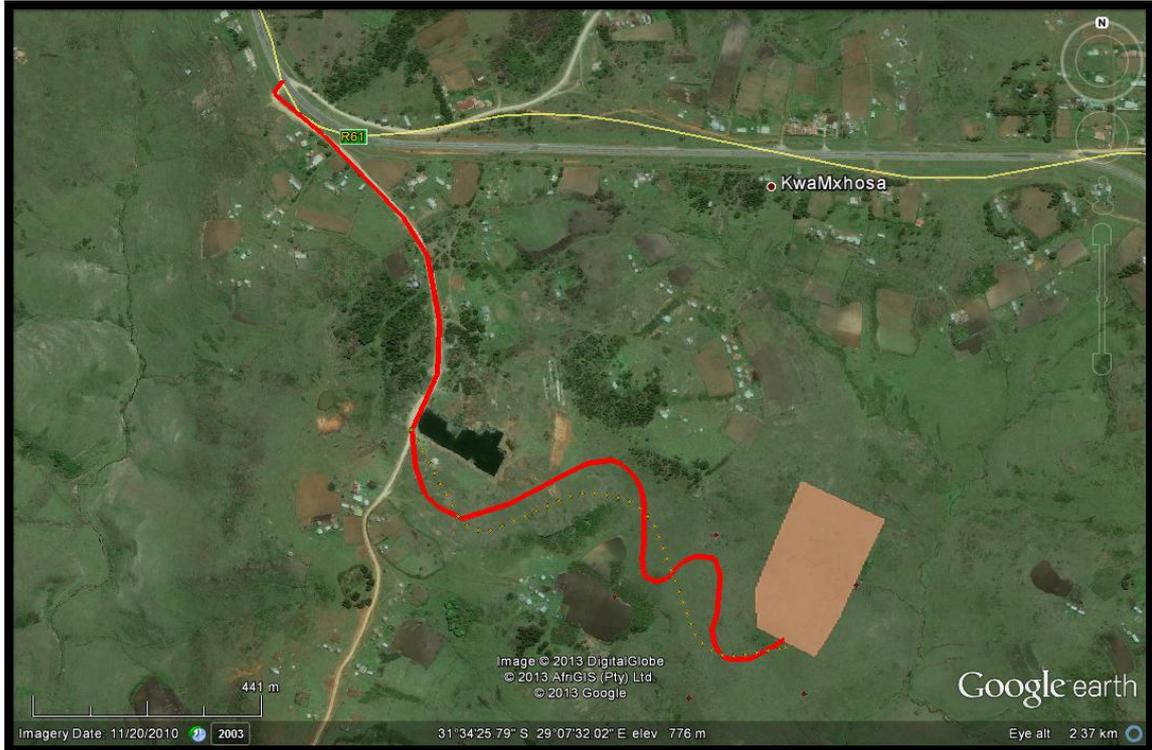


Figure 2. Google aerial photograph showing the location of Quarry Pit 9 and Access Road to the south of the R61



Figure 3. Google aerial photograph showing the locations of Borrow Pits 1 and 7 adjacent to the R 61.



Figure 4. Google aerial photograph showing the location of Borrow Pit 6 on the northern aspect of the R 61.



Figure 5. Access Road to Quarry Pit 9



Figure 6. Grasslands in the close environs of the proposed Quarry Pit 9



Figure 7. Borrow Pit 6



Figure 8. Area demarcated for Borrow Pits 1 and 7.

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