

**DESKTOP ARCHAEOLOGICAL, PALAEOLOGICAL &
HERITAGE ASSESSMENT OF THE FARM ELANDS KLOOF 121
(SCHANSKRAAL), RICHMOND, NORTHERN CAPE PROVINCE**

“The Karoo is not a mere destination, it is an emotion”.

Some enchanted visitor.

“To the stranger, oppressive, weird, fantastic, it is to the man who has lived with it, a scene for the loss of which no other on earth compensates”.

Olive Schreiner (On describing the Karoo).

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**SRK CONSULTING
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&

RANOR KAROO FARM HOLDINGS

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SPECIALIST PANEL & DECLARATION OF INDEPENDENCE

Cobus Dreyer (MA Archaeology (Wits)), is an Archaeologist and accredited member of ASAPA, rated as Principal Investigator for Stone Age, Iron Age, Colonial and Industrial Archaeology, with Specialist rating on Anglo-Boer War history. He is based in Bloemfontein and has been involved with heritage and archaeological impact assessments since 1998. After many environmental and heritage impact assessments in the Karoo, Northern Cape, the upper part of the West Coast and along the Orange River towards the Richtersveld (see Select Bibliography). Dreyer is familiar with the archaeology and cultural heritage of the region and competent to do the investigation.

Dr Johan C. Looek, PhD (HC) from Bloemfontein has retired from the Geology Department at the University of the Free State after lecturing for more than fifty years. Dr Looek has a thorough understanding of the geology and palaeontology of the Karoo. He was born and bred in the Karoo and has a keen interest in, and a wide knowledge of the history and farm and place names of the region. His love of fieldwork contributed to his expert knowledge of Anglo-Boer War history and paraphernalia. He is a member of the Geological Society, Palaeontological Society and the Archaeological Society of South Africa.

Cobus Dreyer and Johan Looek are working as independent specialists, who are in no way connected, financially or otherwise, with the proponent, other than in the delivery of consulting services on the project.

EXECUTIVE SUMMARY

SRK Consulting is conducting the Scoping and Environmental Impact Assessment process for the proposed Schanskraal Sporting Estate, on the farm Elands Kloof 121, near Richmond, Northern Cape. The assessment is performed on behalf of Ranor Karoo Farm Holdings. The proposed project will involve developments on a substantial part of land (2000ha). The footprint of less than 100ha will include a low-density residential estate consisting of 57 housing units restricted to a maximum development footprint of 550m², each on its own 4000m² stand. Further developments will include a golf course, tennis courts and other outdoor sporting facilities and appropriate staff housing.

This desktop archaeological, palaeontological and heritage assessment forms part of the Environmental Impact Assessment process.

The farm is located about 60km southeast of Richmond, 100km southwest of Middelburg and about 140km northwest of Graaff-Reinet in the Northern Cape. This specific region lies in an ecological sensitive area with a significant incidence of historical, archaeological and palaeontological remains.

In general, the human impact on the environment is limited to farming activities in the form of farm roads, fences and windmills. In this particular area, some land has already been used for housing and crop cultivation.

Intensive archaeological research in the upper Seacow valley stretches over several decades and a large amount of information about the findings is available.

A desktop review of the literature suggests the following:

- Built Environment

Schanskraal contains a diversity of manmade structures and features of historical significance. Farm buildings date from the arrival of the early European immigrant farmers. The homesteads and outbuildings seem to be well maintained and are in daily use. Responsive and knowledgeable developers were involved in the contemporary renovations and alteration of the old farmhouse. Insensitive building practices could have changed the character and damaged the atmosphere of the house drastically.

The rough stone walls on the farm represent remains of remarkable historical significance and could reveal exceptional stone building skills.

- Archaeology

Intensive field surveys along the upper Seacow River have identified stone artefact assemblages of great archaeological value.

It has been mentioned that archaeological finds also occur at Schanskraal (Email 3 October 2012).

Depending on the locality of the developments, field investigation will still be necessary prior to development.

- Palaeontology

The changing geological formation of the area is such that fossils are found in certain parts, while in other cases the rocks are sometimes quite bare. It is expected that the varying composition of the Adelaide Subgroup of the Beaufort Group dating from the Permian period, could produce fossils in this area. The specific fossil species are expected to be remnants of the *Dicynodont*.

The placing of the proposed developments could affect the palaeontological finds and will have to be investigated and mitigated during construction.

- Graves

Most farms in the Karoo have sizeable cemeteries with graves of European settlers and farm labourers sometimes dating back to the late 18th and 19th centuries.

- Cultural Background

Karoo farmsteads usually have large ash heaps. The investigation of these features normally produces a rapid indication of the lifestyle and social habits of the community. It also explains the availability of household utensils during the 18th and 19th centuries. In this case finds of glass and porcelain fragments, glass bottles, wire, nails, and other metal objects are important.

According to early travellers, firearms came into use in this region in about 1770. Fired cartridge cases from the mid-19th century onwards, normally produce a vital description of the different kinds and user trends in firearms and ammunition.

- Historical Setting

The farmhouses at Schanskraal and on Roelofsfontein are both older than sixty years.

Although recent farm names are sometimes confusing, place and farm names come a long way and have become connected to these fixed points on the land.

Historians maintain that after the Nongqawuse catastrophe, which led to the National Suicide of the Xhosa (1856-57), many Xhosa tribesmen and their families fled from the Transkei and took refuge on White farms in the Karoo.

- Summary

The potential impact of the proposed developments on the heritage resources and palaeontological finds could be significant and further fieldwork is recommended.

I suggest that as each aspect of the development is realised, e.g. prior to home construction, the developer (home owner) be required to appoint a suitably qualified and experienced heritage specialist to undertake a search and rescue of the precise development footprint as this will only be determined following EIA – it would be very difficult to motivate for an on-site assessment of 4000m² x 60, when only a fraction of this area will actually be disturbed.

My suggestion is that once development footprints have been determined that an on site assessment is undertaken on an ad hoc basis.

LEGISLATION

The development area should be examined for possible archaeological and historical material to establish the potential impact on any cultural remains that might be found. The Heritage Impact Assessment (HIA) is done in terms of the National Heritage Resources Act (NHRA), (25 of 1999) and under the National Environmental Management Act, 1998 (Act. 108 of 1998).

The study aims to locate and evaluate the significance of cultural and heritage sites, archaeological material, manmade structures older than 60 years, and sites associated with oral histories and graves that might be affected by the proposed developments.

Archaeological and palaeontological material and historical features on the property does not belong to the landowner or developer to deal with at free will. In the case of the alteration, destruction or removal of any of these finds of significance, the necessary approval and permits will have to be obtained from the South African Heritage Resources Agency (SAHRA) in Cape Town.

ARCHAEOLOGICAL BACKGROUND TO THE AREA

Information on the pre-colonial archaeology of the area is derived from a number of impact assessment reports, which have been undertaken in the past number of years (Dreyer 2004-2012).

Our main source of archaeological knowledge comes from a research project in the drainage basin of the upper Seacow valley, undertaken by Garth Sampson (1985), an expert archaeologist from the University of Cape Town. The published records of material finds include a wide range of objects from the excavations, mainly in rock shelters and confirm the richness of archaeological finds in the region.

These papers include reports on stone artefacts (Peace 1993), macro-fauna (Plug 1993), livestock (Plug, Bollong & Sampson 1994), glassware and metalwork (Crass & Sampson 1993a), old European clothing (Crass & Sampson 1993b), European and oriental ceramics (Moir & Sampson 1993), glass trade beads (Saitowitz & Sampson 1992), Bushmen tobacco and cannabis dependency (Sampson 1993), and the role of ostrich eggs in Bushmen existence (Sampson 1994).

Later Stone Age pottery finds were described by Sampson & Sadr (1999.) and the ceramic sequence of the area was compiled (Sampson, Hart, Blagg, & Wallsmith 1989). A radiocarbon chronology of the Later Stone Age pottery decorations was compiled (Sampson & Vogel 1995) and Late Holocene and historical bone midden density in rock shelters were calculated (Sampson & Plug 1993). European livestock in rock paintings were recorded (Voigt, Plug & Sampson 1995), while the acquisition of guns by the Bushmen of the Seacow valley was discussed (Westbury & Sampson 1993).

For the purpose of this report, his "Atlas of Stone Age Settlement" (1985) is very useful. For the sake of simplicity, his cultures were amalgamated into three groups, namely, Early Stone Age, Middle Stone Age and Later Stone Age. The localities where concentrations of stone artefacts occur are too few to define a pattern. It is only in the case of the Later Stone Age where a clustering of flakes can be identified. This area ranges from Schanskraal Manor (Roelofsfontein) to a position against the slope of the hill one kilometre to the north east.

According to the tourism brochure on the Schanskraal Estate, the owners lay claim to the existence of San rock art on the farm. The contention of a Khoikhoi (Hottentot) and San (Bushmen) co-existence on Schanskraal is debatable and somewhat ambiguous. According to early travellers Khoikhoi tribes were settled further away along the base of the Great Escarpment.

GEOLOGICAL BACKGROUND TO THE AREA

The solid bedrock geology of Schanskraal consists entirely of rocks of Karoo age, with younger gravels and alluvium in the valleys. A simplified stratigraphic column for the area is given below.

Alluvium & Gravel
Karoo Dolerite

Karoo group	Super	Beaufort Group	Tarkastad subgroup	Katberg Formation
			Adelaide subgroup	

ADELAIDE SUBGROUP

Outcrops appear in the lowest part of the farm, on low hills and along the mountain slopes. The rocks are grey and maroon mudstone with thin layers of fine grained sandstones and siltstones. The sediments were originally washed into the Karoo Basin by rivers flowing in from the west and south east, and deposited on flood plains and in river channels.

KATBERG FORMATION

The outcrops occur on the highest slopes of the mountains. The fluvial-deposited rocks are in the form of maroon mudstones and grey feldspathic sandstone. The formation is easily recognised by the white appearance in high ground.

KAROO DOLERITE

As the supercontinent of the Gondwana slowly rifted during the Early Jurassic Period of the earth's history, tension cracks permitted basic magma to intrude and solidify as dolerite in the form of horizontal sills and vertical or near vertical dykes.

The high temperature of the magma (1000°C) caused the mudstones of the Karoo rock to metamorphose into a dense black rock called lydianite. This lydianite was a favourite material for Stone Age people to manufacture stone tools.

QUATERNARY SEDIMENTS

Modern rivers deposited thin layers of gravels and alluvium in the broad valleys.

ECONOMIC GEOLOGY

URANIUM: The area underlain by Beaufort beds, contain thousands of small occurrences and a few large deposits of uranium. No uranium deposits are shown for Schanskraal. A small deposit appears just beyond the northern farm boundary.

ROCKS FOR BUILDING PURPOSES

Sandstone and dolerite stones are used in all houses and outbuildings of the area. A short stone wall occurs on Schanskraal near the Elandskloof homestead and a 4km wall on Ruigte Valley 122 and others are found on Leopardsvley.

Note that about 1100 Scots cart loads of rock were needed to build one kilometre of wall.

GEOMORPHOLOGY

Schanskraal lies amongst the northern foothills of the east-west Sneeuberg highlands in the northern part of a long broadening valley. The plains of the Karoo extend away to the north.

PALAEONTOLOGICAL ENVIRONMENT

The Karoo rocks of the area contain fossils of many species of reptiles and other types. During the Late Permian Period of the earth's history, the flood plains and river channels of the Beaufort supported a wide variety of animals and plants. At the end of the Permian (Adelaide Subgroup) time, the so-called end-Permian Extinction took place. The succeeding Triassic Period (Katberg Formation) saw fewer species, but vast numbers of the reptile *Lystrosaurus* appeared. The extinction is also recorded in the Adelaide – Katberg contact on Elandskloof and Ruigtevallei.

After a lifetime of fossil hunting in the Beaufort beds, J.W. Kitching from the Bernard Price Institute for Palaeontological Research at the University of the Witwatersrand compiled a list of farms where fossils of the various assemblage zones were found (Kitching 1977). He did not collect on Schanskraal, but his data from farms in an arc between Middelburg, Richmond and Murraysburg provides a clear view of the palaeontology of the area. The useful first number of the Biostratigraphic Series of the Council for Geosciences gives a description of the bio-zones of the Beaufort Group.

For this report on Schanskraal, the *Dicynodon* and *Lystrosaurus* zones are relevant (Rubidge 1995).

DICYNODON ASSEMBLAGE ZONE

In the area covered by the Middelburg Geological Map (3214), the assemblage zone coincides with the upper part of the Adelaide Subgroup.

The types of vertebrate, invertebrate and plant species are given below.

FOSSIL TYPE	NUMBER OF SPECIES
Fishes	2
Amphibians	2
Reptiles	8
Synapsids	61
Bivalves	1
Plants	3

Note that any one farm will not contain all the species listed above. A scrutiny of Kitching's monograph reveals that far less than 10 species are found in one locality.

On Schanskraal, any of the listed species may be found in the Adelaide Subgroup rock on the lower hill slopes and in the valley floors where mudstones crop out.

LYSTROSAURUS ASSEMBLAGE ZONE

This specific assemblage zone coincides with the Katberg Formation.

The list of fossil species is given below.

FOSSIL TYPE	NUMBER OF SPECIES
Amphibians	8
Reptiles	9
Synapsids	16
Invertebrate (millipede)	1
Plants	3

It is possible that these fossils will be found at Schanskraal in the maroon mudstone interlayered with the white weathering grey feldspathic sandstones high up in the hills.

HISTORICAL BACKGROUND OF THE AREA

By the mid-1700s, the Cape Colony had expanded to the east and north east. In 1800, the north western boundary was officially declared to be the line running from Plettenberg's Beacon to Groot Tafelberg from there to the south west, including the Upper (southern) portion of the drainage basin of the Zeekoei River in the Cape Colony. Schanskraal and some of the other historic farms were already settled by White farmers. In 1825, Schanskraal is shown to be in the Field-Cornetcy of Agter Sneeuberg in the Graaff-Reinet district.

One of the prominent occupants of Schanskraal on Ruitevallei 122 was Thomas Francois Burgers (1834-1881), a onetime preacher and State President of the South African Republic. After retiring from public life, he farmed on Zoetvlei in the Richmond district, while later on moving to Schanskraal on Ruigtevallei, where he fell ill, and was taken to Richmond where he passed away.

The farmstead previously called Roelofsfontein on Elands Kloof 121 is now called Schanskraal. It is assumed that the farmhouse at Schanskraal, presently known as Burgersrust Lodge, has been built in 1793. It is wrongly assumed that this house was built by Thomas Burgers. The age of the renovated farmstead on Roelofsfontein (The Country Manor) is not known, but it is accepted to be older than sixty years.

Accounts by early travellers mention the place and farm names of the area (Webb 1958). These references became fixed points on the land. New farm names are confusing as proven in the current case of Schanskraal where the name was transferred from Ruigte Valley to Elandskloof.

Historians maintain that after the Nongqawuse catastrophe, which led to the National Suicide of the Xhosa (1856-57), many Xhosa tribesmen and their families fled the Transkei and took refuge on White farms. According to oral traditions, it is suspected that these Xhosa-people were the builders of the stone walls in certain parts of the Karoo (Bergh & Visagie 1985).

CULTURAL BACKGROUND TO THE AREA

Karoo farmsteads usually have large refuse heaps which have accumulated over the years. The investigation of these features produces a rapid and effective indication about the lifestyle and social habits of the society. It also reveals the availability of household utensils in the 18th and 19th centuries. In this case finds such as cartridge cases, glass and porcelain fragments, glass bottles, wire, nails, and other metal objects are valuable (Dreyer 2005-2012).

It is clear that the cultural environment of the Karoo in general and the Schanskraal region in particular has already been affected significantly by ordinary farming activities, road building and the erection of high voltage power transmission lines over many years.

STONE FLAKES

These finds are confirmed by the research by Sampson in the upper Seacow valley (Sampson 1974, 1985).

ANGLO-BOER WAR RELICS

Although rare in some places and abundant in others, food tin cans and lids originating from Anglo-Boer War (1899-1902) period British army rations could also be found. The cans are characterised by heavy soldering on the seams.

FIRED CARTRIDGE CASES

According to early travellers, firearms came into use in the Karoo region from about 1770. From the mid-19th century onwards, fired cartridge cases produce a vivid narrative of the different kinds and trends in firearms and ammunition.

Gunflints, melted lead and copper percussion caps used with muzzle-loading rifles, could also turn up in the area.

Cartridge cases and bullets of a later period could be found on the ash heaps at the different farms yards. These finds represent a long period of European occupation during the 18th and 19th centuries before and during the Anglo-Boer War, First World War (WWI 1914-1918), the Second World War (WWII 1939-1945) and the Angolan Bush War during the 1960s and 1970s. In many other cases, military ammunition has been used for hunting purposes and target shooting practice.

Historians are aware that during the Anglo-Boer War skirmishes took place near Schanskraal somewhere towards the mountains between Middelburg and Richmond.

A considerable collection of fired rifle cartridge cases has been made on the ash heaps at different farms yards elsewhere in the Karoo. These finds date from the 19th and 20th centuries (Dreyer 2005-2012). Some ,303 British rifle cartridge cases are dated to the Guerrilla-phase of the Anglo-Boer War (Loock 2003, Bester 2003).

TABLE WARE

The middens on the different farms represent a long time span of European occupation. The ash heaps contains fragments of glass, porcelain, stoneware and ash from kitchen fires, bottles, lids and various metal containers.

Colourful fragments of Sponge Ware crockery could also be found on the ash heaps (Dreyer 2010). Some of these domestic vessels date back to the 18th century (Trehaven 1996).

Sponge Ware crockery and tableware was manufactured at Staffordshire, UK, where separate designs were designated for the different British Colonies. The porcelain was affordable and became very popular amongst the European immigrants in South Africa, and was considered to be for everyday use. Hence the common name of Voortrekker crockery or “Boerenbont” (bont = multi-coloured). Because of the fact that it was handmade, it could be sold at relatively affordable prizes. It is claimed that the same kind of sponge-decorated tableware is still available from Staffordshire at present, but because of the fact that it is handmade, it is very expensive to buy.

GRAVES

Most farms in the Karoo have large cemeteries with graves of European settlers and farm labourers sometimes dating back to the 18th and 19th centuries (Dreyer 2005, 2010).

Care should be taken to look out for any human skeletal remains, in which case the work should stop and SAHRA should be notified.

BURNT KRAAL DUNG

The recognition and investigation of vitrified dung from archaeological and historical sites in the Free State and elsewhere started a number of years ago (Dreyer 1992, 1997; Jacobson, Loock, et al. 2003). Field workers and scientists are rapidly becoming aware of this phenomenon in parts of the central regions and new sites with burnt dung from old stock enclosures are discovered at an increasing rate. Formerly unknown finds include areas in the Beaufort West, Somerset East, Klaarstroom and Loxton districts in the Northern Cape and Murraysburg in the Karoo.

Recent research results have developed into an escalating new source of information on different animal species and their grazing habits (Carrión, Scott, et.al 2000, Jacobson, Loock, et.al 2003). The farm Schanskraal would be no exception in this regard and any samples of the vitrified material will be analysed at the Geology Department, University of the Free State.

DISCUSSION

The topography and natural environment of the whole Karoo region is mainly determined by the geology.

From the desktop study, it is clear that the farm is located in an area with a very rich heritage legacy.

IMPACT ASSESSMENT

This Heritage Impact Assessment report identifies and evaluates the impacts of the proposed developments on the heritage resources of the site.

With respect to Palaeontology, the investigation indicates that potential for fossils on the farm is relatively low.

It is anticipated that there will be an impact on archaeological finds such as stone artefacts. Finds of concentrations of artefacts should be reported to the archaeologist.

CONCLUSIONS AND RECOMMENDATIONS

Palaeontological, archaeological, buildings, graves, heritage remains and the cultural environment, were considered.

In the case of any archaeological, palaeontological and historical finds of significance, arrangements should be made for the implementation of rescue actions by suitably qualified and experienced heritage specialists.

Arrangements should also be made to preserve and manage any finds of significance to the benefit of the tourist potential of the Estate.

A search and rescue is conducted for all development footprints once that have been determined, and prior to clearing in order to satisfy the requirements of the National Heritage Resources Act.

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