

ARCUS GIBB (Pty) Ltd

**ARCHAEOLOGICAL AND HERITAGE IMPACT ASSESSMENT OF THE SANI
PASS FOR THE PROPOSED SANI PASS ROAD UPGRADE PROJECT IN THE
UKHANHLAMBA/DRAKENSBERG PARK UNESCO WORLD HERITAGE
SITE, KWAZULU NATAL PROVINCE**

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EXECUTIVE SUMMARY

The Nzumbululo Heritage Solutions was appointed by Arcus Gibb (Pty) Ltd to carryout a Heritage Impact Assessment (HIA) study as part of the Environmental Impact Assessment (EIA) Study for Phases 2 of Sani Pass Road development project. The road section earmarked for upgrade traverses through the uKhahlamba-Drakensburg Park UNESCO World Heritage Site. The road links the town of Underberg, KwaZulu Natal Province and eastern Lesotho highlands. This Heritage Impact Assessment (HIA) study focuses on identifying potential impacts on physical cultural properties including archaeological and historical resources as well as impact on intangible (living) heritage associated with the project area. The study seeks to identify limitations the heritage resources may have on the proposed construction's receiving environment. From a planning perspective, the Heritage Impact Assessment (HIA) Study will inform the conservation and management of the road development impacts on both tangible and intangible heritage resources where they within the project's receiving environment. In order to draw informative conclusions and make effective recommendations, the project area was approached as a coherent Cultural Landscape. This cultural landscape is a geographic area, encompassing both natural and cultural resources associated with prehistoric, historic and contemporary events that are significant in the local history of the area. The findings of the HIA study are summarized as follows.

- The uKhahlamba-Drakensburg Park UNESCO World Heritage Site is an exceptional, highly dynamic mountainous ecosystem of world importance. Biophysically it represents an interconnected morphological system with the adjacent Lesotho Highland bioregion and low lands of the Underberg region in KwaZulu Natal province of South Africa, significant in terms of unique ecological, socio-economic, scientific and cultural characteristics. The uKhahlamba-Drakensburg Park World Heritage Site characteristics of particular significance include biomass productivity, habitats and species, and breeding grounds, tourism and recreational activities, scientific research and cultural heritage. Together these constitute a unique resource, worthy of the highest order of conservation, use management and stewardship.
- Environmental protection of the the uKhahlamba-Drakensburg Park World Heritage Site is perceived as a trilateral Governmental responsibility. It is currently achieved by national and international environmental and heritage protection legislations and designation; regulation of cultural and terrestrial activities; and a high level of co-ordinated management. However specific foci affected by the proposed road upgrade are limited to an area already developed with the existing Sani Pass Road. The proposed development is limited to upgrading the road to an all-weather road.
- In general, the uKhahlamba-Drakensburg Park project area has several archaeological sites particularly rock art sites, Stone Age shelters, stone wall enclosures on the parks management records, as well as Amafa and Natal Museum records. However, the proposed road development is an upgrade of the existing Sani Pass gravel road to an all-weather road linking South Africa and eastern section of Lesotho. Therefore, the project's footprint will be limited to existing road and associated road reserve. It was not anticipated that significant archaeological or other physical cultural properties will be affected by the proposed road works.
- Although the impact on physical cultural resources will be minimal given the factor that the proposed road works will be limited to upgrading an existing road, the heritage significance of the affected area lays mostly in the intangible value associated with cultural landscape represented by

the existing road route and associated milieu. The other generic value of the project area is that the road traverses through portion of the protected UKhahlamba-Drakensburg Park World Heritage Site. The Sani Pass road itself has always gone through a series of developments including the road's early history of construction, repairs and upgrade which have seen the pass historically evolve over time from a foot path, to a mule track, a wagon track and eventually a motorized vehicle road. The proposed road upgrade, therefore, should be viewed as part of the Sani Pass' continuous development. From this point of view, the heritage assessment study did not identify any heritage barriers that may require the road upgrade project to be abandoned.

- Stone wall structures were recorded on a site along the road upgrade's route. The stone walls have automatic protection from the heritage legislations since they are part of an archaeological site. Historical ruins of the old Sani Pass Trading Store are also located along the Sani Pass road. Part of the old store ruins is older than 60 years and they are similarly protected by the KwaZulu Natal Heritage Act (Act 4 of 2008) and the National Heritage Act (Act 25 of 1999). Both the stone wall enclosures and the Old Sani Pass Trading Stores ruin sites are presently located outside the road reserve. However, these sites may not be destroyed or altered in any way without an express permit from Amafa KwaZulu Natali during the proposed road upgrade construction work.
- Loose rocks with trapped fossilized sea shells were recorded at the Mkomazana River crossing. Although the rocks are not *in situ*, they are an indication that the rock formations in the general project area have the potential to yield fossil remains. Should it become necessary to blast rock formations during the road construction work, it is recommended that a paleontologist (or geologist with fossil expertise) be retained to monitor for any possible chance fossil finds on affected areas.
- Overall, the proposed road upgrade will enhance the value and utilitarian significance of the Sani Pass from both an economic and regional socio-political development perspectives (between South Africa and Lesotho). This study did not identify any prohibitive archaeological or heritage barriers to this development. As such, the program should be supported with insurance that it will be implemented in a sustainable manner while ensuring it will not degrade the overall natural and cultural values of the area.
- The principal recommendation of this HIA study is therefore that, based on these findings and those associated mitigation measures confirmed as advantageous and achievable, the development may proceed as planned and to be implemented under the guidance of the overall project Environmental Management Plan (EMP). The road construction work should not interfere in a negative way with any known cultural properties in the project area. However, as stated earlier, should any previously unknown heritage sites such as an archaeological sites be identified in the course of the development, heritage authorities should be informed immediately before any further work on affected area.
- Finally it is recommended that the Amafa KwaZulu Natal authorities may approve the development to proceed as planned subject to heritage monitoring during the project's construction phase.

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ABBREVIATIONS

HIA	Heritage Impact Assessment
EIA	Environmental Impact Assessment
HeSSA	Nzumbululo Heritage Solutions (South Africa)
LIA	Late Iron Age
SAHRA	South African Heritage Resources Agency
EMP	Environmental Management Plan
NHRA	National Heritage Resources Act
KZN	KwaZulu Natal

DEFINITIONS

Archaeology: the scientific study, interpretation, and reconstruction of past human cultures from an anthropological perspective based on the investigation of the surviving physical evidence of human activity and the reconstruction of related past environments. Historic archaeology uses historic documents as additional sources of information. An **archaeologist** is a scientist professionally trained to conduct such studies.

Archaeological Material remains resulting from human activities, which are in a state of disuse and are in, or on, land and which are older than 100 years, including artefacts, human and hominid remains, and artificial features and structures.

Biophysical cultural resource: a plant or animal community associated with human settlement and use at a historic property.

Chance Finds Archaeological artefacts, features, structures or historical cultural remains such as human burials that are found accidentally in context previously not identified during cultural heritage scoping, screening and assessment studies. Such finds are usually found during earth moving activities such as water pipeline trench excavations.

Cultural Heritage Resources Same as Heritage Resources as defined and used in the South African Heritage Resources Act (Act No. 25 of 1999). Refer to physical cultural properties such as archaeological and palaeontological sites; historic and prehistoric places, buildings, structures and material remains; cultural sites such as places of ritual or religious importance and their associated materials; burial sites or *graves* and their associated materials; geological or natural features of cultural importance or scientific significance. Cultural Heritage Resources also include intangible resources such as religion practices, ritual ceremonies, oral histories, memories and indigenous knowledge.

Cultural Significance The complexities of what makes a place, materials or intangible resources of value to society or part of, customarily assessed in terms of aesthetic, historical, scientific/research and social values.

Cultural landscape: a geographic area, including both cultural and natural resources and the wildlife or domestic animals therein, associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values.

Grave A place of interment (variably referred to as burial), including the contents, headstone or other marker of such a place, and any other structure on or associated with such place. A grave may occur in isolation or in association with others where upon it is referred to as being situated in a cemetery.

Cultural practice: a pattern of behaviour associated with a particular way of life. Cultural practices are often associated with particular ecosystems, the use of natural resources, and the use or production of sites, structures, objects, and landscape features. Traditional forms of house building, subsistence activities, religious, family, and community ceremonials, and expressive activities such as musical performance, craft production, and folklore are examples of cultural practices.

Cultural resource: an aspect of a cultural system that is valued by or significantly representative of a culture or that contains significant information about a culture. A cultural resource may be a tangible entity or a cultural practice. Tangible cultural resources are categorized as districts, sites, buildings, structures, and objects for the National Register of Historic Places and as archaeological resources, cultural landscapes, structures, museum objects, and ethnographic resources for EMM management purposes.

Historic Material remains resulting from human activities, which are younger than 100 years, but no longer in use, including artefacts, human remains and artificial features and structures.

In Situ material *Material culture* and surrounding deposits in their original location and context, for example an archaeological site that has not been disturbed by farming.

Late Iron Age this period is associated with the development of complex societies and state systems in southern Africa.

Lifeways: a pattern of behavior associated with a particular way of life. Life way constitute cultural practices often associated with particular ecosystems, the use of natural resources, and the use or production of sites, structures, objects, and landscape features. Life way also refer to traditional forms of house building, subsistence activities, religious, family, and community ceremonials, and expressive activities such as musical performance, craft production, and folklore are examples of cultural practices. a system of behaviours (including economic, religious, and social), beliefs (values, ideologies), and social arrangements.

Material culture Buildings, structure, features, tools and other artefacts that constitute the remains from past societies.

Phases of Heritage Impact Assessment HIA studies are conducted in two Phases. Phase 1 generally focus on identifying and describing impacts to archaeological and cultural resources, including intangible heritage resources; make recommendations on mitigation measures. Phase 2 HIA study generally focuses on implementation of mitigation measures as may be directed by the heritage authorities. These include archaeological excavations.

Site A distinct spatial cluster of artefacts, structures, organic and environmental remains, as residues of past human activity.

1 INTRODUCTION

The KZN Department of Transport has appointed Arcus Gibb (Pty) Ltd as the independent Environmental Assessment Practitioner to undertake an Environmental Impact Assessment (EIA) process for the proposed Phase 2 Sani Pass Road upgrade project. Nzumbululo Heritage Solutions was appointed by Arcus Gibb (Pty) Ltd to conduct a Heritage Impact Assessment (HIA) study for the project which is situated in the UKhahlamba-Drakensburg Park World Heritage Site in KwaZulu Natal Province. This heritage impact study report was prepared as part of the Phase 1 HIA study.

The project in question is a linear road upgrade construction work along the existing Sani Pass gravel road. The upgrade would make the pass an all-weather road. The affected portion of the road stretches for 33km. For project implementation purposes, the road upgrade program has been broken into three phases. Phase 1 of the project which covers the first 14 km was approved and was already under construction by the time this study started in mid-2008. This study focuses on phases two (Fig. 1 and Fig. 2). No development activities have commenced on the second phase portions of the road pending the outcome of the required environmental assessments. This assessment has been carried out taking into the consideration of the requirements of the KwaZulu Heritage Act, Act 4 of 2008 and Section 38 of the National Heritage Resources Act 25 of 1999 while bearing in mind the project area falls within the UKhahlamba-Drakensburg Park UNESCO World Heritage Site.

2. AIMS OF THE HIA STUDY

Given the nature of the project's receiving environment that falls in a diverse nature and cultural conservation area of the uKhahlamba-Drakensburg Park World Heritage Site, the project area is treated as a Cultural Landscape. This cultural landscape is a geographic area which encompasses both natural and cultural resources associated with prehistoric, historic and contemporary events that are significant to the local history of the area.

This HIA study primarily seeks to:

- Identifying heritage resources affected by the Sani Pass Road upgrade project and the associated road infrastructural development.
- Assess the significance of the resources where they are identified along the road route within the affected section of the uKhahlamba-Drakensburg Cultural Landscape.
- Evaluate the impact thereon with respect to the socio-economic opportunities and benefits that would be derived from the proposed road upgrade development.
- Consult with the affected and other interested parties in regard to the impact on the heritage resources in the project's receiving environment.

- ❑ Make recommendations on mitigation measures with the view to reduce specific adverse impacts and enhance specific positive impacts on the heritage resources.
- ❑ Take responsibility for communicating with the Amafa and other authorities in order to obtain the relevant authorization with reference to heritage aspects.

Table 1: Summary Terms of Reference for the HIA study for the proposed Sani Pass road upgrade project.

PURPOSE	ACTIVITIES
<ul style="list-style-type: none"> ❑ Fulfil the statutory requirements of the Amafa KwaZulu Natali Act 10 of 1997 and National Heritage Resources Act, Act 25 of 1999, section 38. ❑ To identify and describe, (in terms of their conservation and / or preservation importance) sites of cultural and archaeological importance that may be affected by the proposed Sani Pass Road construction project. This study should include the identification of gravesites. ❑ Identify and describe impacts to archaeological and cultural resources, including intangible heritage resources. ❑ Make recommendations on mitigation measures. ❑ Identify and describe management measures. 	<ul style="list-style-type: none"> ❑ Survey the project area to identify and describe sites of archaeological, historical or cultural interest affected by the proposed Sani Pass road development. ❑ Identify, if any, gravesites affected by the development. ❑ Liaise with the local communities and stakeholders (if applicable) with regards to the impact of the development on the heritage resources. ❑ Produce a detailed technical HIA report describing the importance or significance of known heritage resources and whether these resources need to be conserved/ protected ❑ Describe, in an HIA report, the procedures for mitigation of sites and provide an indication of time required for these management measures to be implemented. ❑ Document findings and recommendations.

2.1 HERITAGE LEGISLATION BACKGROUND

Among all the laws and regulations drafted for the protection of the natural and cultural resources and the environment, the following acts have particular relevance to the management of heritage sites (cultural and historical sites) wherever they are found in the Republic.

- Amafa KwaZulu Natali, Act 10, 1997 (provincial)
- The National Heritage Resources Act, No.25 of 1999
- World Heritage Convention Act, No.49 of 1999
- Environmental Conservation Act, No.73 of 1989
- Tourism Act, No.72 of 1993
- The Mineral Amendment Act, No.103 of 1993
- National Environment management Act (NEMA), No.107 of 1998
- Cultural Institutions Act, No.119 of 1998
- The National Heritage Council Act, No.11 of 1999, and regulations
- Cultural Laws Amendment Bill, No.46 of 2000.

In terms of Section 35 (4) of the National Heritage Resources Act, 1999 (Act No. 25 of 1999)

...no person may, without a permit issued by the relevant heritage resources authority, destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or material or any meteorite; or bring onto, or use at an archaeological or palaeontological site any excavation equipment or any equipment that assists in the detection or recovery of metals or archaeological and palaeontological material or objects, or use such equipment for the recovery of meteorites.

In terms of the KwaZulu Natal Heritage Act No 4 of 2008. Section 27(1) of the Act requires such an assessment in case of:

- (a) construction of a road, wall, power line, pipeline, canal or other similar form of linear development or barrier exceeding 300 m in length;
- (b) construction of a bridge or similar structure exceeding 50 m in length; and
- (c) any development, or other activity which will change the character of an area of land, or water –
 - (i) exceeding 10 000 m² in extent;
 - (ii) involving three or more existing erven or subdivisions thereof; or
 - (iii) involving three or more erven, or subdivisions thereof, which have been consolidated within the past five years; or
- (d) the costs of which will exceed a sum set in terms of regulations; or
- (e) any other category of development provided for in regulations.

The heritage legislations and associated regulations highlight that heritage impact assessment is not limited to physical cultural properties such as archaeological sites and artefacts, historical buildings and graves. It includes intangible and invisible resources such as life ways, oral traditions, popular local histories, folklores, religion, and rituals. In the KwaZulu-Natal Heritage Act 1997 a heritage resource is defined as any place or object of cultural significance i.e. of aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value or significance. This includes the following wide range of places and objects:

- (a) places, buildings, structures and equipment;
- (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;
- (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 of victims of conflict,
 - (iv) graves of important individuals,

- (v) historical graves and cemeteries older than 60 years, and
- (h) movable objects, including -
 - (i) objects recovered from the soil or waters of South Africa including archaeological and palaeontological objects and material, meteorites and rare geological specimens;
 - (ii) ethnographic art and objects;
 - (iii) military objects;
 - (iv) objects of decorative art;
 - (v) objects of fine art;
 - (vi) objects of scientific or technological interest;
 - (vii) books, records, documents, photographic positives and negatives, graphic, film or video material or sound recordings; and
 - (viii) any other prescribed categories, but excluding any object made by a living person;
- (i) battlefields;
- (j) traditional building techniques.

Clearly, all of the above categories of heritage resources are seen in the Amafa KwaZulu Natali Act (as well as the NHRA) as “the source of our understanding of the evolution of the earth, life on earth and the history of people.” In this context, the laws emphasize that the management of heritage resources is integrated with environmental resources and this means that heritage resources should be assessed and, if necessary, rescued before development is allowed to take place.

3. PROJECT AND PROJECT AREA BACKGROUND

3.1 BRIEF DESCRIPTION OF THE PROJECT

The KZN Department of Transport, in association with the national Department of Transport, proposes to continue upgrading the existing Sani Pass (P318) road from gravel to a hardened surface all-weather road linking South Africa and Lesotho (Fig. 1). The first phase of this upgrade (km 0 - km 14) was already been approved and under construction when this HIA study began. This present study concerns Phase 2 of the project, namely the upgrading of the remainder of the P318 from km 14 to the summit at the Lesotho border (km 33), a distance of 19 km (see Fig 1 and Fig 2). The proposed upgrade involves the complete grading and resurfacing of the P318 including:

- Road re-alignment and widening were necessary,
- Construction of new bridges, stormwater control and attenuation systems,
- Bank and slope stabilisation measures and
- Road servitude rehabilitation.

3.2 BRIEF GEOGRAPHICAL AND CULTURE HISTORY OF THE STUDY AREA

The Sani Pass road, earmarked for upgrade, is located in the southernmost part of the uKhahlamba-Drakensburg Park World Heritage Site (Appendix 1 Fig. 1). The project area is marked by the road which winds up a narrow V-shaped valley flanked by towering buttresses. The Sani Pass is the only access from KwaZulu Natal to the harsh environment of the Lesotho Highlands, the domain of the endangered Bearded Vulture, Basotho shepherds and their animals. The road can be accessed from the Underberg Town. This steep zigzagging pass climbs the face of the Drakensberg escarpment to an altitude of 2874m. The Route, affectionately called the “roof of Africa”, boasts to be the highest road in Africa and third highest in the world and peaks at a heady height of 3200m above sea level. Close to the Sani Pass summit, within a couple of kilometers, is the highest peak in Southern Africa, Thabane Ntlenyana, 3482m high. The Sani Pass was originally developed as a bridal path in 1913. The first vehicle negotiated the path in 1948 when it was no more of a boulder littered track. It is now used for the most part by 4x4 vehicles and has become a highlight for tourists visiting the Southern Drakensberg.

The imposing uKhahlamba-Drakensberg is the product of millions of years of geomorphological sculpting by the elements. With foundations reaching back billions of years, present mountain formation of imposing rock walls and deep, green valleys have provided a home for an ever-changing variety of life through the ages. Through the centuries, the slow build up of fragile soils on the steep slopes provided a base for vegetation, food for the vast herds of game which roamed the grasslands. The San hunter-gather people have been in the uKhahlamba-Drakensberg mountain range for centuries long before the Bantu-speaking peoples arrived in southern Africa. The San hunter-gatherer left behind a large amount of archaeological evidence including rock art that today are some of the most unique prehistoric paintings on the continent. They used paints prepared from iron oxides, charcoal, gypsum, ochre, and paintbrushes made of reeds, hairs and feathers. Their activities and beliefs were reflected on the walls of their shelters by their artists – the battles, the hunts, the animals and birds, the mythological beings, bees and fish, ladders and digging sticks, dances and families. They painted till as late and the most recent to around AD 1720-1820 (Deacon & Deacon 1999; Write & Mazel 2007).

By the end of the first half of the first millennium AD, the Bantu-speaking farming communities were migrating into the region occupying the foot-hills and valleys below the uKhahlamba-Drakensberg mountain range. The Bantu-speaking communities introduced settled life, domesticated livestock, crop production and the use of iron Huffman, 2007). Over the next centuries into the second millennium AD, the Nguni groups in the region developed giving rise to socio-cultural complex societies that eventually led to the rise of African complex societies such as the Basotho and Zulu Kingdoms in the 1800s AD.

In 1835 the Voortrekker with horses and wagons arrived in the foothills of the uKhahlamba-Drakensberg Mountains. The shrinking of the San's traditional hunting grounds and the political dynamics among the Nguni-Zulu farming communities and the arrival of the white settlers led to further instability and hardships particularly for the San. With the encroaching settlement of Voortrekkers amongst the foothills of the Drakensberg, serious trouble began and the very existence of the San people was threatened. Soon the San themselves were being targeted and being shot in tensions and battles over resources. Clashes over hunting grounds, private ownership of land, and the arrival of cattle led to increasing numbers of cattle raids by the San people. Eventually the situation became so bad that the San were hunted and decimated by the settlers. The last sighting of San people in the Drakensberg Mountains was in the early 1880's (Wright & Mazel 2007). By the turn of the century "tiny hunters" had vanished and the mountains which had been their home was empty of the eland artists, never to see them again.

With colonialism came far reaching socio-political and economic dynamics, most of which were detrimental to the African populations. Land acquisitions and apportionments were the order of the day. In the uKhahlamba-Drakensburg area, early conservation efforts led to the establishment of the Natal National Park in 1916. It changed its name to the Royal Natal National Park in 1947. Through time, more and more land along the length of the mountain range was added to the protected area, some by the Natal Parks, Game and Fish Preservation Board and some by the Department of Forestry. Late in the 20th century the majority of land along the length of the Drakensberg had become consolidated and was administered in its entirety by the Natal Parks Board. The Board later combined with the KwaZulu Department of Nature Conservation and the new KwaZulu-Natal Nature Conservation Service was formed. In 2000 the organization became known as KwaZulu-Natal Wildlife and the park was nominated and listed as a UNESCO World Heritage Site in December of the same year.

3.3 HERITAGE STATUS OF THE PROJECT AREA

The uKhahlamba-Drakensburg Park UNESCO World Heritage site, where the project area is situated, is one of the few sites enlisted as mixed World Heritage Site. The area was listed for its natural and cultural heritage significance (Plate 1). According to UNESCO World Heritage Commission (2000) the uKhahlamba-Drakensburg Park possesses the following natural and cultural universal characteristics:

Natural criteria (iii) and (iv): The site [uKhahlamba-Drakensburg Park] has exceptional natural beauty with soaring basaltic buttresses, incisive dramatic cutbacks and golden sandstone ramparts. Rolling high altitude grasslands, the pristine steep-sided river valleys and rocky gorges also contribute to the beauty of the site. The site's diversity of habitats protects a high level of endemic and globally threatened species, especially of birds and plants.

Cultural criteria (i) and (iii):

Criterion (i): The rock art of the uKhahlamba-Drakensberg is the largest and most concentrated group of rock paintings in Africa, south of the Sahara and is outstanding both in quality and diversity of subject.

Criterion (iii): The San people lived in the mountainous uKhahlamba/Drakensberg area for more than four millennia, leaving behind them a corpus of outstanding rock art which throws much light on their way of life and their beliefs.



Plate 1: The Mkomazana River Valley flanked by steep mountain slopes. The Sani Pass road traverses along the valley to the mountain top into Lesotho [Photo Author 2008].

Heritage resources present in the uKhahlamba-Drakensburg Park UNESCO World Heritage site as protected under the country's legislation include the following:

- Archaeology
- Palaeontology
- Built Heritage
- Architectural Heritage
 - Architectural Conservation Areas
 - Protection of the Architectural Heritage
- Significant Graves and Burial grounds
- Natural Heritage
 - Local Biodiversity
 - Protected Species
 - Trees
 - Avi-fauna
 - Fauna

- Intangible cultural heritage & community identity

The southern section of the uKhahlamba-Drakensberg Park where the Sani Pass road is situated is described as an area of exceptional natural beauty and outstanding geological formations that includes basaltic buttresses, incisive cutbacks, and golden sandstone ramparts. Rolling high altitude grasslands, the steep-sided river valleys and rocky gorges contribute to the beauty of the area that supports a diversity of habitats that protects endemic and globally threatened flora and fauna species. The mountainous region contains many caves and rock-shelters with the largest and most concentrated group of 4000 years old San prehistoric rock paintings on the African continent and the world at large.



Plate 2 & 3: View of the Sani Pass and Mkomazana Valley from the Sani Top on Lesotho side [Photos by Author 2008].

While it is unlikely that any known rock painting sites will be affected by the proposed road upgrade, it is the intangible aesthetic characteristic of the project area, particularly the cultural landscape, that are more likely to be impacted upon by the proposed project.

4. STUDY METHOD

4.1 RECONNAISSANCE STUDY

The object of the study was to undertake a detailed site survey and gain an overall understanding of the heritage sensitivities of the Sani Pass Road servitude within which the road upgrade construction work would be developed and indicate how, if any, heritage resources may be impacted or enhanced through development activities. The preliminary survey was limited to reconnaissance activities conducted in the company of Arcus Gibb (Pty) Ltd project managers and other EIA specialist on the 12th and 13th of May

2008. The author (Heritage Specialist) conducted an independent reconnaissance of the road route on the first day of the field work and the second site visit on the following day was in the company of the project Engineers and EIA team members. The reconnaissance study gathered geographical and topographical background information on the proposed development site (Fig 1). A desktop literature review was conducted as part of the preliminary scoping HIA study for this project. We consulted the provincial databases, including historical, archaeological and geological sources. We assessed the value and significance of heritage resources, as defined in the KwaZulu-Natal Heritage Act 1997. A scoping report was produced and submitted to the client as part of the EIA Scoping phase (some sections of the HIA Scoping Report are incorporated into this Final HIA Report).

4.2 HIA FIELD SURVEY

We subsequently conducted a detailed field survey of the affected landscape in December 2008 and February 2009. The survey was aimed at identifying archaeological sites and physical cultural resources signatures as well as other cultural heritage sites such as graves, burial and religious or sacred sites that may be affected by the proposed road upgrade project. The author in company of another Nzumbululo Heritage Solution archaeologist systematically transacted the project area on foot. Using the preliminary findings from the reconnaissance study we applied a judgement surveying strategy (stratified sampling). We divided the affected landscape into geographical zones (previously built up roadside sections, open low land, open grass lands, steep slope mountain section, road side gullies, and stream or river valley sections). Naturally, we placed more emphasis on areas we believed had potential of archaeological, historical or other physical cultural resources. Nonetheless, the field survey team conducted an impact assessment by transecting the affected landscape on foot looking for indicators of geological, palaeontological, archaeological and any other cultural materials in the affected areas. In part the field officer also inspected soil profiles for potential archaeological materials that may still be trapped *in situ* in an area already disturbed by previous earthmoving activities such as road construction and maintenance activities.

Identification of archaeological sites during surveying also depends on visibility and accessibility. The proposed project area is generally accessible. The road reserve servitude area is occasionally cleared during the limited routine maintenance of the existing Sani Pass Road. Under these disturbed conditions, it was anticipated that the chances for finding archaeological material preserved *in situ* in most portions of the road side were limited.

Geographic coordinates were obtained with a handheld Garmin GPS global positioning unit. Photographs were taken as part of the documentation process during field study.

4.3 ASSUMPTIONS AND LIMITATIONS

The field survey did not include any form of subsurface inspection or tests beyond the inspection of burrows, road cut sections and the river banks exposed by natural erosion and previous road works. Some assumptions were made as part of the study and therefore some limitations, uncertainties and gaps in information apply including:

- The proposed road work will follow the existing Sani Pass road route and construction work will be limited to the road reserve without any major deviation.
- Since the current road has been in use for more than 60 years, it was anticipated that no significant archaeological materials were likely to be situated *in situ* within the road reserve to present day given the extensive nature of the disturbance to the vegetation and upper soil layers.
- The chances of encountering settlement sites (both Stone and Iron Ages) within the road route directly affected by the proposed project were limited given the lack of rock shelters in the immediate vicinity of the road reserve and steep slope topography through which the present road traverses. Available data suggests that the Stone Age communities in this region favoured rock shelters and caves as settlement and camp sites where as the Iron Age farming communities preferred areas suitable for settled homesteads with access to agricultural fields, water and grazing lands. This does not mean that the project area was not used for non-settlement activities by prehistoric communities.
- No excavations or sampling were undertaken, since a permit from Amafa KwaZulu-Natali is required to disturb a heritage resource.

4.4 STUDY CONDITIONS

The project area consists of the Sani Pass road and road reserve (see Appendix 1 for Locational maps). The road is currently open and under use by travelers between KwaZulu Natal Province and eastern Lesotho. The same road is a rated 4x4 Driving Road. There are no restrictions to accessing the project area that stretches from Km 14 to Km 33 on the Lesotho Border. The only challenge is the steep slopes and tight switch backs one would have to travel to traverse along the road route. This did not hinder the HIA study in any way. As such the field team conducted a survey of the road from the South African side at the base of the escapement all the way to the top on the Lesotho border post and back. The mountain slopes are covered with low grass and some riverside mountain vegetation. However, some sections on the valley sides and bottoms are covered with impenetrable indigenous bushes. In such sections, this means that we had to restrict our observation to accessible areas hiking tracks and road cuttings where we could examine the surface geology.

4.5 HERITAGE RESOURCES VALUATION

In order to evaluate the significant heritage resources or sites for management purposes, this HIA study adopts an evaluation system that ensures that sites or heritage resources are assessed against criteria described in detail in Appendix 2 Table 2. An effective HIA system evolves around three independent but related aspects: conservation; significance and utilisation with reference to interferences that would result from the proposed development in the project area (See Appendix 2 for detailed evaluation criteria used in this HIA study). However, at the core of this evaluation are four steps were used to interpret selected of Sani Pass cultural landscapes. These included understanding the history, analysing the landscapes as categories of human use, reading the landscapes as values associated with different worldviews, and finally analysing the character of the landscapes. This process enabled landscapes of strong significance to be identified and the condition or integrity of these landscapes to be assessed.

5. HIA STUDY FINDINGS

5.1 GENERAL OBSERVATIONS

The overall uKhahlamba-Drakensberg park region

The uKhahlamba-Drakensberg region takes on unusual prominence in the convergence of prehistoric and historic hunter-gatherer San, Bantu-speaking farming communities and colonial settlers' traffic on, at, and near the Sani Pass (also see Write and Mazel, 2007). Before Europeans ever came to this part of southern Africa, the San and later the Bantu-speaking Iron Age farmers crisscrossed the uKhahlamba-Drakensberg region using countless trails, including most probably what came to be the Sani Pass. The San Hunter-gatherers settled the region in seasonal camps and temporary campsites associated with seasonal migrations. Archaeological evidence from the Drakensberg has revealed that the Stone Age hunter-gatherers have lived in the area for more than 25000 years before present (Wright and Mazel, 2007: 23). The major prehistoric rock shelters and cave sites — such as Good Hope 1 Shelter, Collingham Shelter and Eland Cave — are well known in the mountain region, but not immediately on, the Sani Pass project area. Some 600 years ago, Bantu-speaking farmers appeared in the region and were responsible for Late Iron Age prehistoric villages such as the Mgoduyanuka in the grasslands below the mountain range (also see Huffman, 2007). By the time the first Europeans appeared in the region, the San and Bantu-speaking farmers trails were well defined, and consequently used by explorers, hunters, traders, missionaries, soldiers, and eventually, settlers. European settlements tended to be located in the vicinity of African settlements, probably because they were drawn by the same natural features and transportation routes.

Southern uKhahlamba-Drakensberg and Sani Pass region

The southern uKhahlamba-Drakensberg region contains archaeological sites ranging from Stone Age to Late Iron Age (Write and Mazel, 2007). Stone Age materials are usually associated with several rock shelters and caves in the uKhahlamba-Drakensberg Mountain range whereas Iron Age sites are recorded in the foothill and uplands below the escarpment (Huffman, 2007). Nonetheless, no immediate archaeological sites were observed in the vicinity of the Sani Pass Road project area. This is most probably because of the fact that caves and rock shelters that could have formed foci of prehistoric habitation appear located away from the road route which is the primary focus of this study. Some rock shelters exist in the ravines that run through the study area. However these areas were not targeted for this study because they are far removed from the project impact area.

The project's receiving environment along the road route is unlikely to contain a large number of Iron Age archaeological sites because the affected landscape is too high for prehistoric farming communities to have settled voluntarily to pursue their farming activities (see Plates 1, 2 and 3). The sourveld of the region only supplied good grazing for a limited period during first rains but very poor grazing during the winter dry season (Write and Mazel, 2007: 73). The open grass land did not provide firewood or timber the farmers would have required for energy and construction. However, this does not rule out the use of the mountain slopes for grazing purposes by the prehistoric pastoralists during spring and summer.

The road earmarked for upgrading in this project follows the Mkomazana River valley which has potential to yield Late Iron Age sites that may be associated with political dynamics that preceded the *mfencane*. For example, undated stone wall remains were recorded along the road (Plate 10). The stone walls are situated within the fenced off area located within the present South Africa Border Post property. Around the 1830s, the region also witnessed the massive movements associated with the *mfencane* ('wandering hordes'). The causes and consequences of the *mfencane* are well documented elsewhere (e.g. Hamilton 1995; Cobbing 1988; also see Wright & Mazel, 2007: 76-9). During this period, different competing farming groups retreated in and out of the mountains for safety and security during these troubled times.

Defining the Sani Pass Cultural Landscape

The project area has a long history of human interaction with the environment. The Stone Age hunter-gatherers used the area to hunt and migrate between the present day Lesotho highlands and the low lands of the KwaZulu Natal Province. The incoming African farming communities 700 years ago interacted with the hunter-gatherers in this region. They also used the area as a pass to the upper sections of the escarpment. Later on the colonial settlers from the 19th century confronted the last of the San hunter-gatherers in this area. This made the Sani Pass one of the last frontiers for the San hunter-gatherers.

Several colonial administrators sought to tame the region to make it the shortest passage between the Natal and the Cape Colonies. This is how the modern day Sani Pass Road was envisaged and continuously developed from a foot track, a mule track to a vehicle road. Total the proposal on the table seek to improve this road to an all weather surface. The natural and cultural characteristics of the area make it worthy the classification of a Cultural Landscape defined by:

- Cohesive assemblage of natural, cultural, and historic resources, which together represent distinctive local aspects of the South African heritage worthy of national and international recognition;
- Traditions, customs, beliefs, local histories, or folkways that represent distinctive aspects of South African heritage;
- Outstanding opportunities to conserve natural, cultural, and historic resources through the quality and availability of resources, funding and expertise, or a high level of civic and/or political interest. The proposed road upgrade in itself is a direct economic investment in the region and the various specialist impact assessment studies commissioned for this project's EIA will generate more scientific data that may trigger even more follow-up research projects in the area;
- Outstanding opportunities for educational and recreational experiences through a variety of recreational and educational experiences, physical linkages between sites and intangible features of the local heritage, public access, and the potential for public facilities, such as the proposed expansion of border post, an all weather road, information transfer stations along the road, possible increase in visitor volumes due to better access and low transport costs which may lead to demand for more transit services. There are downsides to this picture but with effective management of the road upgrade development and the post development activities, the benefits will far outweigh the limitations;
- Integrity of natural, historic, and cultural resources sufficient to illustrate and convey the distinctive heritage of the region;
- Effective management through potential partnerships among a variety of public and private entities such as the parks management, heritage agencies, roads and transport departments; and
- Strong public and government support, principally through an effective public involvement process—for Cultural Landscape status with a commitment to implementing a comprehensive management plan for the overall uKhahlamba-Drakensberg Park World Heritage Site.

5.2 COLONIAL PERIOD HERITAGE

The uKhahlamba-Drakensburg region witnessed sudden arrival of thousands of Voortrekkers from 1837. The area to the east became a contested land between the African farming groups, the incoming Boer settlers and the British colonial administration which was setting up the Colony of Natal. By the 1870s, the uKhahlamba-Drakensburg was rid of its indigenous inhabitants, the San, and the African farmers were effectively under colonial administration. By the 1880s, the white settlers had established farms and settlements in Underberg-Himmeville at the base of the Sani Pass (Wright & Mazel, 2007). The cultural visual landscape began to shift with new stone-wall houses and sheds surrounded by imported eucalyptus, pine and wattle trees connected by wagon tracks. On the foothills, settlements grew around magistracies and trading stores such as Himmeville and Underberg below the Sani Pass (ibid).

It was after World War 1 (WW1) that some form of stability returned to the uKhahlamba-Drakensburg. The growing post-war motor sport brought visitors to the region. The rivers in the region had seen introduction of the trout fish from Scotland. After WW 1, the region became popular to fishing and mountain climbing enthusiasts. The first hotel in the southern uKhahlamba-Drakensburg was built in 1935.

The period from the late 1800s to the 1940 also saw several different efforts undertaken by the colonial administrations to establish different conservation and state forests as protected areas in the uKhahlamba-Drakensburg Mountains.

The Recent Development of the Sani Pass

The post WW 1 period effectively saw majority of Africans converted into tenants and farm labourers with their local economies destroyed. White traders in the Himmeville-Underberg prospered as Africans had to buy food and other commodities. One example of the most successful trading stores in area was the Old Sani Pass Trading Store which was strategically located on the pass to tap African customers from Mokhotlong area of the then Basutoland (Lesotho) since before WW 1. The Sani Pass developed into an established route used by trains of horses, mules and donkeys that carried large volumes of maize, timber, fuel blankets, clothing and household goods over the uKhahlamba-Drakensburg Mountains and return with wool and mohair on the way down the pass. This trade grew considerably alongside the demand for tourism into Lesotho. This led to establishment of a track for four-wheel-drive vehicles over the pass by a group of South African entrepreneurs in the 1950s. The pass was opened to commercial vehicle traffic by David Alexander, whose company Mokhotlong Mountain Transport was the first to operate on the pass in 1955. By 1980, the track had been developed by the South African and Lesotho governments into a road usable by large trucks. Ever since the Sani Pass had remained a strategic link between the two countries in the southern uKhahlamba-Drakensburg region.

Tapping from this long history, the South Africa has committed to upgrading the Sani Pass gravel road into an all-weather road. The present study is a product of this proposed development.

From this history of the pass, it is anticipated that the heritage sites associated with the Sani Pass Cultural Landscape would be linked to the history related above. The cultural landscape represents both pre-colonial and the colonial frontier history. The later is marked by the disappearance of San communities, subjugation of the African farming communities, establishment of White settler communities and eventual colonial rule. The Sani Pass reflects activities in uKhahlamba-Drakensburg region in that it contains a collection of remains of buildings such and remains of the old Sani Pass Trading store, old tracks, the ever popular 4x4 Sani Pass road itself, and features that reflect the development of the region and the range of activities that took place over time.

5.3 INTANGIBLE HERITAGE

Since the Amafa KwaZulu Natali Act, Act 4 of 2008 and National Heritage Resources Act 25 of 1999 includes “landscape” (and other intangible elements) as part of the National Heritage, it is appropriate to comment on these aspects. This ICMP uses the following definition of Intangible Cultural Heritage (ICH) issued by the 2003 UNESCO Convention for the Safeguarding of the Intangible Cultural Heritage:

The “intangible cultural heritage” means the practices, representations, expressions, views, thoughts, knowledge, skills – as well as the instruments, objects, artefacts and cultural spaces associated therewith – that communities, groups and, in some cases, individuals recognize as part of their cultural heritage. This intangible cultural heritage, transmitted from generation to generation, is constantly recreated by communities and groups in response to their environment, their interaction with nature and their history, and provides them with a sense of identity and continuity, thus promoting respect for cultural diversity and human creativity.

The Sani Pass Road route traverses through a World Heritage Site of uKhahlamba-Drakensberg Park and cultural landscape of national and international significance. Furthermore the exceptional natural beauty and scenic qualities of the Sani Pass area of the uKhahlamba-Drakensburg region (soaring basaltic buttresses, incisive dramatic cutbacks, and golden sandstone ramparts, rolling high altitude grasslands, the pristine steep-sided river valleys and rocky gorge, and fresh water rivers[s] and the tight zigzag switch-backs that characterise the Sani Pass road itself) are among the most significant qualities that characterize the pass and make the area desirable as a holiday and tourist destination. The study area presents a number of scenic vistas along the pass while the escarpment is visible from Himmeville-Underberg towns. From this point of view the study area is of highly visual aesthetic sensitivity. Inappropriate planning and insensitive placement of auxiliary road facilities has the potential to impact the public memory and sense of place on a national and regional level particularly given the fact that the road upgrade will remove the 4x4 off road driving experience qualities associated with the Sani Pass.



Plate 4: The proposed road upgrade will terminate at Km 33 on the Lesotho border.



Plate 5: South African border post situated mid-way along the Sani Pass road in South African territory. The proposed road upgrade will also include a section which traverses through this property.

5.4 SITE SPECIFIC OBSERVATIONS ALONG THE SANI PASS AND MILIEU

Detailed descriptions of sites recorded during the preliminary survey are contained in following sections.

Site name: Sani Pass Road Corridor

Position: 29.64.853° S 29. 43.345° E [beginning of Phase 2 road upgrade] and 29.58.536° S 29. 28.802° E [end of Phase 2 road upgrade at Sani Pass Lesotho Border post]

Type of site: A Valley corridor traversing from lowland KZN up into Lesotho rising to highest point in southern Africa. The corridor is characterised by a linear gravel road traversing cultural landscape that links KwaZulu Natal Province of South Africa and eastern Lesotho highlands. Also see Table 2 below for different characteristics of the cultural landscape that are encountered along the Sani Pass and associated milieu.

Period of use: From the 19th century AD to present day. (Most probably used long before then as access route going back centuries by the San hunters who have been in the area for millenniums).

Table 2: Categories of Cultural Landscapes in the Sani Pass

LANDSCAPE CATEGORIES	SANI PASS EXAMPLES
Landscapes of Nature	One of the richest areas of KwaZulu Natal for flora & fauna diversity largely as a result of protection as a national park and recently as mixed World Heritage Site with significant state forests, geological formations, rock shelters, rivers and wetlands mountains and escarpment.
Landscape of Cultural Heritage	Rock shelters in the general uKhahlamba-Drakensberg Park World Heritage Site contain some the best preserved Stone Age archaeological remains including universally acclaimed Rock Art sites.
Landscapes of Settlement	Long history of human settlements dating to prehistoric Stone Age to colonial frontier settlements including small towns serving plantations, later small fishing villages, trading posts, transport access pass, holiday areas, increased into resort in from early 1900s.
Landscapes of Enterprise	Forest plantations were earliest industries. Nature conservation and tourism the biggest industry consisting of a number of landscape types, national parks, nature resorts. Education, schools and university/reserve. Service industry for tourism. Adventure tourism for off-road and 4x4 driving. Transport industry linking KwaZulu Natal and Lesotho.
Landscapes of Communication	Sani Pass was main original transport routes between KZN and Lesotho. Old donkey trail corridor replaced by road. Border crossing between South Africa and Lesotho.
Landscapes of Water Management	River head waters draining from the escapement to the east into KwaZulu Natal province, Mkomazana River.
Landscapes of Experimentation	The sections that finally came to be declared as protected national park started as nature conservation experimental projects.
Landscapes of Strategic Interest.	The last San resistance frontier in the 1800s. First attempts by colonial rulers to link he then Natal and the Cape Colonies. Frontier region for colonial struggle between the Basotho and the British Natal Colony. Main route linking eastern Lesotho Highlands and western KZN Province of South Africa.
Landscapes of Leisure	Leisure is the main reason people go to the Sani Pass / uKhahlamba-Drakensberg. National parks World Heritage Site. Resorts & Ecotourism. '4x4 off-road driving.
Landscapes Associate with Particular Communities	The last recorded Sani hunter-gatherers in the mountain region. The upper most African farming communities of Nguni origin. The first Voortrekker and British Natal Colony settlements – Himmeville and Underberg historic town settlements. Earlier colonial period traders established the first Sani Pass Trading Store which serviced Lesotho residence who travelled down the mountain into South Africa for food and other supplies.
Landscapes of Symbolism	Iconic as South African symbol of leisure associated with nature and off-road 4x4 enthusiasts. Symbolic of earlier free enterprise and cross boarder trade. Symbolic of South Africa earlier efforts on nature conservation and development of some of the continent's first protected areas. Indigenous San symbolism associated with last frontier of resistance to both African Farmers and the Voortrekker and British colonialists World Heritage Site symbolism associated with one of the few mixed status WHS.

Description: The Sani Pass follows the upper valley of the Mkomazana River. The Sani Pass was originally developed as a bridal path in 1913. This steep zigzagging pass climbs the face of the Drakensberg escarpment to an altitude of 2874m. The first vehicle negotiated the path in 1948.

The Sani Pass is the only access from KwaZulu Natal to the harsh environment of the Lesotho Highlands, the domain of the Basotho shepherds and their animals. The Route, aptly called the "roof of Africa", boasts to be the highest road in Africa and third highest in the world and peaks at a heady height of 3200m above sea level. Close to the Sani Pass summit, within a couple of kilometers, is the highest peak in Southern Africa, Thabane Ntlenyana, 3482m high.



Plate 6: The Sani Pass is flanked by outstanding cliffs which give the area.



Plate 7: The mountain slopes and cliff flanking the Sani Pass are marked with occasional cave and rock shelters. Some of these shelters contain archaeological materials and some are open to hikers who visit the park.

Use: The pass has been used in prehistory by hunter-gatherers during the Stone Age as they migrated between the escapement and the low lands. The Iron Age farming communities also used the landscape to graze their livestock during the favourable seasons. The pass was later developed during the colonial period to provide links from KwaZulu Natal to the Lesotho Highlands. From the late 1940s the Sani Pass was opened to commercial transport and 4x4 wheel vehicle route for tourism and leisure purposes. From 1980, the pass was upgraded to increase traffic volumes between the two countries. The present study is part of an EIA exercise in order for the two governments of South Africa to upgrade the Sani Pass to an all weather road. The corridor forming the Sani cultural landscape has multiple landscape characteristics (see Table 2).

Sensitivity¹: The site returns intangible heritage values attached to the cultural landscape features (also see Table 2), scientific, archaeological, aesthetic, historical and social significance (refer to Appendix 2 for method of assessment).

¹ Sensitivity in this context refers to significance level of the cultural heritage resources in general and not directly linked to the anticipated impacts associated with the proposed road upgrade works.

- A moderately to high intangible heritage sensitive cultural landscape representative of local frontier history associated with the last indigenous San communities, colonial displacement of the African farmers, the expansion of Voortrekker settlers and the colonial administration associated with both the Natal and Basutoland British colonial administrations.
- Furthermore, the Sani Pass road provides a unique picturesque and visual aesthetic scene from both the bottom and the top ends of the road. This visual quality make the pass unique from an intangible heritage perspective. The full impact of the proposed road upgrade will be limited to controlled scarring of the road side slopes during construction. Furthermore the upgrading of the new all weather road may introduce a more distinct road surface with more visibility which may give an intrusive impression over the area in comparison to the present road surface. The full visual impacts of the project are covered in an independent visual impact study which forms part of the EIA report.
- The Sani Pass is one of the highest rated 4X4 route in southern Africa. The pass is very popular among 4x4 enthusiasts and highly recommended by 4x4 Club and the Land rover Club in South Africa. This makes the Sani Pass road route a highly significant contemporary living heritage experience for the local and international motoring visitors. As such, the road is of high sensitivity to the proposed road upgrade. In fact the proposed development will completely remove the 4x4 qualities of the route and the associated recreational value. However, the road upgrade may allow an increase of motoring visitors who can use the pass potentially increasing the recreational value of the area to more members of the public who currently are not accessing the area due to the need to 4x4 vehicle use.

Protected by legislation: The pass retains medium to high intangible value as cultural landscape. Furthermore, the Sani Pass road is technically protected by the heritage legislations from the point of that the road itself could be defined as a road engineering site more than 60 years old. Furthermore A permit must be obtained from Amafa KwaZulu Natal heritage authority for interfering with the cultural landscape, its alteration or demolition of any historic features older than 60 years that may be associated with the road works.

Mitigation: If this road is to be upgraded, earthmoving will need to be monitored to ensure that the footprint of the road works are kept at minimum to reduce impact on the aesthetic visual qualities (see Plates 6 & 7) of the pass are not completely lost.

Related features: The upgrade will remove the 4x4 recreational value of the Sani Pass road. The loss of the 4x4 recreational value may, however, lead to increased volume of visitors who will be able to visit the area with ordinary cars as opposed to the current situation where a four-wheel vehicle is required by law given the nature of the road surface. It is not the recreational visitors only who will potentially benefit from the upgrade. But members of the public who use the road to visit both South Africa and Lesotho for socio-

economic reasons. The road upgrade will reduce costs of travel between the two countries which will increase the volume of trade and communication in the region.

Site Name: Old Sani Pass Trading Store Ruins

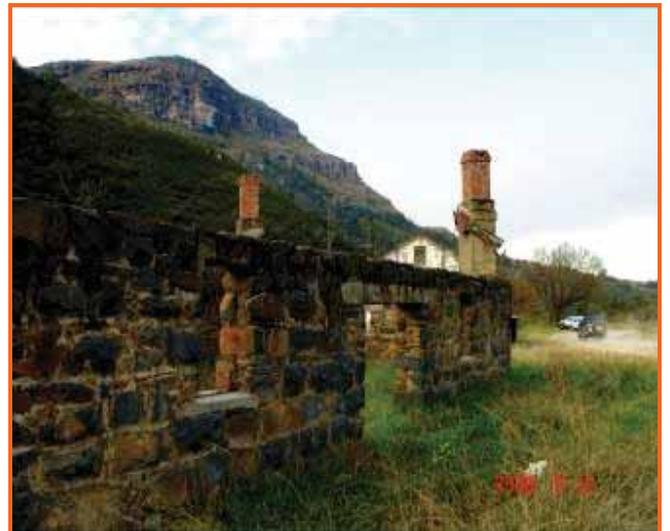
Position: 29.64.604° S 29. 43.083° E

Type of site: Historic building ruins of old Sani Pass Trading Store (Plates 8 & 9).

Period of use: Late 19th – 20th century

Description: Ruins consisting of a group of partially demolished remains of the trading store buildings. The site has a set of at least five building remains. Two of the ruins are original stone wall store structures. Subsequent and bigger buildings were built of brick and concrete blocks. The building ruins are in poor state with no roofs, window frames (casement) have been removed. Surrounding the building ruins are trees and shrubs, grass (now overgrown).

Use: The buildings were originally the Sani Pass Trading Store and now stand in ruin and partially demolished. The out buildings, however it appears to have been designed as a dwelling houses. At present the ruins are used as a taxi rank where the Lesotho taxis drop and pick their customers going up the pass. The ruins have no cultural heritage use at present.



Plates 8 & 9: The ruins of the old Sani Pass Trading store. The present road pass between the remains of the store buildings.

Sensitivity: Medium Historic Significance and low Historic Architectural Significance:

- Historical significance relates exclusively to the last 100 years or a period of importance associated with events, developments, artistic excellence, outstanding achievement and evolution of a nation, group, region or locality.
- Historical value encompasses the history of aesthetics, science, economy and society, and therefore to a large extent underlies all forms of significance valuation.

- Sani Pass Trading Store has historical significance because it has influenced, or has been influenced by an historic figure, event, phase or activity. It may be valued as a site of an important socio-economic event. For Sani Pass Trading Store, the significance will be greater where the evidence of the association or event survives in situ, or where the settings are substantially intact, than where it has been changed where evidence does not survive. However, some events or association at Sani Pass may be so important that the place retains significance regardless of the subsequent treatment.

From Historic Architectural Significance perspective, the value is low:

- The structures are in a poor state and partially demolished. In this state of disrepair the ruins are no longer particularly unique. The original stone wall buildings may represent the late historic architecture of the early 20th century. While we do not advocate total conservation of the physical remains of the trading store, the story of its reason for being, the significance of the services it provided then, and the regional economic role it played needs to be documented.
- Given its historic significance and the intangible value it retain in the local history of the Sani Pass, it is necessary to map the ruins before any work that interfere with their present state is authorized.

Protected by legislation: The site is protected by the Amafa KwaZulu Natal Act 10 of 1997 and National Heritage Resources Act in that some of the original store buildings are over 60 years old. A permit must be obtained from the provincial authority for their alteration or demolition.

Mitigation: Ideally, the ruins should be protected as they are and should not be affected by the proposed road construction work. If the site were better preserved, adaptive reuse would have been a desirable option, however the buildings are in ruin state and they warrant little more than systematic recording, survey and photography of the buildings. Nonetheless, the demolition of the Trading Store Ruins may not be required as part of this project, however, should this be required an application to AMAFA should be made for their partial or total demolition.

Related features: Sani Pass Road, Sani Pass Cultural Landscape, associated outbuildings and house ruins, the river behind the store ruins.

Site Name: Late Iron Age Stone Wall Enclosures

Position: 33.2611S, 20.1226E.

Type of site: LIA archaeological stone wall enclosures situated open areas along road route.

Period of use: Estimated 19th century

Description: Rough and low stone wall enclosure which were probably livestock holding (Plates 10a & 10b).

Use: The stone wall enclosures were probably to livestock by LIA farming communities that occupied the lowlands and valley sections of the Sani Pass area. The enclosures are currently in stable state of preservation and outside the road servitude.

Sensitivity: Medium archaeological significance:

- Archaeological significance relates to the pre-colonial history of the area. Stone wall enclosures in this region may represent the escapement frontier settlements of the farming and cattle herding Iron Age communities in the area.
- Any Iron Age site in this area encompasses the history of pre-colonial settlement pattern.



Plate 10a: Stone wall enclosures situated within the South African Border Post property. These structure should not be disturbed during the proposed road upgrade.



Plate 10b: Stone walls located on fenced off area near the road reserve [Photo adapted from Arcus Gibb, 2008].

Protected by legislation: The stone wall enclosure sites are automatically protected by the Amafa KwaZulu Natal Act 10 of 1997 and National Heritage Resources Act as part of the archaeological heritage. As such they may not be disturbed during the proposed road works. The walls should be fenced off and no access should be allowed during the proposed road works.

Mitigation: Ideally, the stone wall enclosures should be protected in the state they currently are and should not be affected by the proposed road construction work. To ensure total safety of the stone walls, they should be fenced off during the proposed road works.

Site name: Geological and Fossil material

Position: 29.64.853° S 29. 43.345° E [beginning of Phase 2 road upgrade] and 29.58.536° S 29. 28.802° E [end of Phase 3 road upgrade at Sani Pass Lesotho Border post].

Type of site: Geological formations and fossil materials (see Plates 11 & 12) within the road reserve and entire project area.

Period of use: Scientific evidence reflecting landscape geological history of the since formation going back to millions of years.

Description: The entire uKhahlamba-Drakensburg Mountain range region is an outstanding geological formation which is acknowledged in the UNESCO World Heritage Site listing. The Sani Pass road route traverse through the southern section of this universally valued natural landscape. The imposing Drakensberg escarpment is the product of millions of years of sculpting by the elements. The foundations of the mountain range reach back billions of years. Its formation provides a fascinating geological history. Millions of years of formation left different geological as glistening quartz crystals trapped between the sand grains that characterise the southern uKhahlamba-Drakensburg. These even molten layers provided the surfaces that were to be used by the San hunter-gatherers as painting surfaces. These layers also contain early dinosaur fossils. The footprints of these early creatures can be found in the sandstone caves of the Drakensberg foothills, often exposed on the ceilings where the softer sediment layers below them have been worn away (Truswell, 1970)

Some fossilised sea shells were observed on some loose rocks on the river bed of the Mkomazana River whose valley the Sani Pass follows. It was determined that the fossils shells identified on the river bed at the crossing of were not *in situ*. Since they were recorded on rocks on the river bed, it means they originated elsewhere from upstream. However, these serve as an indication that the rock formations within the vicinity of the road servitude have potential to yield fossil remains.

Use: Scientific evidence of the earth's formation history.

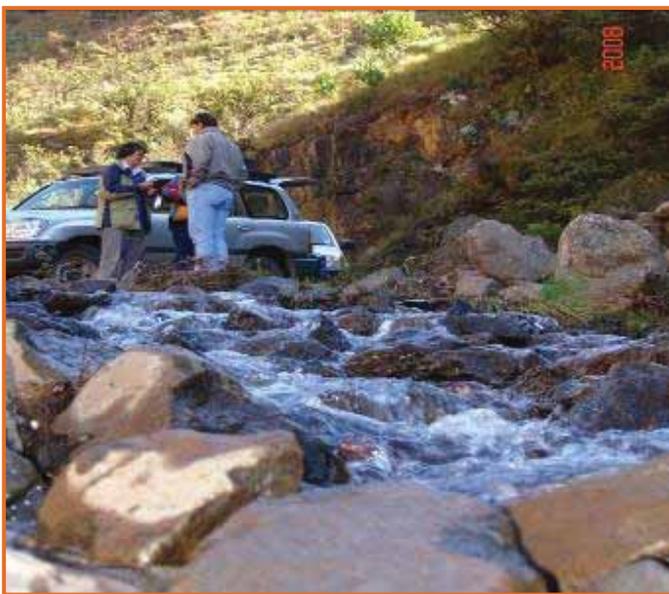
Sensitivity: Low due to limited area to be affected by the proposed development. The recorded fossil shell bearing rock lack context and have been washed down from upstream. If the fossil materials were substantial and *in situ* within the confines of the project area, their significance would:

- Relates to the assessment of the research potential of the site and the relevance of any data that the site(s) might contain for the pursuit of academic research questions.
- This also concerns the potential of a site(s) to address anticipated future trends, research capabilities and interests. The importance of a place will depend on its rarity, quality or representativeness, and degree to which the place may contribute further substantial information. This is not the case with the fossil remains recorded.
- May be measured against the site(s)'s values as unique sources of information; whether such information is not available from other sites; can it answer pertinent questions.

Mitigation: None required for the geological landscape. None required for the fossil remains. However, as part of the heritage monitoring during the construction work, we recommend that a palaeontological specialist be retained to monitor all road construction sites where rock blasting will occur.

Protected by legislation: Both the geological materials and the fossil remains are protect by the provincial and national legislations. Given the potential of identifying previously unknown geological and fossil remains, it is recommended that palaeontological monitoring form part of the heritage monitoring program during the construction phase.

Related features: The visual aesthetic of the Sani Pass cultural landscape is closely tied to the geological formation of the project area. The landscape is closely tied to the cultural history of the region. The sea shell fossil identified during field work are so limited and not visual to an untrained eye. Therefore their relational value is limited and insignificant.



Plates 11 & 12: loose rocks bearing fossilised sea shells were recorded on the Mkomazana River bed at the current crossing of the river. The area where the Sani Pass road crosses the river has been extensively disturbed and it is not clear whether the fossil bearing rocks are *in situ*.

6. GENERAL OPPORTUNITIES, RESTRICTIONS, IMPACTS OF PROPOSED DEVELOPMENT

In general terms, the entire project area is sensitive when assessed as a cultural landscape which is part of the overall uKhahlamba-Drakensberg Park World Heritage Site. Any development therein has potential negative impacts. For the proposed Sani Pass road upgrade, the development has been assessed to have low to medium impacts (refer to Appendix 2 for method of determining the impact levels). These will include alteration to the current road physical status. The road constructing activities including scaring, stock piling and eventual re-surfacing of the road to all weather will leave temporary and permanent

negative impacts. Within the study area there are several intangible foci of varying sensitivity (as described in Sub-section 5.4 above) [also see Table 3 below]. Changing the present road surface from the rough gravel road with portions rated as four-wheel drive to all weather all vehicle surface would remove the historical and contemporary off-road 4x4 driving experience that attracts the majority of tourist who visit the area today. Presently the volume of traffic along the pass is relatively limited, but once the proposed upgrade is complete, this would enable more people with ordinary vehicles to access the area. This may potentially increase the traffic volumes in the area. Increase in traffic volumes in the area may negatively impact the sense remoteness, wilderness and difficulty in accessibility associated with the Sani Pass. There are not mitigation measures that may be implemented to negate this impact on the intangible values attached to the Sani Pass.

However, the proposed road upgrade will not have significant changes to the overall physical characteristic of the overall Sani Pass cultural landscape since the road works will not introduce any new development but involve upgrading an existing road. In this regard, the impact will be positive in as much as the development, while eliminating one of the present road uses [four-wheel driving adventure/ recreation], will increase the utility value of the road by making it an all weather and all vehicle road.

From a historical development perspective, it would be valid to argue that the Sani Pass as it is today is a product of a series of historical developments going back to the time the pass was just a mule track to the present gravel road used by motorised vehicles. As such the proposed all-weather road surface upgrade may be viewed as a part of the pass' continuous history. While the proposed road upgrade will have some negative impacts on the general cultural landscape, there are neither "unmitigatable" nor permanent heritage barriers to the proposed project.

Table 3: Sani Pass Cultural Landscape Heritage Resource Significance

RESOURCES	HERITAGE SIGNIFICANCE	SUITABILITY OF PROJECT	PROJECT FEASIBILITY
Natural Resources	Yes; concentration of biodiversity forming part of the uKhahlamba-Drakensberg World Heritage Site. Rare remnant natural landscape once widespread (pre-pass road development).	Yes; the proposed road works involve upgrading the existing road without opening a new road in the area.	Yes; However the magnitude and complexity of development, possible high level of traffic, and vehicular noise, increased public access will potentially erode the natural value of the area if not managed well.
Cultural Resources	Yes; the uKhahlamba-Drakensberg World Heritage Site region features internationally and nationally significant resources related to the Natural and cultural resources particularly high concentration of Stone Age Rock Paintings, frontier history, regional trade history and public transport system	Yes; the uKhahlamba-Drakensberg World Heritage Site region represents significant aspects of the Nation's prehistoric and historic past, multiple facets of hunter-gatherer, African farmers and colonial settlers, lives, and the modification of an entire region's natural environment to serve regional economic network and related colonial and conservation history. These theme and resource type are not represented in any existing World Heritage Site in the country.	Yes; the existing Sani Pass Road and associated infrastructures precludes advocacy for total protection or abandonment of the proposed road upgrade. The high value of the socio-economic and political values to be derived by the road upgrade out-weighs any potential need to completely abandon the project as a means of protecting the heritage value of the landscape.
Recreational Resources	Yes; existing resources are nationally significant. While the opportunities exist for expanded accessibility and recreational access volumes, such a system would serve both the local community and attracting visitors from other areas of the country and abroad. Currently accessibility is limited to drivers of the expensive 4x4 vehicles. The upgrade will open the pass to less sophisticated vehicles all seasons.	Yes; Although the 4x4 recreational values will be lost, the road will open this section of the uKhahlamba-Drakensberg World Heritage Site to more recreational values of international and national significance.	Yes; recreational resource will be nationally significant and therefore the proposed development is considered feasible for the benefit of the wider members of the public e.g. in terms of accessibility, low transportation cost, socio-economic regional cooperation, increased tourist volumes.

The Sani Pass Road. Access to the entire road route areas is easy by way of the existing gravel road. However, one would need a 4x4 vehicle to traverse the route from bottom to top on the Lesotho border post. There are existing hiking trails into the peaks from the valley along the pass. Scanning the slopes from the road, there are rock shelters and overhangs within the valleys which could contain archaeological deposits which are very vulnerable to damage (trampling, erosion) should people gain access to them. Should the road be upgraded to all-weather surface road, it is assumed that traffic volume would increase and so would be the number of people reaching the area. The uKhahlamba-Drakensberg Park management would have to develop new measure o control the anticipated increase number in visitors in the area with particular focus on ensuring that members of the public do not access rock shelters without proper guidance on value and conservation sensitivity of such sites. More educational information (signage, pamphlets) would have to be developed to enhance the visitor experience.

The Cultural Landscape and intangible values. The upgrade of the road to an all-weather surface would lead to permanent loss of the existing recreational and possibly the aesthetic value of the pass. The area will lose its sense of wilderness and the associated “rough and high difficult rating 4x4 road” experience. Alongside this loss would be the complete disappearance of the living heritage, sense of remoteness and recreational experience of extreme 4x4 driving in the area since more people will be able to access the area without the need of a 4x4 vehicle. .

However, careful redevelopment of this road will result in an asset of interest and value to any future development; however this will have to be done within the confines of any restrictions that uKhahlamba-Drakensberg Park World Heritage Site management authorities may require. The new road has potential to bring in more local visitors to the region since it will no longer be necessary to use off road vehicles to ascend the pass. A focused Socio-economic Impact Assessment (as part of the EIA exercise) has addressed this issue in detail in a separate report. There is need for the park management authorities to consider .adaptive use of the new road and surrounding landscape in light of the possible increase in local traffic.

Generic value of the proposed development may lead to the history of the Sani Pass being incorporated into its redevelopment through making information available to visitors to the area in the form of small displays, exhibition at the border posts and pamphlets for tourist and general visitor information transfer.

Visual impacts: This is an area of great concern as the entire geographical setting of the study area is within the uKhahlamba-Drakensberg Park World Heritage Site. Should the road upgrade be executed in a manner that will leave a larger foot print, the project may have negative visual impacts of high intensity

over a long duration on the wider surroundings. It is strongly recommended that the road engineers aim to minimise the project's foot print on the landscape particularly the road side scarring and ensuring that the upgrade utilise the existing road servitude.

7. OVERALL RECOMMENDATIONS

7.1 SANI PASS CULTURAL LANDSCAPE

The proposed road upgrade may proceed as planned because the upgrade project is not a major threat to the cultural landscape in as much as the pass' has been changing in shape and character throughout the history of its. In fact the pass has gained its cultural landscape value because of its changing characteristics over its history. The entire Sani Pass Road traverses through a Cultural Landscape that 'is a reflection of human adaptation and use of natural spaces, settlement, land use, systems of accessibility, economic activities and the natural resources use and is often expressed in way the land was utilised, organised and divided, patterns of types of structures and features that were built. The character of the Sani Pass as a cultural landscape is defined both by physical materials, such as the road itself which evolved from a foot path, donkey and mule track to a vehicle road, buildings, crossings and vegetation, and by uses reflecting cultural values and traditions.

7.2 INTANGIBLE HERITAGE

Anticipated impacts on the Sani Pass cultural landscape will include visual changes to the present physical landscape along the road servitude. Other impacts on the intangible will include loss of a sense of place that will result in upgrading the road to an all seasonal and all weather road in this part of the park. This will mean loss of the intangible sense of place associated with possible increase in accessibility which will remove the sense of wilderness and remoteness of the present Sani Pass. These impacts on the intangible aspects of the pass may not be mitigated since they will be a direct consequence of the proposed development. As such the recommendation is that the construction work should be done with minimum interference on areas that are not directly on the path of the existing Sani Pass Road servitude.

Although the proposed road development involves upgrading the existing road to an all-weather surface, there will still be negative visual impacts resulting from the construction work within this portion of the World Heritage Site. This impact is unavoidable during the construction phase of the project. The post development visual impacts are subject to recommendations that will emanate from other independent visual impact assessment study of the EIA exercise. The visual aesthetics of the Sani Pass form part of the landscape's "intangible cultural heritage" that include cultural spaces associated therewith – that communities, groups and, in some cases, individuals recognize as part of their heritage of intangible

experiences. Since it will be impossible to completely avoid negative visual impact associated with the proposed road construction works, we recommend that construction activities should not be allowed to take place outside the area earmarked for the road upgrade. All temporary construction sites such as stock piles and construction camps should be removed and rehabilitated immediately where necessary as soon as construction work is complete.

The loss of intangible recreational value attached to 4x4 off-road activities may not be mitigated as long as the Sani Pass road is upgraded to an all-weather and all-vehicle road. However, this intangible experiential value attached to the pass evolved from the difficulties of accessibility through this pass. However, the pass evolved from a foot path to mule track to wagon track and eventually to motorised vehicle road. For a considerable period the road remained a 4x4 route earning it high rating from off-road enthusiast. The proposed road upgrade will remove this value and there is no mitigation to this impact. However, a new value will be created as the road will increase the possibility of more people using the pass without necessity of four-wheel drive vehicle. Furthermore, the upgrade has potential to increase the volume of ordinary traffic between Lesotho and KNZ thereby adding generic value to socio-economic significance of the pass.

Clearly, the intangible cultural heritage, transmitted from generation to generation, is constantly recreated by communities and different groups who utilise the geographical region within which the pass traverse. Different groups or individual interact with nature and the built environment of the Sani Pass from historic perspective; recreation; and a sense of place for others. This multiple value of the pass at some level do promote respect for cultural and natural diversity and human activities in this part of the uKhahlamba-Drakensberg Park World Heritage Site. This means the proposed road upgrade may not necessarily be seen as intrusive to this cultural landscape but rather it is an enhancement of utilitarian value of the area receiving the road upgrade. Given the fact that a road already exists in the area, there is no cultural heritage impact basis upon which to recommend that the project be abandoned completely. As such, the recommendation is that the road may be upgraded as proposed subject to recommendations herein contained and others that will come from other EIA studies.

7.3 OLD SANI PASS TRADING STORE

The proposed road upgrade will not interfere with the Old Sani Pass Store historic structures. However, the Old Sani Pass Trading Store site is not conservation-worthy from the point of view of total protection. Nonetheless, the site occupies a significant place in the local history of the Sani Pass' development. As such, the ruins should not be interfered with during the proposed development. Should total protection not be possible during the proposed development, the ruins should be mapped, photographed, measured and

documented before partial demolition is planned. Since the structures are more than 60 years old, a permit must be secured from Amafa KwaZulu Natali heritage authority before any interference is allowed.

7.4 GEOLOGICAL HISTORY

The fossil-bearing rocks observed at the crossing of the Mkomazana River during this study are not *in situ* because they originate from upstream. As such they do not require any further focused study. However, the fossil shell bearing rocks point to the fact that the rock formations in the project area's milieu have potential to yield fossil remains. As such a paleontologist / geologist should be retained to monitor all rock blasting sites during construction work in order to ensure that no chance fossil finds will be destroyed during the road construction work.

7.5 STONE WALL SITES

Stone wall enclosures identified in the general vicinity of road route in the lowland sections (border post area) may not be interfered with or disturbed during the proposed road works. The sites are located in relatively safe distances from the road servitude. The contractors should be made aware that these stonewalls may not be interfered with during the proposed road works. In particular, the stones from the walls may not be removed or used for road construction work. The enclosures should be marked and a barrier created around them to ensure that the walls have maximum protection.

7.6 GENERAL

- The foot print impact of road works should be kept to minimal and within the existing road reserve to limit the possibility of encountering chance finds outside areas assessed during this study.
- Construction camps during construction phase should be approved as part of the project EMP and monitoring to ensure that no archaeological or historic sites will be affected
- Although no significant rock shelters or overhangs were record along the road servitude during this study, as a precaution, any ravine with rocky sides, which may contain overhangs or shelters in the vicinity of the road servitude should be considered archaeologically sensitive during construction period and should not be interfered with.
- Furthermore, the construction team should be informed about the value of the cultural heritage resources in general so as to ensure that they do not destroy the chance archaeological sites they may encounter during working on the linear road route..

- Amafa KwaZulu Natali authorities may approve the project to proceed as planned subject to recommendations herein made and other applicable conditions to be set by environmental and parks management authorities.

8. CONCLUDING REMARKS: SANI PASS CORRIDOR CULTURAL LANDSCAPE RESOURCES MANAGEMENT GOALS

The recommendation of this study is that the proposed development may be approved to proceed as planned subject to the construction work being monitored and managed closely. This would mean effective cultural landscape management measures to ensure minimal changes the landscape that can occur as a result of the proposed project while maintaining the landscape character-defining features. The Sani Pass cultural landscape significance is association with prehistoric land use, historic events such as the frontier between the last hunter-gatherers and the African farmers and subsequently the colonial settlers. The present road earmarked for upgrade is part of the long history of human interactions in the area. As such the proposed road upgrade will not diminish the cultural landscape's integrity but will rather alter the utilitarian value. However, the construction work and the possible resulting increase in accessibility to the area would need to be carefully managed during the operation phase of this project.

The Sani Pass landscape is also significant for the pattern of use that has evolved therein, the proposed physical change of the road is essential to the continual and probable increased use of the road pass. The recommendation for approval of the road upgrade supports our notion that the upgraded road would perpetuate the use while maintaining the general character and feeling of the historic period(s), rather than focusing on preserving a specific sense or appearance of a remote inaccessible rough wilderness area.

A range of possible strategies for long-term protection and management of natural and cultural resources located within the study area have been identified based on resource characteristics, existing protected areas, opportunities for natural area improvement, preservation of cultural values and community needs for public access and socio-economic development as well as regional cooperation between South Africa and Lesotho. The overall recommendations herein made are evaluated with regard to KZN Heritage Act and the NHRA criteria; cognisance of the characteristics of the universality of the uKhahlamba-Drakensberg Park World Heritage Site and its resources, and public participation during the study process.

During the HIA study process, cultural heritage resources management goals have been identified to guide the protection and public enjoyment of natural, cultural and recreational resources offered in uKhahlamba-Drakensberg region where the proposed Sani Pass road upgrade will take place. These goals aided the evaluation of various recommendations developed for implementation considerations:

- the cultural and historic features in the southern uKhahlamba-Drakensberg region where the proposed Sani Pass road upgrade will take place are related to the prehistory and colonial history of the region, and require a unified approach to resource (natural and cultural) management and interpretation;
- the geologic evolution of the region is unique and important in the history of the earth, requiring a consistent approach to protection, management and interpretation;
- Although the proposed road works are unlikely to affect any significant physical cultural properties, the resources are highly fragmented and widespread over a large national park area, in terms of geographic location including the specific Sani Pass Road foci study area requiring an integrated management approach or comprehensive regional planning mechanism (since the road earmarked for upgrade will impact both South Africa and Lesotho).
- The road upgrade would introduce a new utilitarian value of the road by making it an all-weather road. The protection and management of the Sani Pass corridor could provide additional opportunities for recreation and public enjoyment as well improving the socio-economic value of the pass.

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APPENDIX 1: MAPS OF PROJECT AREA

Fig 1: The proposed project area. Phase 2 of the proposed road upgrade will begin from Km 14 to Km 33 on the Lesotho border (Scale 1:250 000).

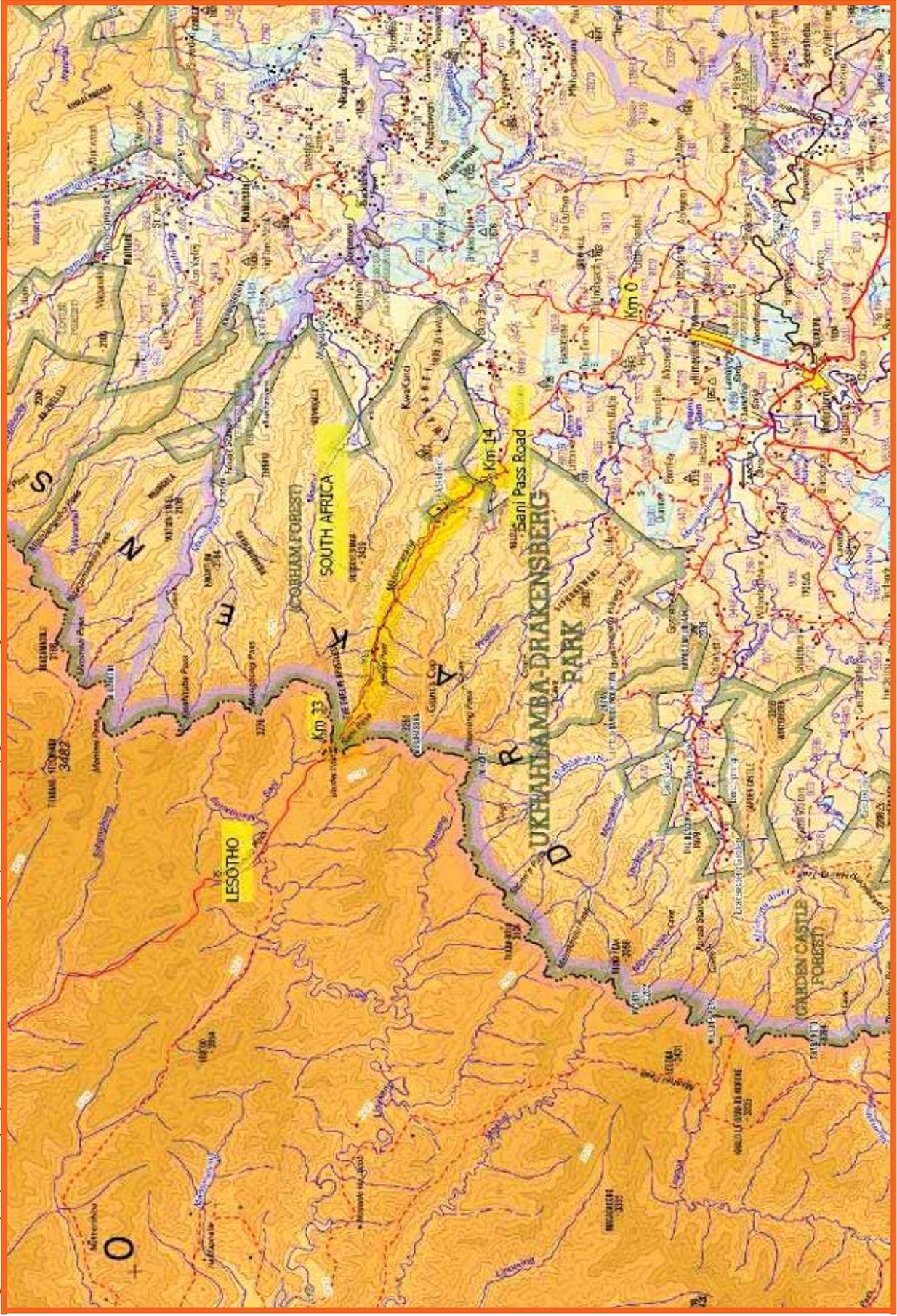


Fig 3: Route Map of the propose road upgrade (Source – Arcus Gibb (Pty) Ltd. 2009)

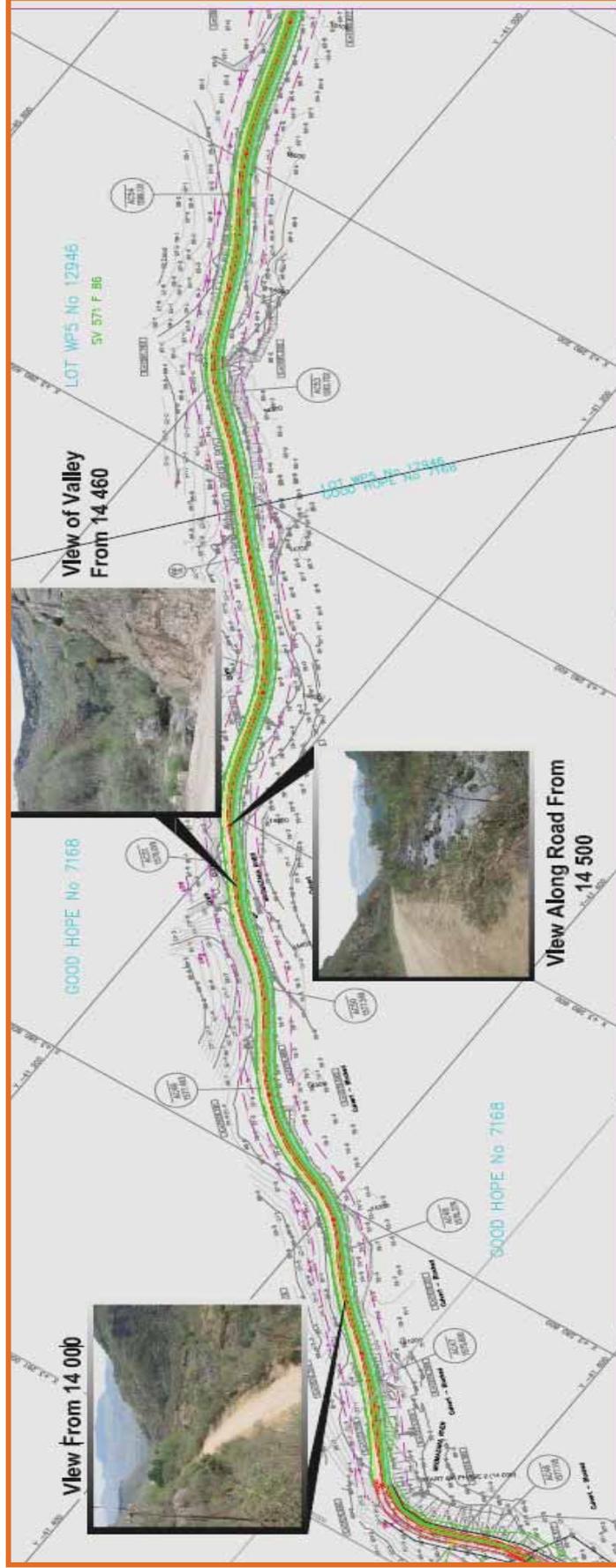
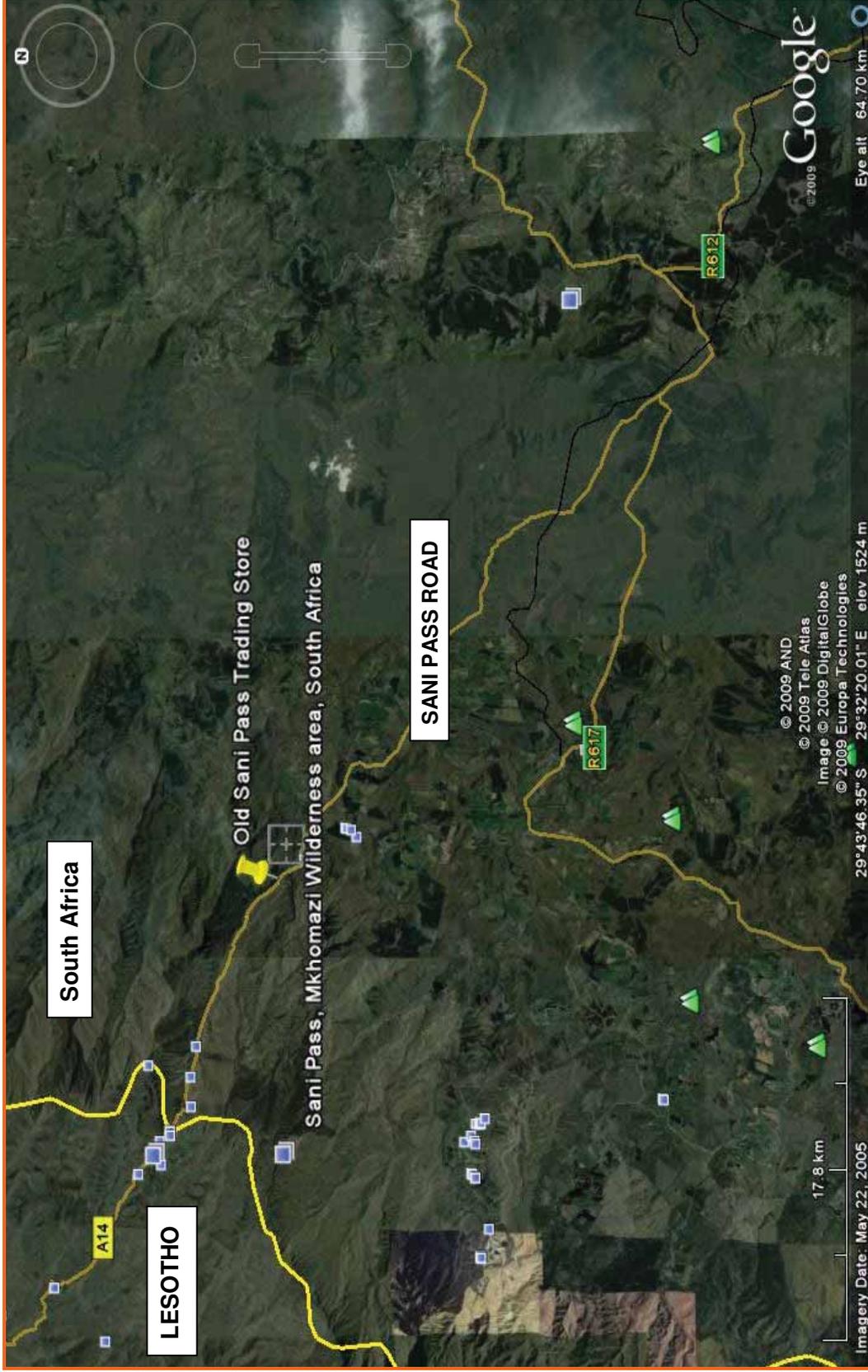


Fig. 4: Aerial view of the regional location of the Sani Pass Road



APPENDIX 2: SIGNIFICANCE VALUATION OF HERITAGE RESOURCES

As stated in Subsection 4.2 of this document, effective HIA system revolves around three independent but related aspects: conservation; significance and utilisation with reference to interferences that would result from the proposed development in the project area.

Conservation – this element focus on physical condition of the resources (site condition survey), potential threats or vulnerability (exposure of site or resource to immediate interference from development activities, deterioration or damaging elements), and accessibility (frequency of and density of human visitation). The physical condition, threats and accessibility of a given resource has implications on the intangible value of significance of the particular resource.

Significance archaeological, architectural, palaeontological, historical, scientific, biophysical, socio-cultural, religious, aesthetic, uniqueness, emotional and contextual value of the site, feature and the overall cultural landscape.

Utilisation relates to the site’s current use and utilisation status varying between two continuums of no utilisation (0 points) to utilised (5 points).

- **Scientific utilisation** – Primary aim of scientific research lies in the search for answers to fundamental issues about the biophysical natural and the human world. Evaluation for scientific utilisation value for heritage resources revolves around context, i.e. primary versus secondary contexts whereby primary contexts are original and undisturbed or less disturbed and therefore more important scientifically as opposed to secondary contexts. This also borders around the preservation status of the given site(s). High levels of preservation obviously are very favourable for the site’s scientific utilisation.
- **Educational/ interpretative** – This is similar to evaluation of uKhahlamba-Drakensberg cultural heritage resources for tourism utilisation. This refers to the presence of humans in the region and on heritage sites. This depends on potential for public display and interpretation capacity while embodying conservation principle for sustainability.

Table 1: Conservation valuation system.

Criteria	Valuation Points
Physical condition	No damage = 0 points
Potential threats	Serious damage = 5 points
	Not vulnerable = 0 points
Accessibility	Serious vulnerability = 5 points
	Not accessible = 0 points
	Highly accessible = 5 points

Archaeological & Heritage Impact Assessment Study for proposed Sani Pass Road Upgrade Development
The following guidelines for determining site significance were developed by the South African Heritage Resources Agency in 2003.

HIGH SIGNIFICANCE

- High magnitude with regional extent and long term duration.
- High magnitude with either a regional extent and medium term duration or a local extent and long term duration.
- Medium magnitude with a regional extent and long term duration.

MEDIUM SIGNIFICANCE

- High magnitude with local extent and medium term duration.
- High magnitude with regional extent and short term duration or a site specific extent and long term duration.
- High magnitude with either a local extent and short term duration or a site specific extent and medium term duration.
- Medium magnitude with any combination of extent and duration except site specific and short term or regional and long term.
- Low magnitude with a regional extent and long term duration.

LOW SIGNIFICANCE

- High magnitude with a site specific extent and short term duration.
- Medium magnitude with a site specific extent and short term duration.
- Low magnitude with any combination of extent and duration except site specific and short term.
- Very low magnitude with a regional extent and long term duration.

VERY LOW SIGNIFICANCE

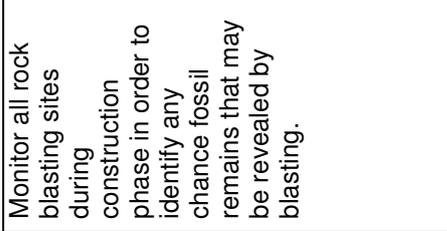
- Low magnitude with a site specific extent and short term duration.
- Very low magnitude with any combination of extent and duration except regional and long term.

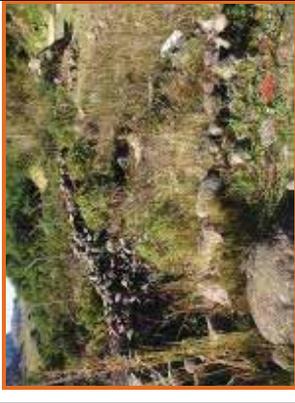
Table 2: Significance Valuation details.

Significance	Value details
Scientific significance	<ul style="list-style-type: none"> Relates to the assessment of the research potential of a site and the relevance of any data that the site(s) might contain for the pursuit of academic research questions. This also concerns the potential of a site(s) to address anticipated future trends, research capabilities and interests. The importance of a place will depend on its rarity, quality or representativeness, and degree to which the place may contribute further substantial information (see Burra Charter, 1988. p.12) May be measured against the site(s)'s values as unique sources of information; whether such information is not available from other sites; can it answer pertinent questions (Bickford and Sullivan 1977: 23-24).
Archaeological Significance	<ul style="list-style-type: none"> The significance of an archaeological site is based on the amount of deposit, the integrity of the context (that is primary versus secondary context), the kind of deposit and the potential to help answer present research questions.
Historical Significance	<ul style="list-style-type: none"> Historical significance relates exclusively to the last 100 years or a period of importance associated with events, developments, artistic excellence, outstanding achievement and evolution of a nation, group, region or locality. Historical value encompasses the history of aesthetics, science and society, and therefore to a large extent underlies all forms of significance valuation. A place may have historical significance because it has influenced, or has been influenced by an historic figure, event, phase or activity. It may value as a site of an important event. For any given place the significance will be greater where the evidence of the association or event survives in situ, or where the settings are substantially in tact, than where it has been changed where evidence does not survive. However, some events or association may be so important that the place retains significance regardless of the subsequent treatment.
Aesthetic Significance	<ul style="list-style-type: none"> Mostly associated with intangible heritage values and cultural landscapes. Deals with visual values. In this context the significance is classified by response derived from the experience of the environment and cultural attributes within the project area. Important in the context of this study is the observation that aesthetic significance is a product of emotional experience rather than a checklist of attributes. As such many archaeological sites are sub-surface and therefore will not be able to be assessed on aesthetic criteria. This study uses site to site assessment whether aesthetic significance is a relevant category to assess, rather than taking this as a given.
Social Significance	<ul style="list-style-type: none"> Social value embraces the qualities for which a place has become a focus of spiritual, political, national or other cultural sentiments to a majority group Social significance threshold also include religious sites bordering around the fact that they are considered sacred and they are used for rituals. Data on the ritual activities relating to their significance is not readily available. Access to these sites is normally strictly restricted. The sites are supposed to be located away from settlements or areas where the public may not have easy access.
Religious	<ul style="list-style-type: none"> The significance threshold of religious sites border around the fact that they are considered sacred and they are used for rituals. Data on the ritual activities relating to their significance is not readily available. Access to these sites is normally strictly restricted. The sites are supposed to be located away from settlements or areas where the public may not have easy access.

APPENDIX 3: SANI PASS EMP HERITAGE RESOURCES MITIGATION MEASURES TABLE

KM REF.	ENVIRONMENTAL ASPECT	POTENTIAL IMPACT	MITIGATION MEASURES	RESPONSIBLE PARTY	PENALTY	METHOD STATEMENT REQUIRED
Km 0 – km 33	Sani Pass Road Corridor Cultural Landscape Intangible heritage value - 29.64.853° S 29. 43.345° E [beginning of Phase 2 road upgrade] and 29.58.536° S 29. 28.802° E [end of Phase 3 road upgrade at Sani Pass Lesotho Border post] 	<ul style="list-style-type: none"> Loss of aesthetic value due to construction work Loss of sense of place Loss of intangible heritage value due to change in land use 	<ul style="list-style-type: none"> Keep foot print of road works within the existing road servitude minimal deviations Minimise earth moving scarring during road construction Only use designated borrow pits to supply road construction gravel Do not use areas not approved to establish work camps or stock piles. 	<ul style="list-style-type: none"> Construction Contractor Project Engineers Project Manager Environmental Officer 	Fine and or imprisonment under the NHRA and Amafa KwaZulu Natali Act	This is a construction management & monitoring issue. Should be issued as instruction within the project EMP
Km 12	Old Sani Pass Trading Store Ruins - 29.64.604° S 29. 43.083° E - Ruins consisting of a group of partially demolished remains of the trading store buildings. The site has a set of at least five building remains. Two of the ruins are original stone wall store structures.	<ul style="list-style-type: none"> Destruction of the historic Old Sani Pass Store ruins 	<ul style="list-style-type: none"> Road construction work should not interfere with the Old Store ruins since they are protected by law. Should partial destruction of the ruins become necessary, the Old Store remains should be documented through mapping, photography A permit must be sought from Amafa before any interference with Old Store ruins is conducted 	<ul style="list-style-type: none"> Construction Contractor Project Engineers Project Manager Surveyor Amafa 	Fine and or imprisonment under the NHRA and Amafa KwaZulu Natali Act	Total documentation of Ruins by accurate mapping and photography of the remains Apply for Destruction permit from Amafa should any part of the site be under threat from development.

	<p>Geological and Fossil material 29.64.853° S 29. 43.345° E [beginning of Phase 2 road upgrade] and 29.58.536° S 29. 28.802° E [end of Phase 3 road upgrade at Sani Pass Lesotho Border post]. Geological formations and fossil materials (see Plates 11 & 12) within the road reserve and entire project area.</p> 	<ul style="list-style-type: none"> • Destruction of significant fossil/ geological samples 	<p>Retain a paleontologist to monitor all rock blasting sites during construction phase to ensure that no rock formations with fossil remains are destroyed as a result of road construction work. Rock formations in the vicinity of the road servitude but outside the affected area may not be disturbed.</p>	<ul style="list-style-type: none"> • Construction Contractor • Project Engineers • Project Manager • EO • Monitoring Paleontologist 	<p>Fine and or imprisonment under the NHRA and Amafa KwaZulu Natali Act</p>	<p>Monitor all rock blasting sites during construction phase in order to identify any chance fossil remains that may be revealed by blasting.</p>
<p>Km 0 – Km 33</p>	<p>14003</p> <p>Presence of a LIA archaeologically significant circular stone enclosure at coordinates of 332611S, 201226E.</p>	<ul style="list-style-type: none"> • Damaging of circular stone enclosure. • Use of stones by construction workers during construction phase 	<p>Area should be demarcated as no-go zone by use of fencing during construction, and access thereto by the construction team must be denied.</p> <p>Defecation and/or urination inside or next to the structures must not be</p>	<p>Contractor / PM Archaeologist Project EO Amafa Inspector</p>	<p>Fine and or imprisonment under the NHRA and Amafa KwaZulu Natali Act</p>	<p>PM/EO/Archaeologists Monitor construction work in sections in vicinity of stone wall enclosure sites</p>

			<p><input type="checkbox"/> No artifacts may be tampered with or removed from the site. No stones may be removed from the walls</p>			
	<p>Presence of undated archaeologically significant stone enclosures within South African border post property next to road reserve.</p> 	<ul style="list-style-type: none"> • Damaging of circular stone enclosure. • Use of stones by construction workers during construction phase 	<p><input type="checkbox"/> Area should be demarcated as no-go zone by use of fencing during construction, and access thereto by the construction team must be denied.</p> <p><input type="checkbox"/> Defecation and/or urination inside or next to the structures must not be allowed.</p> <p><input type="checkbox"/> No artifacts may be tampered with or removed from the site.</p> <p><input type="checkbox"/> No stones may be removed from the walls</p>	<p>Contractor / PM Archaeologist Project EO</p>	<p>Fine and or imprisonment under the NHRA and Amafa KwaZulu Natali Act</p>	<p>PM/EO/Archaeologists Monitor construction work in sections in vicinity of stone wall enclosure sites</p>