

A PHASE 1 ARCHAEOLOGICAL HERITAGE IMPACT ASSESSMENT FOR THE PROPOSED NEW ENTRANCE GATE WITH ASSOCIATED INFRASTRUCTURE AND THE CONSTRUCTION AND UPGRADE OF ROADS IN THE MOUNTAIN ZEBRA NATIONAL PARK, CRADOCK DISTRICT.

Prepared for: South African National Parks
P. O. Box 787
PRETORIA
0001
Contact person: Antionet van Wyk
Tel: 012 426 5126
Fax: 012 426 5446
e-mail: antionetv@sanparks.org

Compiled by: Dr Johan Binneman
Department of Archaeology
Albany Museum
Somerset Street
Grahamstown
6139
Tel: 046 6222312
Fax: 046 6222398
email: J.Binneman@ru.ac.za

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Dr Johan Binneman
Department of Archaeology
Albany Museum
Somerset Street
Grahamstown
6139
Tel: 046 6222312
Fax: 046 6222398
email: J.Binneman@ru.ac.za

Note: This report follows the minimum standard guidelines required by the South African Heritage Resources Agency (SAHRA) for compiling Archaeological Heritage Phase 1 Impact Assessment (AHIA) reports.

SUMMARY

Proposal

The original proposal was to conduct a survey of possible archaeological heritage sites at the proposed site for the construction of a new entrance gate and the upgrade of the Ubejane loop and Ubejane link road in the Mountain Zebra National Park, Cradock District; to establish the range and importance of archaeological heritage features; the potential impact of the development and to make recommendations to minimize possible damage to these sites.

The investigation

Archaeological heritage sites were found in only one area. A small overhang with rock paintings and an accumulation of stone tools were found at the top/beginning of a deep gorge (refer to as the Waterfall/Doringhoek Gorge). The locations of the sites were recorded by GPS and a series of photographs were taken. No other archaeological or historical materials/sites were found.

Cultural sensitivity

The rock paintings are important and a sensitive archaeological heritage resource and are protected by the South African Heritage Resources Act of 1999. Great care must be taken to protect these paintings from any potential damage during construction work in the vicinity, as well as after the completion of the project.

Recommendations

1. A rock art specialist must be appointed to record the paintings and compile a site management plan before construction of the proposed road starts in the Waterfall/Doringhoek Gorge area. This management plan may include the opening of the site to visitors.

2. The location of the paintings should be a prohibited ('no-go') area during the construction of the road and the public until the management plan has been completed.
3. The Site Manager must be alerted to, and briefed on the importance of the paintings and monitor that the site is not visited by the construction workers.
4. Stone tools in the immediate vicinity of the proposed road construction must be collected.
5. If any concentrations of archaeological material are uncovered during development, it should be reported immediately to the nearest museum and/or the South African Heritage Resources Agency.

PROJECT INFORMATION

Status

The report is part of an Environmental Impact Assessment.

The type of development

Construction of a new entrance gate with associated infrastructure and the construction and upgrade of roads.

The Developer:

South African National Parks
P. O. Box 787
Pretoria
0001

The Consultant

Triviron EAP (Pty) Ltd
P.O. Box 177
Woodlands
0072
Tel: 012 367 0625
Fax: 012 367 0624
email: pieter@triviron.co.za

Terms of reference

Conduct a survey of possible archaeological heritage sites at the proposed site for the construction of a new entrance gate and the upgrade of the Ubejane loop and Ubejane link road in the Mountain Zebra National Park, Cradock District; to establish the range and importance of the exposed and *in situ* archaeological heritage features, the potential impact of the development and to make recommendations to minimize possible damage to these sites.

BRIEF ARCHAEOLOGICAL BACKGROUND

Literature review

In general little is known about the archaeology of the region, due to the fact that not much systematic archaeological research and regional surveys/recordings have been conducted in the

Graaff-Reinet/Cradock area. To gain some insight into the prehistory of the wider region, one must turn to the research of Garth Sampson (1985, 1988) in the Agter Sneeuberg region in the central and upper Seacow River Area some 180 km north-west of the Park.

The oldest evidence for occupation of the region are stone artefacts (small hand axes, side scrapers and flakes) from the Earlier Stone Age, known as the 'final' Acheulian Industry which date older than 200 000 years. Sampson (1985) located a large number of sites and there is also a collection housed in the Albany Museum originating from the Cradock area. Middle Stone Age (MSA) artefacts (long blades and points) are found throughout the region, but due to the fact that these are found in the open it is difficult to establish where they fit into the cultural time sequence. At Highlands Rock Shelter MSA stone tools, possibly a Howieson's Poort Industry, was dated older than 30 000 years (Deacon 1976). Sampson on the other hand reported many open-air MSA sites which he assigned to the Orangian Industry (dating between 128 000 - 75 000 years old), Florisbad and Zeekoegat Industries dating between 64 000 and 32 000 years old.

Early efforts by archaeologists to establish classification schemes for the inland stone tool assemblages were made difficult without the aid of radiocarbon dating. All LSA assemblages were classified into three phases using mainly scrapers shape and size, namely, Smithfield A, large circular scrapers, Smithfield B, long, narrow end scrapers (both manufactured of black hornfels) and Smithfield C, small thumbnail scrapers (manufactured of chalcedonies and agates) (Goodwin and Van Riet Lowe 1929). When radiocarbon dating became available many years later, it indicated that there were no sites which date between 9 500 and 4 600 years old for the drier inland plateaux (Deacon 1974). The LSA deposits at Highlands Rock Shelter date to 4 500 years old (Deacon 1976). Today the term Smithfield is only used for stone tool assemblages with backed bladelets and long end scrapers dating within the last 1000 years and replaces the term Smithfield B (Sampson 1988). The term Smithfield A has been replaced by Oakhurst and Smithfield C by Interior or Post-Wilton. Oakhurst is similar to the Albany Industry in the adjacent Cape Mountains, dating between 10 500 and 8 000 years old and also replaces the previously term Lockshoek Industry (Sampson 1985, 1988).

Brooker (1974) conducted a survey and recording of sites in 1973 in the Mountain Zebra National Park. During the survey three small rock shelters and 27 open sites were recorded. Only one shelter contained a small amount of deposit and one displayed a few paintings. Unfortunately no rock engravings were found in the Park, but there are a number of sites only a few kilometres away. The open-sites occurred mainly along the river valleys or next to dry pans. They varied significantly in size and density of artefacts, from a few pieces to fairly dense scatters over large areas. The most common stone artefacts were scrapers from Holocene age, while Earlier and Middle Stone Age artefacts were absent or rare finds. Despite the accurate recording/plotting of artefacts within square metre grids and collecting of large numbers of stone tools, little information was gained from the exercise. The main problem was that there were no other materials associated with the stone artefacts which could have been used to date these assemblages. Nevertheless, it was estimated that the majority of the sites (22) dated within the past 14 000 years, while five maybe older.

Better preservation of organic material at Highlands Rock Shelter, excavated by Hilary Deacon (1976) some 50 km to the north-east of the Park, provides some insight into hunter-gatherer subsistence in the area. Collecting of underground plant remains such as *Cyperus usitatus* and *Frezia corymbrosa* would appear to have been an important food source together with the hunting of mountain zebra/quagga, mountain reedbuck, warthog and various small antelope such as duiker, klipspringer and steenbok. Also listed in the museum records are freshwater shell middens along the banks of the Great Fish River and small quantities of crab and freshwater mussel were also found in the excavations. Many stock enclosures with stone walls and fragments of grass/sand-tempered ceramic vessels are found throughout the Seacow River area and are most probably associated with Khoi pastoralists who settled in the area during the past 1 000 years.

References

- Brooker, M. 1977. The archaeology of the Mountain Zebra Park. *Koedoe* 20:77-93.
- Deacon, H.J., 1976. Where hunters gathered: a study of Holocene Stone Age people in the Eastern Cape. South African Archaeological Society Monograph Series No. 1.
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- Goodwin, A.J.H. & Lowe, C. van Riet. 1929. The Stone Age cultures of South Africa. *Annals of the South African Museum*.
- Sampson, C.G. 1985. Atlas of Stone Age settlements in the Central and Upper Seacow Valley. *Memoirs van die Nasionale Museum Bloemfontein* No.20.
- Sampson, C.G. 1988. Stylistic boundaries among mobile hunter-foragers. Washington: Smithsonian Institution Press.

Museum/University databases and collections

The Albany Museum in Grahamstown houses the collections made by Mary Brooker originating from the Mountain Zebra National Park and other material from the wider region.

Relevant impact assessments:

Phase 1 archaeological heritage impact assessment for the proposed construction of an overhead power line to lkcf001 (frs 143) on the farm Samekoms 392, Cradock District.

Prepared for: ESKOM Distribution, Private Bag X1, Beacon Bay, 5205
Compiled by: Dr Johan Binneman, Albany Museum, Grahamstown, 6139

DESCRIPTION OF THE PROPERTY

Area visited

Location data

Mountain Zebra National Park, Inxuba Yethembamo Municipality, Amatole District Municipality, Cradock Magisterial District, Eastern Cape Province.

Maps

1:50 000 - 3225 AD Post Chalmers and 3225 BA Cradock

ARCHAEOLOGICAL INVESTIGATION

Methodology

The investigation was conducted on foot and from a vehicle. Three areas were investigated; the new entrance gate area and two existing tracks which will be up-graded.

The new proposed entrance gate with associated infrastructure will be constructed next to the current gate and entrance road to the park. The area was previously an old dam (32.08.456S; 25.30.577E) and was further disturbed by road making and construction of overhead power lines (Figs 1-2). No archaeological material was found and it is unlikely that any archaeological sites/materials of any heritage significance will be exposed during construction work.

The two exiting tracks that will be up-graded, the Ubejane loop (8 km) and Ubejane link road (9 km), are situated on old disturbed farm land. The Ubejane loop has been exposed to large scale agricultural disturbances such as extensively ploughed fields, dam construction, soil erosion and other farming activities (Figs 3-4). Due to the rough terrain, driving was very slow, which allows for easy scanning of the sides of the tracks. Numerous spot checks were made from the vehicle. Most of the Ubejane area is composed of fine sand/silts and only where soil erosion took place were underlying gravel material exposed. The spot checks were conducted where these underlying gravel or any other materials were exposed (Fig. 5). Apart from occasional Later Stone Age stone tools, no visible *in situ* archaeological sites/materials or accumulations/concentrations of any numbers of stone tools were found during the investigation along the Ubejane loop. It is unlikely that archaeological sites/materials of any heritage significance will be exposed during the upgrading/construction of roads. There were no buildings older than 60 years or any graves in the vicinity of the proposed developments.

The first part of the Ubejane link road is a steep and rough track which runs from the valley floor to the top of the mountain. This area comprised typical natural mountain terrain and no archaeological material was found (Fig. 6). Two archaeological sites were found near the waterfall which also marks the beginning of a deep gorge (Figs 7-15). Once on top of the plateau, the road runs through grassland environment and link-up with the existing Rooiplaat loop (Fig. 16). The area is covered by a reddish soil and no archaeological sites/materials were found. No historical buildings older than 60 years or graves were found in the vicinity of the proposed development.

Description of sites

Rock paintings: 32.10.262S; 25.25.987E

- Small overhang with paintings of cattle, human figures with earrings, finger dots and other faded images.
- The site is of high local significance and should be a Grade IIIA rated site.
- Paintings should be recorded and a management plan compiled for the site before any further visits to the site takes place.

This is the only known painted site in the surveyed area. The paintings are situated in a small sandstone rock overhang some 50 metres from the waterfall on the steep right side of the gorge. The main panel depict several animals and at least two human figures. Not all the images are clear, but there are at least three large animals which appear to be cattle. Two are painted in red and one in white. One of the red animals has white dots on the body (probably finger dots) and the neck and upper part of the front leg are over painted with white. It would appear if the white/pinkish dots and 'smears' were added later to the paintings. One of the black figures carries an assegai-type implement and has large red earrings. Similar paintings are found in the adjacent Winterberg Mountains (Hall 1986). The cattle and the human figures suggest that the panel depict a typical Nguni agropastoralist 'contact/interaction' scene with San hunter-gatherers and in the area. The painted panel would relatively date between 400 and 1 000 years old.

Stone tool scatter: 32.110.277S; 25.26.0E

- Stone tools are scattered above the waterfall and next to the edge of the gorge.
- General protected IVB rated site.
- Collection of the stone tools should be made.

Numerous stone tools (most are weathered/patinated to a grey colour) are found above the water fall all the edge of the gorge, on both sides of the present track. The stone tools are scattered over a

relatively large area (some 20 x 20 metres) and are all manufactured of blue-grey hornfels and included a wide range of tools, such as scrapers, adzes, utilized flakes, flakes and cores. There is no other material associated with the stone tools. Although it is difficult to establish the age, most of the tools probably belong to the Smithfield Industry and date within the past 1 000 years (others may be older) (Sampson 1988).

References

- Hall, S.L. 1986. Pastoralist adaptations and forager reactions in the Eastern Cape. In Hall, M. & Smith, A.B. (Eds) Prehistoric pastoralism in southern Africa, pp. 42-49. The South African Archaeological Society Goodwin Series Vol. 5.
- Sampson, C.G. 1988. Stylistic boundaries among mobile hunter-foragers. Washington: Smithsonian Institution Press.

Threats to the sites

Currently there is little threat to the sites, but the proposed construction of the Ubejane link road will impact directly on the stone tool accumulation and indirectly on the painted site at the Waterfall/Doringhoek Gorge. In the long term, the upgrade of the road will bring large numbers of visitors to the area, who may 'discover' the paintings.

Significance and rating

The rock paintings are protected by the National Heritage Resources Act (Act No. 25 Of 1999) and may not be disturbed, damaged or destroyed in any way. The paintings depict cattle and agropastoralists and would make an important contribution to the study of this theme in the wider region. The site is one of only two known painted sites in the Park and is of great local significance and should be rated as a Grade IIIA heritage site. The stone tool accumulation is of lesser significance and should be rated as a general protected IVB site.

RECOMMENDATIONS

1. A specialist in the field of rock paintings must be appointed to record the paintings in detail and compile a site management plan before construction of the proposed road starts in the Waterfall/Doringhoek Gorge area. It is important to have a record of the paintings for archival purposes should any damage occur to the art in the future. Further recommendations may follow from the investigation and may include:
 - 1.1. The painted site must be treated as a prohibited ('no-go') area during the construction phase. The site manager and construction personnel must be briefed on the importance of the paintings and why it is a sensitive zone.
 - 1.2. Public visits to the site may not take place without supervision. Archaeological/rock art sites may only be opened to the public, after they have been registered to the South African Heritage Resources Agency (SAHRA), and a management plan has been approved by SAHRA.
2. Stone tools in the immediate vicinity of the proposed road construction must be collected. These could be used for display purposed at the main administration area of the Park. An archaeologist must conduct the work and a permit must be obtained from SAHRA in collaboration with the Albany Museum, where the material will also be housed. The material may be obtained on 'long loan' from the Albany Museum for display purposes.

3. If any other concentrations of heritage material are uncovered during development, it should be reported to the nearest museum and/or the South African Heritage Resources Agency immediately so that systematic and professional investigation/excavations can be undertaken. Sufficient time should be allowed to remove/collect such material (See appendix A for a list of possible archaeological sites that maybe found in the area).

Conclusions

The proposed area for the new entrance gate and roads investigated, are all located on land previous disturbed by farming activities. Apart from the Waterfall/Doringhoek Gorge area, only occasional single stone artefacts were observed along the road surveys. In general it would appear that the Ubejane loop and Ubejane link road are situated in areas of relatively low cultural significance. These areas are not near streams or springs and were therefore not 'preferred' for occupation. The Brooker survey in 1973 indicated that 80% of the archaeological sites occurred near water sources. This observation is also supported by the fact that numerous stone tools were found at the spring/waterfall area at the top of Waterfall/Doringhoek Gorge. The rock paintings found at the top of the Waterfall/Doringhoek Gorge are of special importance and interest and should be protected from any damage. A management plan must be compiled for the paintings, which could include opening it to visits by the public.

GENERAL REMARKS AND CONDITION

Note: This report is a phase 1 archaeological heritage impact assessment/investigation **only** and does **not** include or exempt other required heritage impact assessments (see below).

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

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

It must also be clear that Archaeological Specialist Reports (AIAs) will be assessed by the relevant heritage resources authority. The final decision rests with the heritage resources authority, which should give a permit or a formal letter of permission for the destruction of any cultural sites.

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

1. Caves and shelters

Often these features were inhabited by people in the past, such as the San and KhoiSan, and contain valuable archaeological deposits. These deposits and the remains such as stone artefacts, bone, pot shards and ornaments are protected by legislation and must not be damaged by digging or may artefacts be collected. Contact the nearest archaeologist for information and advise regarding the protection and conservation of these features.

2. Rock art - paintings and engravings

Rock paintings are often found in caves, rock shelters and also in the open on boulders. They are easy to recognize and must be treated with care. No water or any other substances must be applied to the paintings. Rock engravings are pictures scratched, scraped and pecked into the dark surface of rocks with sharp objects to expose the lighter under surface. Contact the nearest archaeologist to provide information and advice regarding the protection and conservation of rock art.

3. Human Skeletal material

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

4. Stone artefacts

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

5. Fossil bone

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

6. Stone features

They come in different forms and sizes, but are easy to identify. The most common are roughly circular stone walls (mostly collapsed) and may represent stock enclosures, remains of wind breaks or cooking shelters.

4. Freshwater mussel middens

Freshwater mussels are found in the muddy banks of rivers and streams and were collected by people in the past as a food resource. Freshwater mussel shell middens are accumulations of mussel shell and are usually found close to inland rivers and streams. These shells middens frequently contain stone tools, pottery, bone and occasionally also human remains. Shell middens may be of various sizes and depths, but an accumulation which exceeds 1 m² in extent, should be reported to an archaeologist.

6. Historical artefacts or features

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



Fig. 1. Current entrance gate.



Fig. 5. Exposed gravel along the Ubejane loop.



Fig. 2. Old dam area next to the current entrance gate, earmarked for the construction of the new entrance gate.



Fig. 6. Natural veld cover along the first part of the Ubejane link road.



Fig. 3. Ploughed fields and fine silt/sand cover along the Ubejane loop.



Fig. 7. Beginning of the Waterfall/Doringhoek Gorge along the Ubejane link road.



Fig. 4. One of the old dam areas along the Ubejane loop.



Fig. 8. The Waterfall/Doringhoek Gorge.



Fig. 9. The arrow point to the small overhang with paintings in the Waterfall/Doringhoek Gorge.



Fig. 13. Close-up view of one of the human figures. Note the earrings and assegai.



Fig. 10. Close-up of the overhang.



Fig. 14. Stone tools next to the road above the Waterfall.



Fig. 11. Close-up of the overhang and the paintings.



Fig. 15. Stone tools next to the road above the Waterfall.

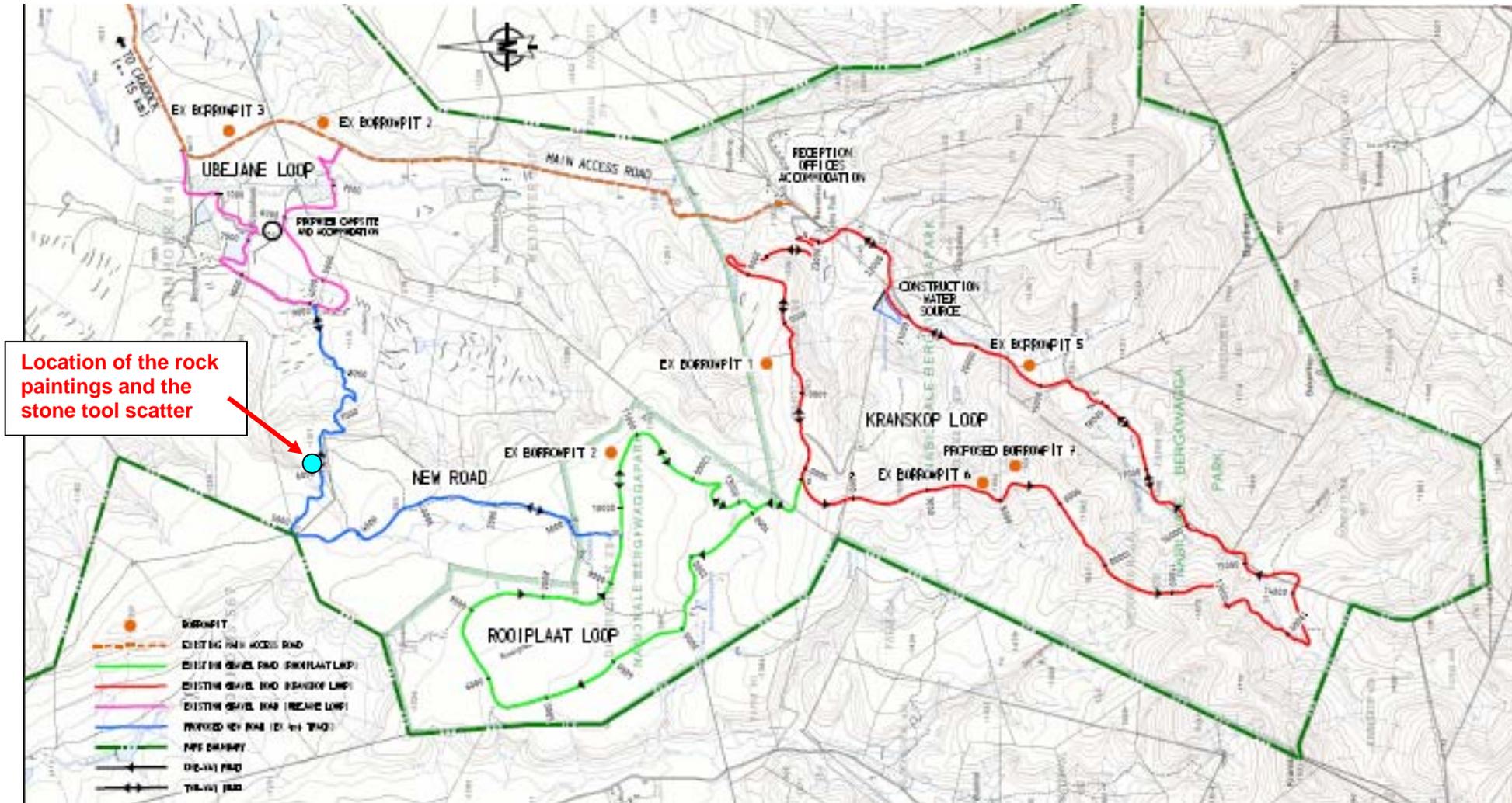


Fig. 12. Close-up view of the paintings.



Fig. 16. Natural veld and red soil cover on top of the mountain along the Ubejane link road.

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Map 1. Location of Ubejane loop and link road and the rock paintings and stone tool scatter above the Waterfall/Doringhoek Gorge.