

**ASSESSMENT OF AREA OF PROPOSED  
CONSTRUCTION, OPERATION AND  
MAINTENANCE OF THE CYPRESS GROVE TO  
TAFELBERG ROAD  
(Chris Hani Magisterial District, Inxuba Yethemba  
Municipality, Eastern Cape)  
  
IN TERMS OF ARCHAEOLOGICAL AND OTHER  
HERITAGE SITES**

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## 1. Executive Summary

The area of the proposed quarry was surveyed on foot. Although various lithic artefacts were observed in the area, no sites were discovered apart from remnants of old stone walls as well as isolated lithic scatters. The 26.4 km stretch of road between road markers 45.1 and 71.5 km on the M10 road between Cradock and Middelburg was surveyed for any structures in the immediate vicinity of the road that might be in danger of destruction in the process of the construction of the road. It should be noted that the intended area for the widening of this road falls within the present fencing on both sides of the road and this area has already been severely disturbed during the initial construction of the road. No activity confined to the space between the two fences will therefore cause any further damage. Only one stone structure lies immediately outside the western fence and this structure has also been already damaged during the initial construction of the road since the fence cuts through a small portion of its eastern boundary wall. Any other stone structures observed and mentioned in this report do not fall within the proposed area of construction and are therefore not in danger of being damaged.

## 2. Background information on the project

This report forms part of the environmental impact assessment commissioned by the South African National Roads Agency Limited (SANRAL) of the area of the proposed widening of a 26.4 km section of the N10 road between Cradock and Middelburg, starting from road marker 45.1 km and continuing to road marker 71.5km, as well as the area for the proposed quarry.

Consultant: Coastal Resource Management

Type of development: Development which will change the character of the site (quarry).

Terms of reference: To carry out a Heritage Impact Assessment

Legislative requirements: The Heritage Impact Assessment was carried out in terms of the National Environmental management Act no 107 of 1998 (NEMA) and following the requirements of the National Heritage Resources Act no 25 of 1999 (NHRA).

### 2.1 Details of the area surveyed:

Footprint: 105.6 ha for the total area on the eastern and western sides of the road between road markers 45.1 and 71.5 on the Cypress Grove to Tafelberg stretch of road on the N10 between Middelburg and Cradock as well as 25.94 ha for the proposed new quarry on the farm Zeeven Fonteynen 254.

Current land use: Agricultural (grazing) with natural vegetation cover in the area of the intended quarry as well as the areas immediately adjacent to the fence line on both the eastern and western sides of the 26.4 km stretch of road surveyed.



### 3. Background to the Archaeological history of the area:

#### Stone Walls and fence pillars:

A particular concern that was brought to our attention is the remnants of a stone wall that is visible on both the eastern and western side of the existing road (M10) at the highest point of Witkransnek Pass. (Refer to Photographs 8-11) The EIA specialists were concerned that it could possibly be the remains of an old Rinderpest Wall dating to the beginning of the period between the end of the 19<sup>th</sup> and beginning of the 20<sup>th</sup> century when this disease ran rampant throughout the sub-Saharan Africa region and the government of the day was forced to take drastic measures to contain the disease in the best possible way.

Phoofolo (1993) describes this disease and its path as follows:

*“The rinderpest was a cattle epizootic which ravaged the entire African subcontinent between 1896 and 1898. Of central Asian origin like the cholera and most other world epidemics, the rinderpest’s devastating trajectory in Africa began in Eritrea in the opening months of 1887. It appears to have been brought there by infected Indian cattle imported by Italians in their efforts to supply their campaign against Somalia. Once it had established itself in the Horn, the murrain moved inexorably south, devastating northern Zambesia in the decade 1887-97 until it was temporarily checked by the Great Zambezi. The extensive network of ox-wagon transport linking the northern and southern trade entrepôts ensured that the spread of the epidemic would be bewilderingly rapid despite spirited, albeit belated, efforts to hold it back. Within the space of twenty-five days the rinderpest had ravaged Bechuanaland Protectorate (present-day Namibia), traveling the distance of about five hundred miles at an astounding speed of twenty miles per day. Although the Limpopo, the Molopo and the Vaal rivers held back the disease temporarily, and the Transvaal government had taken timely steps to forbid all transport with its neighbouring states as soon as the outbreak of the disease was reported in neighbouring Rhodesia, these barriers were soon to prove ineffective. In May 1896 the murrain was spreading through the Transvaal, and by September it had already appeared in many districts of the Cape Colony. Only the Orange River, which ran across the country from the Atlantic to the mountains of British Basutoland and which had been double-fenced with barbed wire for over 1600 km, proved to be an effective barrier for a while. Thus it was not until March 1897 that the epizootic broke out south of the Orange. It hit British Basutoland almost immediately. By May 1897 the Transvaal was riddled with rinderpest; by June it was raging in the southern Orange Free State. Natal followed in July, and Swaziland in August. By December its inexorable advance had extended to Pondoland and the Transkeian territories.*



From the afore-mentioned several deductions can be made, namely:

- a. The rapid nature of the disease did not permit the labour-intensive and slow task of erecting stone walls.
- b. Major rivers, which in general were mostly impassable, formed a natural, although very temporary, obstruction for the spread of the disease.
- c. The Orange River formed the last major river to focus on to block the path further south of this devastating disease and hence the erection of a barbed wire fence along the entire length of the river.

The attached copy of an 1897 Rinderpest Map (Attachment D) clearly shows a barbed wire fence along the Orange River from its most western point to its most eastern point (albeit not a double fence as purported in the above-mentioned article). The broken line along the Orange River on the map is where the fence was erected.

This particular section of the wall seems to be along the boundary of the farm Tavelberg 207 as surveyed in 1894 and could, therefore, be the original boundary wall. Refer to Attachment C for a copy of the 1894 surveyor report. It is possible that this wall could have been constructed prior to 1874 since the introduction of wire fencing to South Africa is claimed to be through the ingenuity of a certain Mr John Sweet Distin from Tafelberg Hall in the same district. (Tafelberg Hall is immediately adjacent to the farm Tafelberg) (Vermeulen 1952). Apparently Mr Distin found the erection of stone walls to be costly and ineffective and hence his search for a more reliable means of containing stock. It is not reported how he came across the idea of wire fencing as a means of erecting boundary walls, only that he imported a skilled fence builder from Australia because no one in South Africa had practical experience of the matter. This took place in 1874 and the first length of fencing completed by him is still in place.

Due to the greater efficiency of the wire fence it was quickly and widely adopted throughout the district and at large, long before the Anglo-Boer war (i.e. 1899-1902), most farms in the district were fenced along the boundaries and many also used it as subdividing fences (Vermeulen 1952). Mr Distin's original fence, however, made use of sneeze wood poles that he had to fetch from the vicinity of Port Elizabeth. This was transported by means of the ox wagon with the return journey purported to occupy nearly three months (Vermeulen 1952). Farmers, therefore, turned to a cheaper and more readily available solution and started using poles constructed of local stone to serve as fencing posts. Remnants of these poles are still visible throughout the Eastern Cape as was also found next to the road on the farm Zeeven Fonteynen 254. (see Photograph 7)

In closing it should also be mentioned that none of the local people interviewed – including Mrs Kitching who is the co-author of a book on the history of this area – were aware of the existence of any rinderpest walls in the vicinity. Mrs Kitching,



however, confirmed that the oldest erected wire fence in South Africa can be found at Tafelberg Hall and thereby confirmed the above reference to Mr Distin being a pioneer in this regard. The present-day owner of Tafelberg confirms that the farm has been in his possession for several generations and that no one has ever referred to that particular wall as a “rinderpest wall”. He is also of the opinion that it is only a boundary wall.

#### Stone Age material:

Extensive research was done by Sampson (1974) on the lithic material of the Stone Age people in the Orange River Scheme area. Although this area falls immediately north of the area surveyed, the Eastern Cape was from the earliest time known for contact between European and Khoisan peoples. The so-called eastern frontier of the Cape interior of 1785 started at Plettenberg’s Beacon on the Seekoei river in the north-east, all along the Suurberg and Boesmanberge, over the Winterberge and along the Fish river up to where it runs into the Indian ocean (Penn 2005). This area was a continuous concern for the Cape government on account of the clashes between the European farmers who settled in this area and the Khoisan peoples who were already settled in this area. Names of landmarks such as the “Boesmanberge” and also the farm “Boshesmansfontein” are clear indications of these people’s presence prior to the arrival of the Europeans. Although it is not of importance to go into detail of the wars that ensued between these two groups of people, it is important to note that lithic material can be found all over the Eastern Cape as evidence of the Khoisan’s prolonged stay in this area or for the more nomadic tribes amongst them, the continuous return to this area – most probably during times of the famous annual migration of the Springbuck and other game. These groups were particularly adapted to the more arid nature of the Eastern Cape and lived in shelters constructed with straw mats and sticks (Penn 2005) which due to its perishable nature left no traces in the archaeological record today. Unlike the other indigenous groups such as the Xhosa further south along the eastern frontier, the Khoisan favoured sheep as livestock (in particular the fat-tail sheep), which were particularly suited to the cold winters in these areas.

#### Other stone structures:

Other stone structures such as the kraal and ruins of buildings at Bosjesmansfontein are more likely to be connected to European settlement.



## **4. Background information of the survey**

### ***4.1 Methodology:***

The areas running parallel along Section 4 of the N10 route was surveyed by means of vehicle and foot by a team of two people. The western section of the road was surveyed on Monday 9 June 2008 and the eastern section on Tuesday 10 June 2008. Both these sections were surveyed up to the fence running alongside the road (+/-20m) (see Attachment B, Map 1).

A team of two people surveyed the area for the proposed New Witkranznek Hard Rock Quarry on foot on Tuesday 10 June (see Attachment B, Maps 1 and 3).

All observations were recorded by means of a GPS. No sampling was undertaken, and the report is based on a visual inspection of the area only. All animal burrows, footpaths, ditches and any other ground disturbance were examined for traces of subsurface material.

Research on the property included consultation of the Department of Archaeology's database.

### ***4.2 Restrictions encountered during the survey:***

#### ***National Route 10 Section 4***

Visibility of the ground surface for Section 4 of the N10 was reasonable for most of the surveyed area, apart from isolated areas which were covered with tall grass and debris left over from road construction and maintenance (Photograph 2). Large sections of the road have also been filled up with material from various quarries, placing any possible related artefacts out of context (Photograph 1).

#### ***New Witkranznek Hard Rock Quarry***

Visibility of the ground surface at New Witkranznek Hard Rock Quarry was reasonable for most of the area, apart from isolated areas, which were covered with dense shrub and grass growth. Disturbance of the surface of the property had occurred in several places. This includes a large excavated area in the southeast section of the property as well as various animal burrows, vehicle tracks and paths (Photographs 12-13). All these areas were checked for subsurface indications of archaeological material, but no material was observed.

### ***4.3 Details of equipment used in the survey:***

GPS: Garmin etrex Summit

Digital cameras: Sony cybershot



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

## **5. Description of sites and material observed:**

### *5.1 Locational Data:*

Map reference: 3125CB - Conway

Province: Eastern Cape

Magisterial District: Chris Hani (Inxuba Yethemba municipality)

Closest Town(s): Middelburg (Cape) and Cradock

### *5.2 Description of the general area surveyed:*

The surveyed area falls in the Nama Karoo Biome (Bredenkamp et al 1996) which occurs on the central plateau of the western half of South Africa, at altitudes between 500 and 2,000m, with the majority of the biome falling between 1,000 and 1,400 m. This biome is the second-largest biome in South Africa.

The Nama Karoo Biome occurs in summer rainfall areas with rainfall that varies between 100 and 520mm per year. This also determines the predominant soil type – over 80% of the area is covered by a lime-rich, weakly developed soil over rock. The high erodibility of soils in these areas pose a major problem where overgrazing occurs.

The dominant vegetation is a grassy, dwarf shrubland. Grasses tend to be more common in depressions and on sandy soils and less abundant on clayey soils. Most of the grasses are of the C<sub>4</sub> type and, like the shrubs, are deciduous in response to rainfall events.

The amount and nature of the fuel load is insufficient to carry fires and fires are rare within the biome. The large historical herds of Springbok and other game no longer exist. Like the many bird species in the area - mainly larks - the game was probably nomadic between patches of rainfall events within the biome. The Brown Locust and Karoo Caterpillar exhibit eruptions under similarly favourable, local rainfall events, and attract large numbers of bird and mammal predators.

Less than 1 % of the biome is conserved in formal areas. The Prickly Pear *Opuntia aurantiaca* and Mesquite *Prosopis glandulosa* are the major alien invader species. Urbanization and agriculture are minimal, and irrigation is confined to the Orange River valley and some pans. Most of the land is used for grazing, by sheep (for mutton, wool and pelts) and goats, which can be commensurate with conservation. However, under conditions of overgrazing, many indigenous species may proliferate, including Threethorn *Rhigozum trichotomum*, Bitterbos *Chrysocoma ciliata* and Sweet Thorn *Acacia karroo*, and





many grasses and other palatable species may be lost. There are very few rare or Red Data Book plant species in the Nama Karoo Biome.

Mining is important in the Biome. Most of the research into the dynamics of the biome has been done in the east of the region, with the Grootfontein Agricultural Station at Middelburg featuring prominently.

### *5.3 Description of sites:*

#### **National Route 10 Section 4**

A rectangular structure, possibly a *kraal* of some sort, with various subdivisions was found immediately outside the western fence at N10-4 51.7N on the farm Bosjesmansfontein 260 (Photographs 3-4). This structure has already been damaged during the initial construction of the road since the fence cuts through a small portion of it (Photograph 4). Approximately 200m east of this structure, also on the farm Bosjesmansfontein 260, lies what appears to be the remains of a *rondawel*- like structure as well as a smaller rectangular structure of some sort (Photographs 5-6). These structures are possibly related. (see Attachment B, Map 2) (Abovementioned structures were observed from the road only and no detail can be given.)

A row of three stone posts were observed next to the eastern fence at N10-4 61.6N on the farm Zeven Fonteynen 254 (Photograph 7). These could be indicative of an old farm boundary (see Map 2).

A stonewall was encountered to the east and west of the road at approximately N10-4 70.4N (Photographs 8-11). (see Attachment B, Map 2). This wall was already damaged by the initial construction of the road and the remaining sections on the eastern and western side of the road fall outside the proposed area of construction. The wall is constructed in a similar style of many old farm boundary walls that can be found in the area, i.e. a double row of larger rocks packed to a height of approximately one meter, filled with smaller rocks between the two sections. The wall is on average approximately 50cm wide.

#### ***New Witkranznek Hard Rock Quarry***

A single MSA flake, produced from hornfels, was observed at the foot of the koppie.

Late Stone Age (LSA) artefacts were encountered in 3 small exposed scatters (see Attachment B, Map 3). Artefact quantities are at their highest near the *koppie* and decrease towards the south and west with little to no artefacts



encountered in the far west of the site. Artefact ratios (artefacts:m<sup>2</sup>) thus vary considerably, ranging from >10:1 to 0:1.

The LSA artefacts found were predominantly produced from hornfels and show varying degrees of patina buildup indicative of differing production time periods. Artefact types include scrapers, bladelets, flake blades, cores, utilized flakes as well as some debitage flakes (Photographs 16-19).

A wall running at an angle from the Zeven Fonteynen 254 farm boundary was also observed. It runs partially up the western side of the *koppie* and rejoins the boundary wall at the top of the *koppie* (Photographs 20-21). (see Attachment B, Map 3) The wall varies in height from 40cm-100cm and is approximately 50cm wide. It consists of two rows of large stones packed next to and on top of each other, the area between the two rows is filled in with smaller stones. The stone for the wall appears to have been collected from the surrounding area (Photographs 22-23).

The purpose of this short section of wall is unknown. It could form part of the initial farm boundary or it could have been packed in this manner to create a type of makeshift *kraal* with the farm boundary fence acting as one of the walls. Unfortunately the available information is too limited to say for sure.

#### *5.4 Dating the findings:*

### **National Route 10 Section 4**

The stone walls running on the eastern and western direction on both sides of the N10 at Witkranznek Pass could possibly date pre-1874. The three fence posts could also date to a period at the turn of the 20<sup>th</sup> century. It is not possible to date the kraal and other stone structures without any associated finds.

### **New Witkranznek Hard Rock Quarry**

The MSA dates from 250 000 to 20 000 years ago (Deacon & Deacon 1999). The sample is however too small to link to a specific MSA period.

The LSA collection is largely undiagnostic with only a few formal tools, it would however appear to form part of the Smithfield industry and dates within the last 1000 years for the Karoo sequence (Deacon & Deacon 1999).

#### *5.6 Summary of findings:*

The proposed area for the actual road is largely disturbed by the initial construction of the road which will place any archaeological finds out of context. The stone structure (possible cattle pen) immediately adjacent to the proposed



area of construction is already damaged by the previous construction and of low significance. The proposed area for the quarry contains only lithic scatterings as well as a singular wall, both of low significance. The stone wall on the eastern and western side of the road at Witkransnek Pass lies outside the area of construction and is not in danger of any further damage. All other stone structures mentioned in this report do not fall within the proposed area of construction and are also of low significance.

## 6. Statement of Significance (Heritage Value)

The area is of low significance in terms of heritage value as described in NHRA, section 3 (3).

### 6.1. Field Rating

The field rating of the area would be Generally Protected C (Field Rating IV C): *this site has been sufficiently recorded (in Phase 1).*

Table 1: Field rating and recommended grading of sites(SAHRA 2005)

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

## 7. Recommendations:

Construction in the proposed area for the widening of the road as well as obtaining material from the quarry may be allowed.

However, should the developer encounter any heritage resources not reported on in this document and as defined and protected by NHRA (1999) during the course of construction of the road or any activity associated with that, the



developer should immediately cease operation in the immediate vicinity and report the site to SAHRA or an ASAPA accredited CRM archaeologist.

## 8. Risk preventative measures associated with construction

<b>Aspect</b>	
Existing and newly discovered sites of archaeological interest	Scattered lithic material – surface material – no clearly distinguishable pattern. Stone structures – stone walls, fence posts and cattle pens
<b>Impact</b>	
Damage to existing and newly discovered sites	Construction activities should not have an impact or further damaging effect on existing structures.
<b>Mitigation</b>	
Identify roles and responsibilities	In event of any heritage resources (other than mentioned in this report) discovered in the process of construction, the services of an ASAPA accredited CRM archaeologist will be required for further investigation.
Regulations and Permits	None required for the reported finds

## 9. References

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Sampson, C.G. 1974. *The Stone Age Archaeology of Southern Africa*. Academic Press, New York.

SAHRA, 2005. Minimum Standards for the Archaeological and the Palaeontological Components of Impact Assessment Reports, Draft version 1.4

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## **10. Terms used**

Middle Stone Age (MSA): this is an archaeological term used to refer to a time period dating between 250,000 and 25,000 years ago.

NHRA: National Heritage Resources Act no 25 of 1999 and associated regulations (2000).

NEMA: National Environmental Management Act no 107 of 1998 and associated regulations (2006).

SAHRA: South African Heritages Resources Agency





**Photos:**

***National Route 10 Section 4***



Photo 1: Example of elevated road



Photo 2: Example of debris left over from road construction and maintenance



Photo 3: Rectangular structure, possible *kraal*.



Photo 4: Subdivisions in rectangular structure with fence cutting through it





Photo 5: Smaller rectangular structure with *Rondawel* like structure in background



Photo 6: Close up of *Rondawel* like structure





Photo 7: Row of stone posts, possibly old farm boundary





Photo 8: East running boundary wall for Tafelberg 207



Photo 9: West running boundary wall for Tafelberg 207





Photo 10: Side view of boundary wall



Photo 11: Top view of boundary wall, showing building technique



### ***New Witkranznek Hard Rock Quarry***



Photo 12: Previously excavated area



Photo 13: Animal burrows show no subsurface artifacts in the west





Photo 14: Location of Stone Age scatter 1 and 3

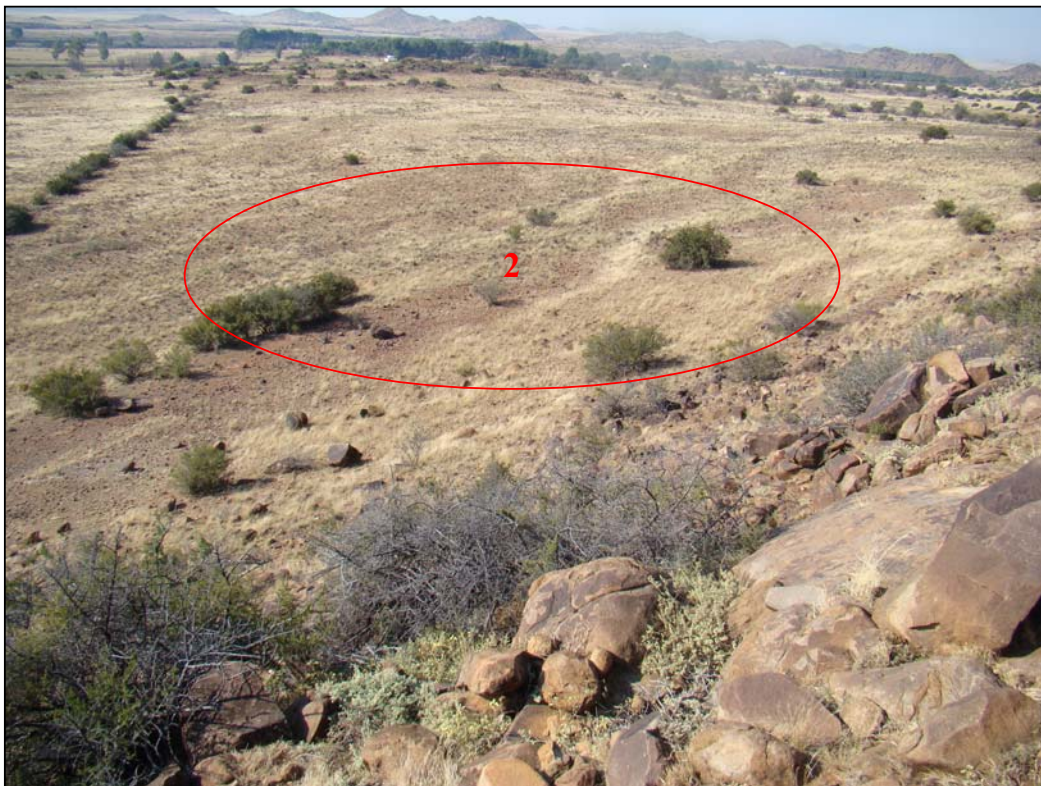


Photo 15: Location of Stone Age scatter 2



Photo 16: MSA flake



Photo 17: Side scraper



Photo 18: Cores



Photo 19: Flakes





Photo 20: Looking east at stonewall alongside farm boundary

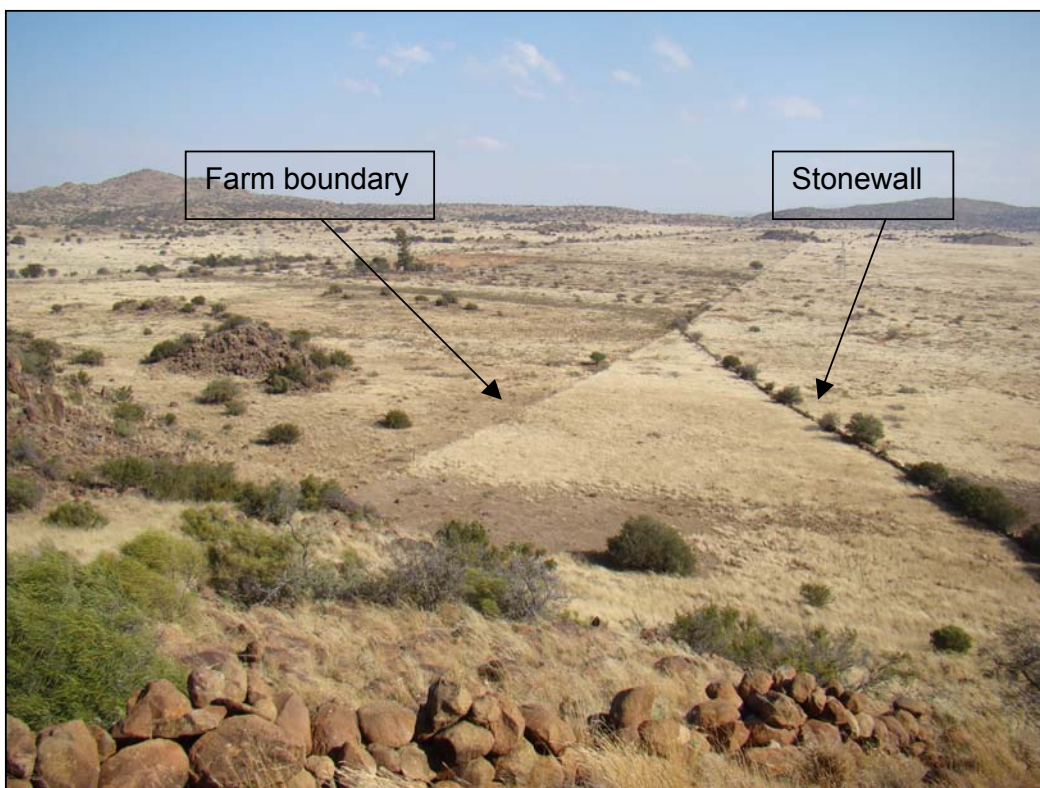


Photo 21: Looking west at stonewall alongside farm boundary





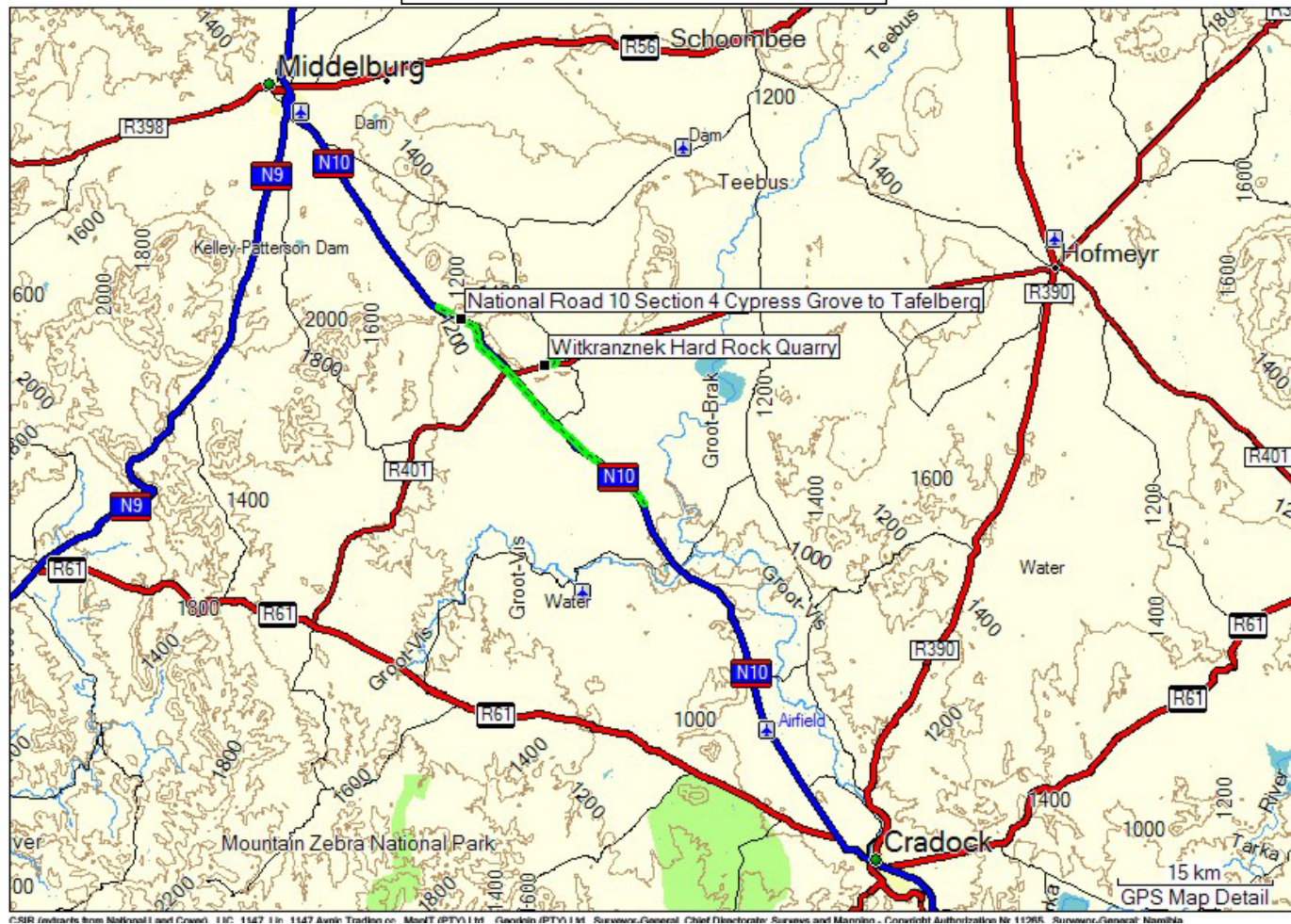
Photo 22: Side view of wall



Photo 23: Top view of wall, showing building technique

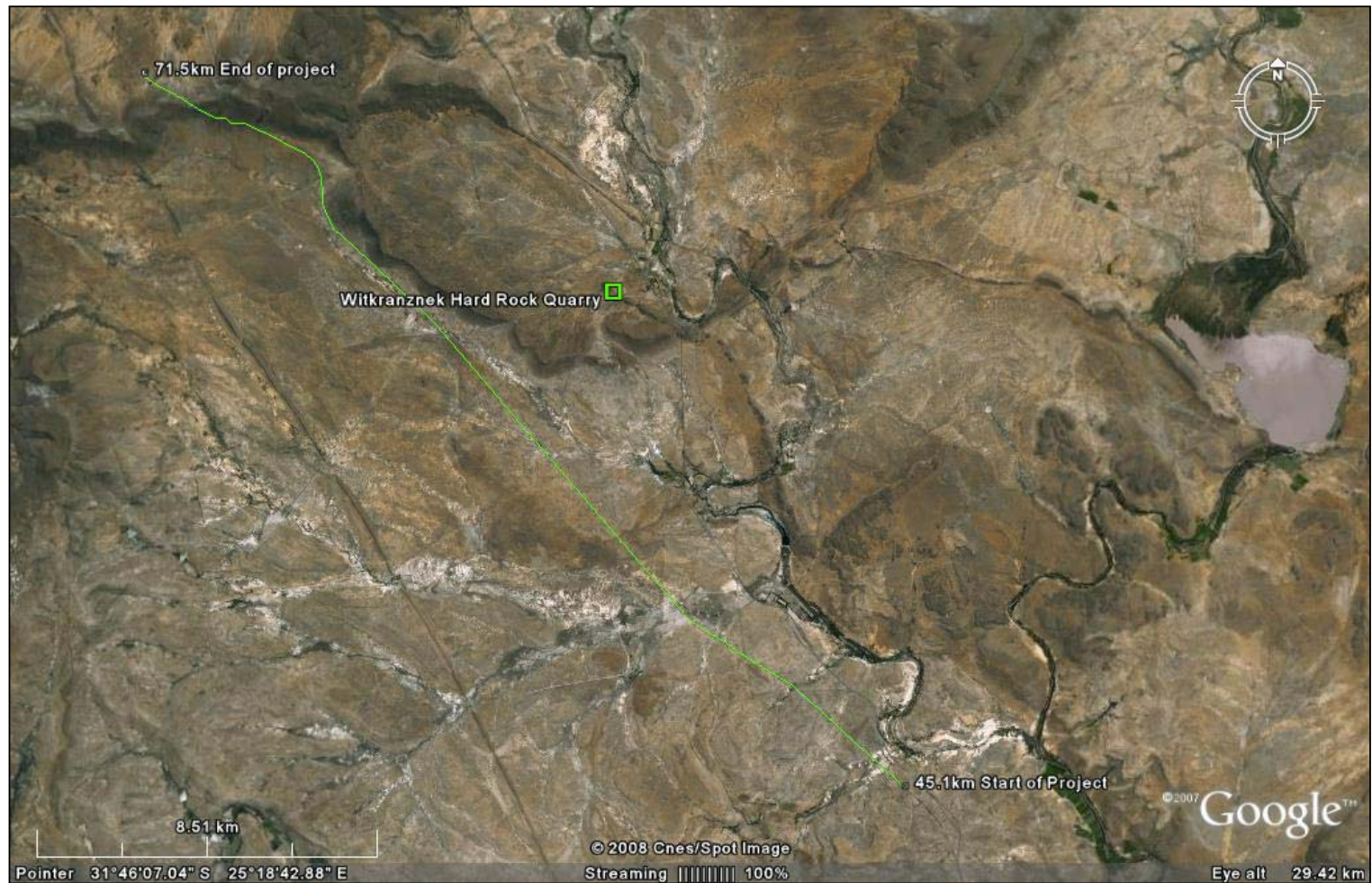
## Attachment B

### Maps:

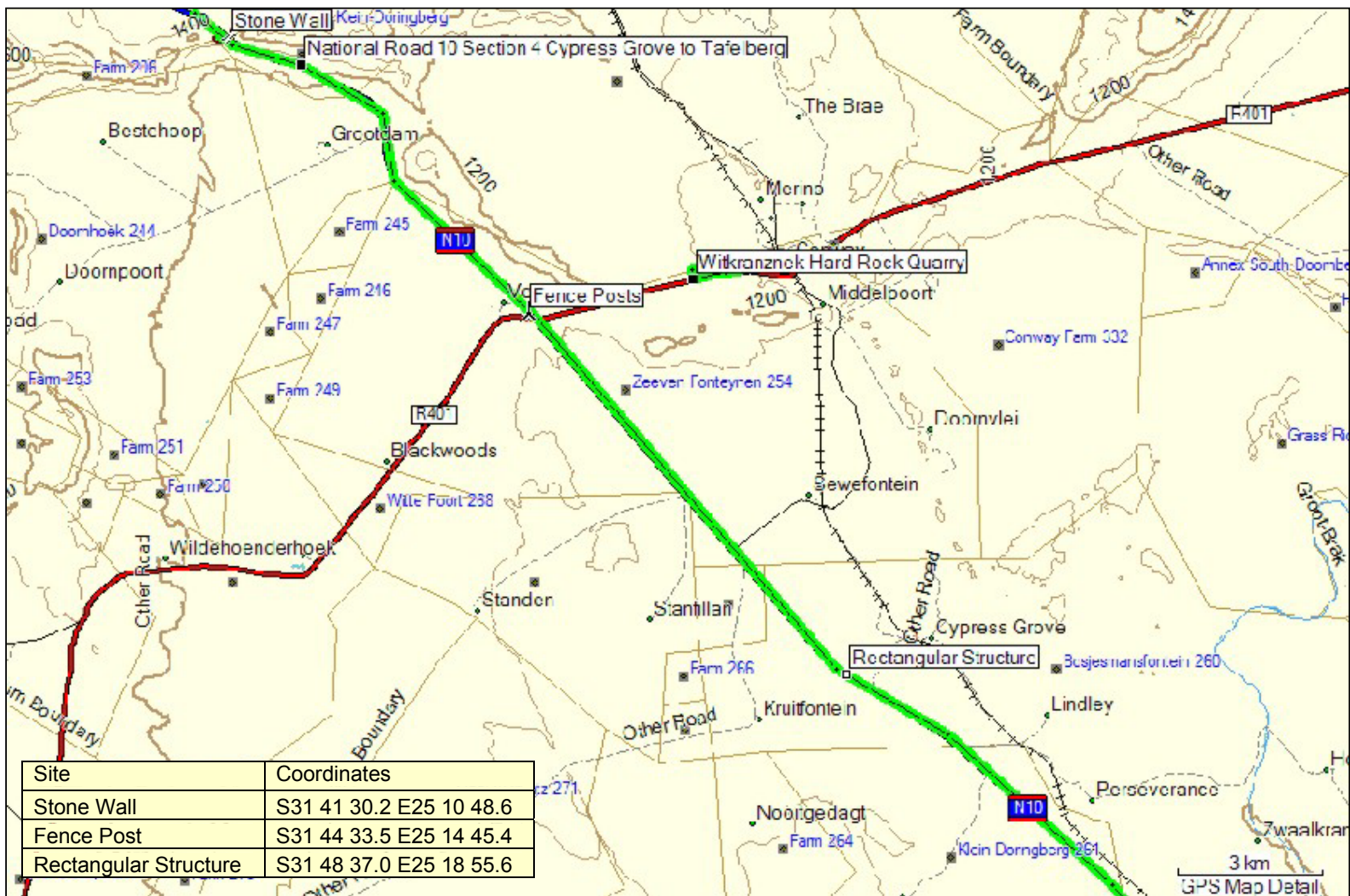


Map 1: Location of surveyed area (■) National Route 10 section 4 Cypress Grove to Tafelberg and New Witkranznek Hard Rock Quarry, Zeeven Fonteynen, Chris Hani District Municipality, Eastern Cape, South Africa.



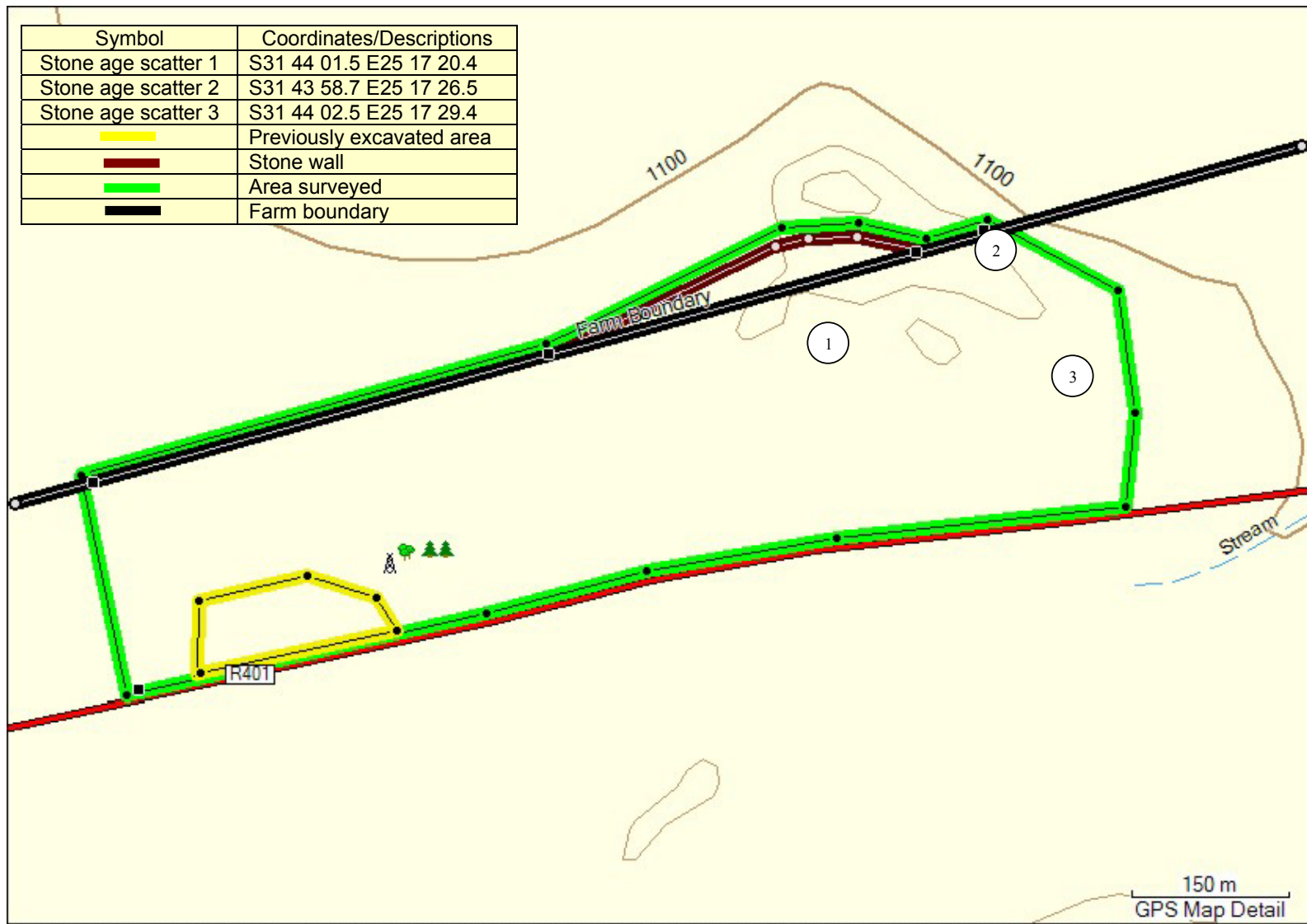


Aerial Photo 1: Surveyed section (■), showing start and end of project along the N10 Section 4 as well as the Witkranznek Hard Rock Quarry.



Map 2: Location of sites found next to N10 Section 4



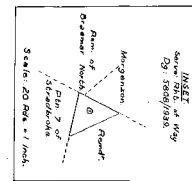


Map 3: Detail of surveyed area: New Witkranznek Hard Rock Quarry.



Aerial Photo 2: Detail of surveyed area: New Witkranznek Hard Rock Quarry.

The numerical data of this diagram  
No. 1-16  
4511  
Sg No 4511 1895



Note  
The northern of the diagrams is intended  
to show the position of the Tavelsberg  
relative to the road and the river.  
The southern of the diagrams is intended  
to show the position of the Tavelsberg  
relative to the road and the river.  
The northern of the diagrams is intended  
to show the position of the Tavelsberg  
relative to the road and the river.

The above diagram, together with the  
diagram of the Tavelsberg, represents  
the position of the Tavelsberg relative  
to the road and the river. The diagram  
of the Tavelsberg is intended to show  
the position of the Tavelsberg relative  
to the road and the river. The diagram  
of the Tavelsberg is intended to show  
the position of the Tavelsberg relative  
to the road and the river.

Handwritten signature: *W. J. J. J.*

Diagram Agreement with  
BA 1000 1895

Sheet DO-1

Handwritten notes at the bottom of the page, including a signature and date: *W. J. J. J. 23.10.1895*





# CAPE COLONY.

1896.