

# ARCHAEOLOGICAL SCOPING

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FOR:

Falls Fish Farm  
Schoemanskloof  
013 733 4179

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**Falls Fish Farm**

**Mooiland 294JT**

**Map Reference (1:50000): 2530BC**

**S: 25°23'15.81" - E: 30°36'3.44"**

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## 1...Executive Summary

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The owner of Falls Fish Farm (Mooiland 294 JT), Mr. Malcomess, is planning to develop 10 one hectare stands in the Schoemanskloof area. The owners of the Falls Fish Farm the author of this report, via Dr Alex Schoeman and Prof. Peter Delius (University of the Witwatersrand) to undertake an initial archaeological scoping of surface areas demarcated for development on the farm Mooiland 294 JT (Map Reference 1:50000 - 2530BC, S25° 23' 15.81", E30° 36' 3.44"), because stonewalled sites have been identified previously on the farm and they wished to avoid impacting on these structures. Dr Schoeman provided Principle Investigator oversight. The aim of the investigation was to establish the presence of heritage resources such as archaeological and historical sites and features, in order to determine the impact of the proposed project on such heritage resources.

In terms of the Environmental Conservation Act (Act No. 73 of 1989), it is by law required of developers to carry out Environmental Impact Assessment Studies. In order to comply with the requirements of the List of Activities and Regulation for Environmental Impact Assessments (EIA) published in the government Notice No. R1183 EIA's should, in all cases, include a Heritage Impact Assessment Segment. The heritage component of the EIA is provided for in Section 26 of the Environmental Conservation Act and endorsed by section 38 of the National Heritage Resources Act (NHRA - Act No. 25 of 1999). In addition the NHRA protects all structures and features older than 60 years (see Section 34), archaeological sites and material (see Section 35) and graves as well as

burial sites (see Section 36). The objective of this legislation is to enable and to facilitate developers to employ measures to limit the potentially negative effects that the development could have on heritage resources.

The areas proposed for development did prove to contain areas/structures of archaeological importance but the extent of these features could not be determined due to dense overgrowth. This report details the methodology, limitations and recommendations relevant to the areas of proposed development.

## 2...Background to the Project

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### 2.1 SCOPE AND MOTIVATION FOR INVESTIGATION

The owner of Falls Fish Farm, Mr. Malcomess, is planning to develop 10 one hectare stands in the Schoemanskloof area. He requested the author of this report, via Dr Alex Schoeman and Prof. Peter Delius (University of the Witwatersrand) to conduct an initial archaeological scoping of areas identified for development. Dr Schoeman provided Principle Investigator oversight. The purpose of this was to archaeologically examine these areas and to identify possible archaeological remains of heritage value by means of a thorough pedestrian survey.

### 2.2 LEGISLATION, CONSERVATION AND HERITAGE MANAGEMENT

The South African Heritage Resources Agency (SAHRA) aims to conserve and control the management, research, alteration and destruction of cultural resources of South Africa and to prosecute if necessary. It is therefore crucially important to adhere to heritage resource legislation contained in the Government Gazette of the Republic of South Africa (Act No.25 of 1999) as many heritage sites are threatened daily by development. Conservation legislation requires impact assessment reports that, in all cases must include EIA's and HIA's.

HIA's should be done by qualified professionals with adequate knowledge to (a) identify all heritage resources including archaeological and palaeontological sites that might occur in areas of developed and (b) make recommendations for protection or mitigation of the impact of the sites.

#### 2.2.1 *The EIA and HIA processes*

Phase 1 Archaeological Assessments generally involve the identification of sites during a field survey with assessment of their significance, the possible impact development might have and relevant recommendations.

All Heritage Impact Assessment reports should include:

- a. Location of the sites that are found
- b. Short description of the characteristics of each site
- c. Short assessment of how important each site is, indicating which should be conserved and which mitigated
- d. Assessment of the potential impact of the development on the site/s
- e. In some cases, a shovel test, to establish the extent of a site, or collection of material might be required to identify the associations of the site. (A pre-arranged SAHRA permit is required) and

f. Recommendations for conservation or mitigation

This HIA report is intended to inform the client about the legislative protection of heritage resources and their significance and make appropriate recommendations. It is essential that it also provides the heritage authority with sufficient information about the sites to enable it to assess with confidence:

- a. Whether or not it has objections to a development
- b. What the conditions are upon which such development might proceed
- c. Which sites require permits for mitigation or destruction
- d. Which sites require mitigation and what this should comprise
- e. Whether sites must be conserved and what alternatives can be proposed that may re-locate the development in such a way as to conserve other sites and
- f. What measures should/can be put in place to protect the sites that should be conserved

When a Phase 1 HIA is part of an EIA, wider issues such as public consultation and assessment of the spatial and visual impacts of the development may be undertaken as part of the general study and may not be required from the archaeologist. If, however, the Phase 1 project forms a major component of an HIA it will be necessary to ensure that the study addresses such issues and complies with section 38 of the National Heritage Resources Act.

## 2.2.2 *Legislation regarding archaeology and heritage sites*

### *National Resource Act of April 1999*

According to Act No.25 of 1999 a historical site is “any identifiable building or part thereof, marker, milestone, gravestone, landmark or tell older than 60 years.” This clause is commonly known as the “60-years clause”. Buildings are amongst the most enduring features of human occupation, and this definition therefore includes all buildings older than 60 years, modern architecture as well as ruins, fortifications and Farming Community settlements. “Tell” refers to the evidence of human existence which is no longer above ground level, such as building foundations and buried remains of settlements (including artefacts). The Act identifies heritage objects as:

- objects recovered from the soil or waters of South Africa including archaeological and palaeontological objects, meteorites and rare geological specimens.
- visual art objects
- military objects
- numismatic objects
- objects of cultural and historical significance
- objects to which oral traditions are attached and which are associated with living heritage.
- objects of scientific or technological interest.

- any other prescribed category.

With regards to activities and work on archaeological and heritage sites this Act states that:

*“No person may alter or demolish any structure or part of a structure which is older than 60 years without a permit by the relevant provincial heritage resources authority.” (34. [1] 1999:58)*

and

*“No person may, without a permit issued by the responsible heritage resources authority-*

- (a) destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or any meteorite;*
- (b) destroy, damage, excavate, remove from its original position, collect or own any archaeological or palaeontological material or object or any meteorite;*
- (c) trade in, sell for private gain, export or attempt to export from the Republic any category of archaeological or palaeontological material or object, or any meteorite; or*
- (d) bring onto or use at an archaeological or palaeontological site any excavation equipment or any equipment which assist in the detection or recovery of metals or archaeological and palaeontological material or objects, or use such equipment for the recovery of meteorites. (35. [4] 1999:58).”*

and

*“No person may, without a permit issued by SAHRA or a provincial heritage resources agency-*

- (a) destroy, damage, alter, exhume or remove from its original position or otherwise disturb the grave of a victim of conflict, or any burial ground or part thereof which contains such graves;*
- (b) destroy, damage, alter, exhume, remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority;*
- (c) bring onto or use at a burial ground or grave referred to in paragraph (a) or (b) and excavation equipment, or any equipment which assists in the detection or recovery of metals (36. [3] 1999:60).”*

On the development of any area the gazette states that:

*“...any person who intends to undertake a development categorised as-*

- (a) the construction of a road, wall, power line, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;*
- (b) the construction of a bridge or similar structure exceeding 50m in length;*
- (c) any development or other activity which will change the character of a site-*
- (d) exceeding 5000m<sup>2</sup> in extent; or*
- (e) involving three or more existing erven or subdivisions thereof; or*
- (f) involving three or more erven or divisions thereof which have been consolidated within the past five years; or*
- (g) the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;*
- (h) the re-zoning of a site exceeding 10000m<sup>2</sup> in extent; or*

- (i) *any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority, must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development (38. [1] 1999:62-64)."*

and

*"The responsible heritage resources authority must specify the information to be provided in a report required in terms of subsection (2)(a): Provided that the following must be included:*

- (a) *The identification and mapping of all heritage resources in the area affected;*
- (b) *an assessment of the significance of such resources in terms of the heritage assessment criteria set out in section 6(2) or prescribed under section 7;*
- (c) *an assessment of the impact of the development on such heritage resources;*
- (d) *an evaluation of the impact of the development on heritage resources relative to the sustainable social and economic benefits to be derived from the development;*
- (e) *the results of consultation with communities affected by the proposed development and other interested parties regarding the impact of the development on heritage resources;*
- (f) *if heritage resources will be adversely affected by the proposed development, the consideration of alternatives; and*
- (g) *plans for mitigation of any adverse effects during and after the completion of the proposed development (38. [3] 1999:64)."*

*Human Tissue Act and Ordinance 7 of 1925*

The Human Tissues Act (65 of 1983) and Ordinance on the Removal of Graves and Dead Bodies (Ordinance 7 of 1925) protects graves younger than 60 years. These fall under the jurisdiction of the National Department of Health and the Provincial Health Departments. Approval for the exhumation and re-burial must be obtained from the relevant Provincial MEC as well as the relevant Local Authorities. Graves 60 years or older fall under the jurisdiction of the National Heritage Resources Act as well as the Human Tissues Act, 1983.

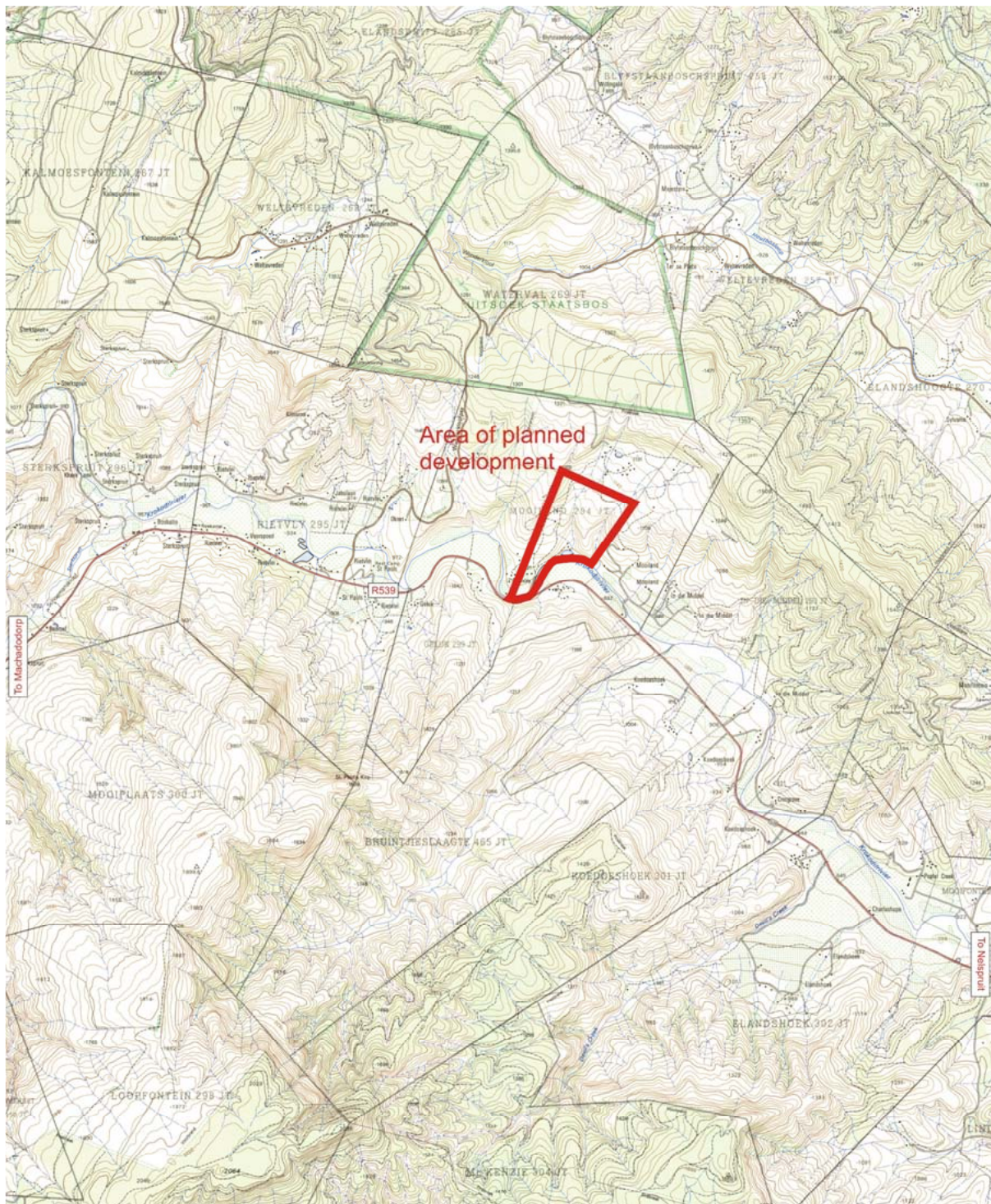
## 3...Background to Area

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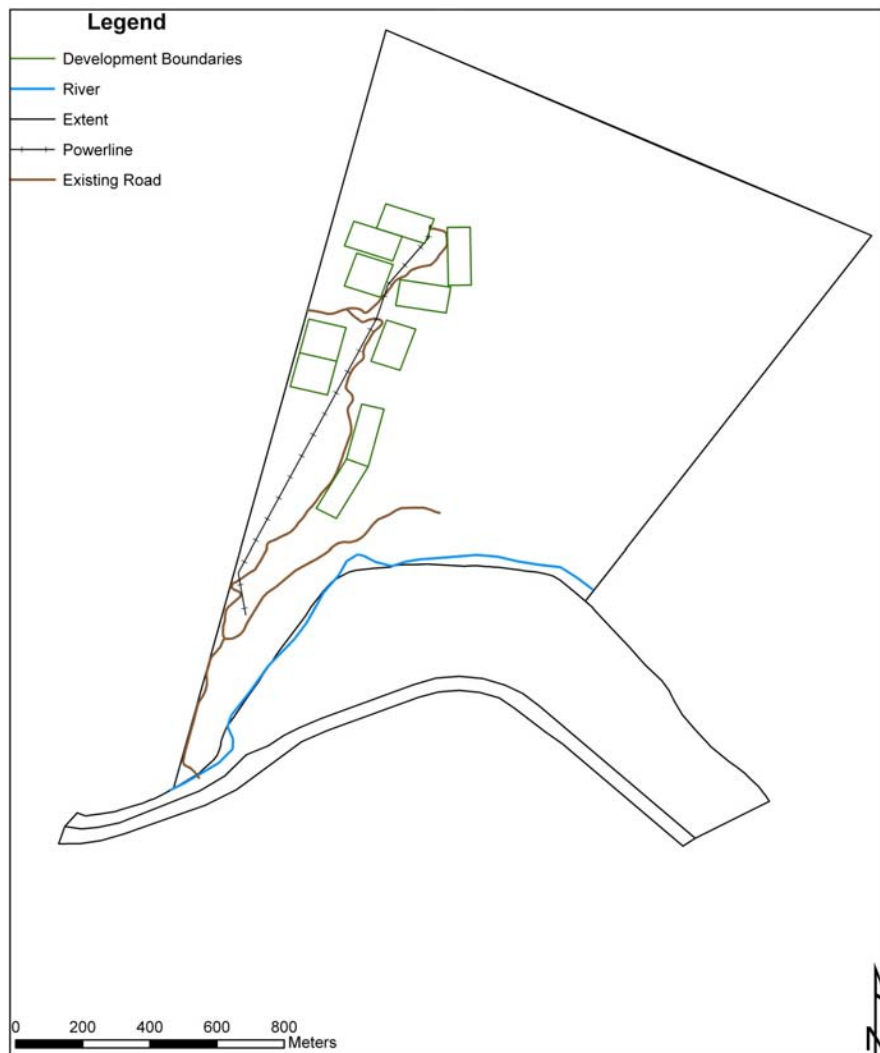
### 3.1 GENERAL DESCRIPTION

Falls Fish Farm is located approximately 15 km west of Montrose on the northern banks of the Crocodile River (Map 1), which runs roughly from east to west through the Mpumalanga Province towards the Indian Ocean and is joined by the Elands River at Montrose where the N4 and R539 intersect. The planned development locations consist of one hectare sections north of the river on the gradual slopes of the Schoemanskloof (Map 2).





Map 1: Segment of SA 1:50 000, 2530BC indicating the research locale (see detail in Map 2).



Map 2: Plan of Mooiland 294 JT indicating proposed development areas in green.

### 3.2 BACKGROUND: ARCHAEOLOGICAL FRAMEWORK

The field of archaeology in southern Africa is typically divided into the Stone Age (Earlier, Middle, Later), Farming Community and Historical Periods.

#### The Earlier Stone Age

The earliest stone tool industry, the Oldowan, was developed by the earliest members of the genus *Homo* such as *Homo habilis*, around 2.6 million years ago. It contained tools such as cobble cores and pebble choppers. It was completely replaced by the Acheulean industry, which was first conceived by *Homo ergaster* around 1.8 or 1.65 million years ago, which lasted until around 300 000 Kya. The most typical tools of the ESA are handaxes, cleavers, choppers and spheroids. Although they appear to have used hand axes often, there is disagreement about their use. There are no indications of hafting, and some artefacts are far too large for that. Choppers and scrapers were likely used for skinning and butchering scavenged animals and sharp ended sticks were often obtained for digging up edible roots. Presumably, early humans used wooden spears as early as 5 million years ago to hunt small animals. Fire was used by the hominin *Homo erectus* and *Homo ergaster* as early as 300,000 or 1.5 million years ago and possibly even earlier. The invention of fire reduced mortality rates and provided



protection against predators. Examples of sites from this time period include Kromdraai, Makapansgat and Sterkfontein (Toth & Schick 2007).

### **The Middle Stone Age**

Middle Stone Age artefacts started appearing about 250 000 years ago and replaced the larger Earlier Stone Age bifaces, handaxes and cleavers with smaller flake industries consisting of scrapers, points and blades. These artefacts roughly fall in the 40-100 mm size range and were in some cases attached to handles, indicating a significant technical advance. Few other artefacts remain from this period. In some cases circular hearths were found which indicate the ability to make fire while animal and plant remains refer to a hunting and gathering lifestyle. It is also during this period the first Homo sapiens species emerged. Associated sites are Klasies River Mouth, Blombos Cave and Border Cave (Deacon & Deacon 1999).

### **The Later Stone Age**

This time period ranges from about 20 000 years ago to the present and saw the emergence of Homo sapiens sapiens. Stone tools from this period are generally smaller but were used to do the same job as those from previous periods, but in a different way. At the time of European contact in South Africa some, such as the Khoisan people, were still making these tools. This greatly helped in understanding what these tools were used for. Some Later Stone Age associations are: rock art, smaller stone tools (microliths), bows and arrows, bored stones, grooved stones, polished bone tools, earthenware pottery and beads. Some Later Stone Age sites include Nelson Bay Cave, Rose Cottage Cave and Boomplaas Cave (Deacon & Deacon 1999).

### **Early Farming Communities**

The Early Farmer Period marks the movement of farming communities into South Africa at around 200 A.D. These groups were agro-pastoralist communities that settled in the vicinity of water in order to provide subsistence for their cattle and crops. Artefact evidence from Early Farmer Period sites is mostly found in the form of ceramic assemblages. The origins and archaeological identities of this period are largely based upon ceramic typologies. Early Farmer Period ceramic traditions are classified by some scholars into different “streams” or trends in pot types and decoration that, over time emerged in southern Africa. These “streams” are identified as the Kwale Branch (east), the Nkope Branch (central) and the Kalundu Branch (west). Early Farmer Period ceramics typically display features such as large and prominent inverted rims, large neck areas and fine elaborate decorations. This period continued up to the end of the first millennium AD. The Lydenburg Heads, which were found on a farm near Lydenburg in Mpumalanga, fall into this period (Huffman 2007).

### **Later Farming communities and Historical periods**

Later Farming Community sites are generally marked by stonewalls, but archaeological research into the Mpumalanga stonewalled sites has been thin. Earlier research by Van Hoepen in 1939 indicated that groups of Pedi or Ndzundza origin settled in the research area. In the 1970s Mike Evers (1975) and David Collett (1979) argued that the ceramics and the sites were similar to historic and modern Pedi settlement layout patterns. The Pedi model was dominant until challenged by Schoeman (1997) and Delius and Schoeman (2008). They challenged the ceramic- ethnic paradigm and thereby opened the possibility of studying the complexity of Bokoni as well as other regional processes and activities such as trade.

Research by Marker and Evers (1976), which focused on settlement attributes, identified three different levels of settlement complexity in their study of stonewalled enclosures in the eastern Transvaal. The first type is associated

with smaller isolated settlements and consists of two concentric circles. The second settlement type is characterized by large central enclosures with two entrances on both sides and smaller stone circles which are found in association with these large enclosures. Whereas the first two types may be associated with terracing, the third type is not and consists of small stonewalled enclosures grouped together.

These enclosures are also associated with road networks, which can be up to four kilometres long and typically characterized by stonewall structures on each side. The road system links individual kraals and homesteads as well as the open veldt with the kraals. In doing so cattle movement is controlled. Stonewalling may also run perpendicular to contour lines in terraced areas and may therefore indicate individual plots (Marker & Evers 1976).

Revil Mason (1962) conducted research on a larger scale and also employed aerial photographs. His study focused on the stonewalled settlements of the Steelpoort, Crocodile, Komati and Sabi rivers where he located 1792 sites. Evers (1975) then covered the area between Lydenburg and Machadodorp also using aerial photography and identified 166 sites which, based on Mason's definition, is equivalent to 5000 sites. Collett (1979), on the other hand, focused on the Badfontein valley near Lydenburg, and showed that sites are located between 1200m and 1500m above sea level on footslopes of the Badfontein valley, specifically those in the northern part where high concentrations of sites occur. Accordingly three factors determined settlement location: gentle slopes, slopes facing a westerly direction and proximity to water (Collett 1979). A similar study done by Coetzee (2005) in the Machadodorp area showed that sites are located between 1600m and 1700m above sea level and also that sites tend to be located on south-east facing slopes. The location of stonewalled sites may thus vary in terms of elevation as well as slope aspect due to a range of factors such as availability of water during dry or wet seasons, soil fertility for cultivation, grazing fields for cattle or conflict.

Maggs (2008) draws on similarities between southern Africa agricultural systems and those found in eastern African - some of which are still active - to argue that Bokoni might be an island of agricultural intensification. The concept of 'islands of agricultural intensification' such as found in Tanzania and the Kenyan rift valley, refers to areas of intense agricultural activities surrounded by areas with a smaller population and where less food was produced (see Widgren & Sutton (2004). Although the 'islands' comprised different environments it was not the determining factor. It was rather the social history of a specific area that could lead to the development of an 'island'.

Strangely, the intensive agricultural terracing is not represented in the rock art of the area. Rather, the majority of these agriculturalist engravings depict settlement layouts. Maggs (2005) argues that the engravings can be seen as early maps of settlements. Van Hoepen (1939) suggested that these concentric semi-circles represent huts seen in elevation. On the other hand, the engravings may represent symbolic spatial arrangements and may therefore reflect on the cosmology of the society (see Delano Smith 1988 cited in Maggs 1995). Richard Mbewe (2005) demonstrates through his study on rock engravings in the Lydenburg district that different cultural groups represent social and religious systems in a different way. Unlike modern maps, these representations do not focus on issues such as direction and distance between features but rather on the symbolic aspect thereof. The engravings, therefore, are a way for us to access the cognitive understanding of their place.

## **Trade**

Trade formed a crucial part of the pre-colonial and colonial Mpumalanga economy. The Maroteng, who is believed to have established a Pedi kingdom in the eastern Transvaal, were able to establish regional hegemony in part because the Pedi polity was well situated in relation to trade routes between the interior and the coast (Delius 1983). Similarly, the people of Bokoni played an intermediary role in trade networks between the coast and the interior (Delius & Schoeman 2008; Coetzee 2008).but Mpumalanga trade routes of the past 500 years, however, are not well understood. In addition no area specific archaeological research has been conducted on the impact of long distance

interaction on people who participated in these networks. Research in other areas demonstrated that trade played a key role in the development of hierarchies and in state formation, examples of which are the Mapungubwe state (Huffman 2000), and the Pedi (Delius 1983) and Tswana polities (Manson 2005). In all three examples local elites exploited trade to increase their own wealth, that in turn facilitate an unequal distribution of wealth within these societies.

### Regional context

Oral traditions from Bokoni are scarce but some historical information from other groups such as the Pedi has been collected. Oral traditions from the Maroteng, who established a Pedi kingdom in the eastern Transvaal, indicate contact between them and the Koni when they crossed the Crocodile River around 1650. Thus the Koni were already established in the Crocodile River area by that time (Delius & Schoeman 2008: 142-143). Pedi oral traditions indicate that Bokoni was occupied from the 1500s to the mid 1800s (Delius & Schoeman 2008). This occupation phase, marked by a period of peace, was disrupted by episodes of prolonged violence. One of these, the *mfecane*, resulted in major shifts in Bokoni and a reconfiguration of the region.

Cobbing (1988) argued that the *mfecane* of the 1820's and 1830's were not due to internal political processes within the Zulu kingdom, rather it was caused by the increase in slave trade. Cobbing's argument might not hold and Eldredge (1995) pointed out that slave trade at Delagoa Bay did not play a significant role before the 1820s, but oral traditions record that slave trading impacted on Bokoni. It may therefore be useful to investigate the impact and extent of the slave trade as well as trade in other commodities.

The competition over trade and wealth between and within societies increased with a time of drought at the beginning of the 19<sup>th</sup> century, causing some communities and individuals to gain greater political power while weaker communities suffered under famine (Schoeman 1997; Eldredge 1995). Wylie (2006) however criticized the generally accepted and often over relied on assumption that climate change resulted in the *mfecane*.

Drought, however, was not the only assumed cause of the *mfecane*, it also has long been believed that Zulu expansion caused conflict and upheaval during the nineteenth century in central and eastern parts of southern Africa. Wright (1995: 111), however, interpreted the evidence regarding the political situation south of the Thukela differently and argued that political changes occurred half a century before the Zulu kingdom emerged, that the area was not devastated and depopulated by the Zulu, although political disturbance did occur during the 1820s. He argues that the regional disruption and conflict were thus probably started with the Ndwandwe expansionism.

The Ndwandwe have largely been forgotten, and little is known about this group. It is, however, said that they originated near Delagoa Bay, moved along the Phongolo river valley in a south-westerly direction and settled around Nongoma (Wylie 2006: 48). Of interest here is the fact that they occupied the Komati river area, previously part of Bokoni, in the nineteenth century. Other contenders for power in area were Mabhudu, Dlamini-Swazi, Mthethwa, Qwabe. All these groups had a strong military element and were socially centralising (Wylie 2006: 51), in contrast Bokoni was not geared for defence.

## 4...Method of Enquiry

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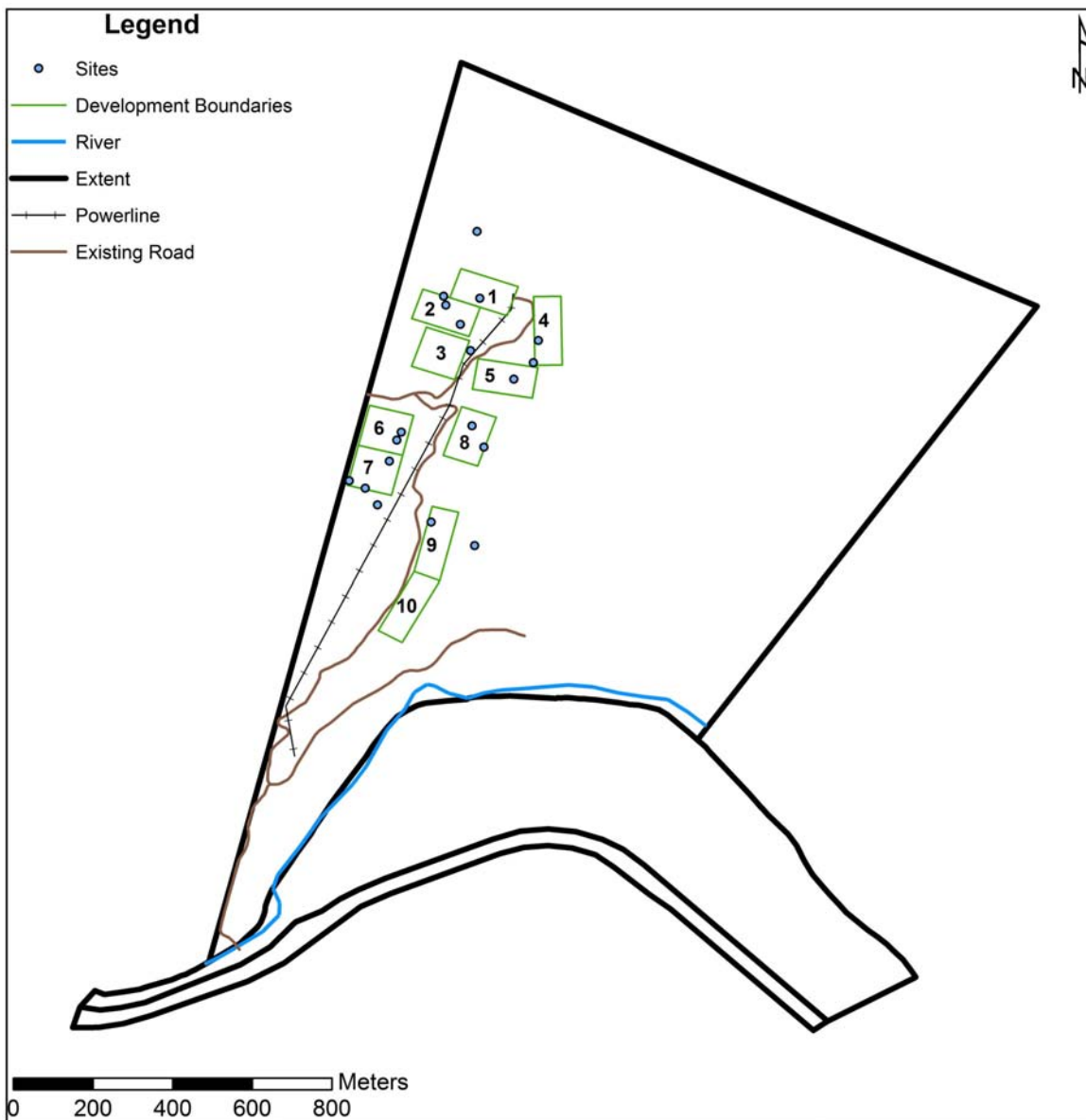
Archaeological reconnaissance is the systematic identification of archaeological sites by means of surveys. Reconnaissance of the area under question was done through a systematic pedestrian survey along a system of east - west transects, which were 5 meters apart. Systematic transects make the recording of finds more accurate and impartial.

The reconnaissance of the area under question served a twofold aim:

- The identification/location of archaeological and historical sites.  
This was done in order to establish whether any archaeological or historical areas of interest exist within the areas marked for development, and attempt to determine the extent of such occurrences in the area under question.
- The spatial recording of archaeological sites.  
All archaeological and historical events have spatial definitions in addition to their cultural and chronological context. Where applicable, spatial recording of these definitions are done by means of a handheld GPS (Global Positioning System).

### 4.1 SOURCES OF INFORMATION

In accordance with archaeological practise, a group consisting of professional archaeologists and students carried out a pedestrian survey as part of the scoping process of the area under question. Standard archaeological procedures for the observation of heritage resources were followed at all times. Where possible, the survey area was divided up into 5m x 100m sectors and a GPS was used to traverse these transects. As most archaeological material occur in single or multiple stratified layers beneath the soil surface, special attention was given to disturbances, both man-made such as roads and clearings, as well as those made by natural agents such as burrowing animals and erosion. Locations of archaeological material remains were recorded by means of Garmin E-trex Legend GPS's and general conditions on the terrain were photographed with a Canon 50D Digital camera.



Map 3: Locations of survey points in and around areas demarcated for development, which also indicates archaeological features/sites.

#### 4.2 LIMITATIONS

The surrounding vegetation in the area under question was a combination of riverine bush and scrubs and mountain forest, mostly consisting of scattered bush, trees and grass. The general visibility of most of the investigated areas was very poor at the time of the survey (April 2010). This was due to the very dense undergrowth occurring throughout Schoemanskloof. It should be noted that undetected heritage remains may be present in sub-surface deposits, in which case it must be reported to the Heritage Resources Authority or the archaeologist and may require further mitigation measures.



Image 1: Dense surface cover in the area hampered visibility during the survey.

#### 4.3 CATEGORIES OF SIGNIFICANCE

The significance of archaeological sites is generally ranked into the following categories.

• No significance: sites that do not require mitigation.
• Low significance: sites, which may require mitigation.
• Medium significance: sites, which require mitigation.
• High significance: sites, where disturbance should be avoided and which requires conservation measures.

The significance of an archaeological site is based on the amount of deposit, the integrity of the context, the kind of deposit and the potential to help answer present research questions. Historical structures are defined by Section 34 of the National Heritage Resources Act, 1999, while other historical and cultural significant sites, places and features, are generally determined by community preferences.

A fundamental aspect in the conservation of a heritage resource relates to whether the sustainable social and economic benefits of a proposed development outweigh the conservation issues at stake. There are many aspects that must be taken into consideration when determining significance, such as rarity, national significance, scientific importance, cultural and religious significance, and not least, community preferences. When, for whatever reason the protection of a heritage site is not deemed necessary or practical, its research potential must be assessed and if appropriate mitigated in order to gain data / information which would otherwise be lost. Such sites must be adequately recorded and sampled before being destroyed.



## 5...Archaeological and historical remains

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**NOTE: DUE TO VISIBILITY (REFER TO "LIMITATIONS" IN SECTION 4.2), THE FOLLOWING RESULTS OF THE SCOPING ARE TENTATIVE AND SHOULD NOT BE REGARDED AS ENTIRELY REPRESENTATIVE OF HERITAGE REMAINS WHICH MAY FURTHER OCCUR IN AREAS DEMARCATED FOR DEVELOPMENT (SEE SECTION 6 - EVALUATION & RECOMMENDATION).**

### 5.1 STONE AGE REMAINS

No Stone Age archaeological remains were identified in the demarcated areas during the scoping.

### 5.2 FARMING COMMUNITY SITES

Indications of later Farming Community sites, notably extensive stonewalling and other stone structures - probably agricultural terracing, were located within demarcated areas. The extent of these structures could not be established as a result of visibility constraints (See Image 1). It should also be noted that the extent of archaeological features could only be determined in very few cases. It is very likely, therefore, that the sites that were recorded form part of a larger system that in turn may affect the development of infrastructure. The different forms of archaeological evidence combined point to a probable residential and settlement function. Within a larger regional context, these structures could be associated with the abundance of stonewalled settlements, occupied by Koni groups in the last 500 years in Mpumalanga.



Image 2: Stone structures, possibly walling in survey area.



**Image 3: Upper and lower grinding stones located in survey areas.**

Circular as well as rectangular stonewalled structures were located within the demarcated sites, terracing often accompanying them. Artifacts associated with these structures, especially angular enclosures, are upper and lower grinding stones (Images 2 and 3). Another common occurrence was long stretches of stonewalling which either roughly follow contour lines or run perpendicular to it and may be cattle tracks or form part of terracing. These long stretches of stonewalling and terracing make it especially hard to determine the true extent of associated archaeological features. The majority of archaeological sites are located on gentle slopes with some stonewalling covering moderate slopes. The angular enclosures, which are of more recent manufacture, are generally better preserved, more visible- in part due to sparser vegetation, and are therefore more accessible. Other sites, which tend to be more circular in shape, are older, less well preserved and therefore less visible. Consequently, the fragmentary nature of these sites combined with dense vegetation made it impossible to determine the extent of these sites.

A total of 19 GPS readings were taken between 03-04-2010 and 04-04-2010 (Map 3). Sixteen of these sites fall inside demarcated areas. Undoubtedly some sites were overlooked due to the above mentioned constraints. The sites located outside of the demarcated areas may also continue into the areas to be developed.

Demarcated area 01: One archaeological site was located in this area against a slope. The stonewalling found here is fragmentary and the feature is unclear, largely due to thick undergrowth. Not artefacts could be seen on the surface.

Demarcated area 02: Three archaeological sites were located here, all occurring on a slope. Two of these sites appeared to be a grouping of several circular stonewalled enclosures but were fragmented and unclear. The form of the other site could not be established due to its fragmentary nature and thick undergrowth. At one of these sites a lower grinding stone was found.

Demarcated area 03: One site was located on a slope next to area marked for development. This site is characterised by long stretches of stonewalling which could relate to either terracing or cattle tracks. These stonewalling however, continued towards the demarcated area but the extent thereof could not be determined. No artefacts were visible on the surface.

Demarcated area 04: The two sites which both fall within boundaries of the demarcated area are located on a slope. One of these sites appears to be a single stonewalled enclosure while the other's form is unclear. It is possible that the latter may be a terrace. Again the extent is unclear and no artefacts were visible on the surface.

Demarcated area 05: One site on a gentle slope was located within this area. These stonewall enclosures associated with this site is a combination of circular and angular structures but the exact layout could not be determined. Terracing is also associated with this site. Broken bottom grinding stones as well as upper grinding stones were visible on the surface.

Demarcated area 06: Two sites associated with terracing were located within this area. Both sites are found on a slope with no visible artefacts. The extent of these sites could also not be determined.

Demarcated area 07: Two sites were located within this demarcated area with another just outside. The two found inside both occur on a slope and have associated terracing. One of these sites, located near a hilltop, is fairly unclear and fragmented. The other is relatively well preserved with monoliths at the entrance still in place. Upper grinding stones were found at both of these sites. The site just outside the boundary is located on a gentle slope, consists of oval stonewall enclosures with terracing and upper and lower grinding stones are visible on the surface. This site may extent towards the demarcated area.

Demarcated area 08: Two sites were located here, but thick vegetation made determining the extent of these sites difficult. Both sites occur on a slope. In the one instance stonewalling appear to continue downhill while in the other it seems to be downhill terracing. No artefacts were visible at these sites.

Demarcated area 09: One site is located within this area with another just outside. These two sites appear to be connected since both of them refer to stonewalling up and down slope. Terracing is also found in the vicinity of these sites. Again tick vegetation and fragmentary walls make it hard to determine the extent of these sites. Again no artefacts were found.

Demarcated area 10: This is the only site were vegetation and undergrowth did not constrict access or visibility. No archaeological sites were located within this area.

### **5.3 HISTORICAL / COLONIAL REMAINS**

Two stone structures, probably houses built in a vernacular style were located in the area under investigation. Their square structures and the presence of windows in the walls suggest a more recent context. The buildings were possibly part of early colonial farmsteads on the escarpment frontier.

### **5.4 GRAVES**

No Graves were identified in the demarcated areas during the scoping.

## 6...Evaluation & Recommendations

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This scoping report serves to confirm that significant heritage resources were found on nine out of the ten areas demarcated for the development on the farm Mooiland 294 JT and the Falls Fish Farm property. These resources include later Farmer stone structures and Historical houses. However, it was not possible to adequately evaluate the extent and thus significance of these features as visibility inhibited a total coverage survey of areas demarcated for development.

There two options in dealing with this matter. The first is for development to continue in the currently identified areas. If this route is taken phase 2 mitigation of all affected sites should be undertaken. This, however, is not the recommended route. Rather, I suggest an alternative option, in which areas on the current sites, or in other areas, devoid of archaeological structures are identified for infrastructure development. The landowners could pre-identify possible areas and an archaeologist can then conduct a representative total coverage survey in these. This assessment would entail the clearing of undergrowth in areas to be surveyed to ensure full visibility. Clearing may happen whilst the archaeologist is on site.

Please, however, note that all areas of development impact have to be surveyed. This should include, but is not limited to, the footprints of buildings, sewerage lines, access roads and footpaths. Therefore, a thorough phase one Archaeological Impact Assessment (AIA) is recommended for all the areas affected by development. Only then can recommendations be made in terms of mitigation or conservation of these heritage resources.

**Undetected cultural remains in sub-surface deposits are most probably present in areas demarcated for development. The discovery of such deposits must be reported to the South African Heritage Resources Agency (SAHRA -Mpumalanga), or the archaeologists.**

From a heritage resources management point of view a comprehensive Archaeological Impact Assessment (AIA) is recommended before the development of surface areas on the farm Mooiland 294 JT commences.

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## 7...Addendum: Terminology

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### **Archaeology:**

The study of the human past through its material remains.

### **Artifact:**

Any portable object used, modified, or made by humans; e.g. pottery and metal objects.

### **Assemblage:**

A group of artifacts recurring together at a particular time and place, and representing the sum of human activities.

### **Context:**

An artifact's context usually consist of its immediate *matrix* (the material surrounding it e.g. gravel, clay or sand), its *provenience* (horizontal and vertical position within the matrix), and its *association* with other artifacts (occurrence together with other archaeological remains, usually in the same matrix).

### **Cultural Resource Management (CRM):**

The safeguarding of the archaeological heritage through the protection of sites and through salvage archaeology (rescue archaeology), generally within the framework of legislation designed to safeguard the past.

### **Excavation:**

The principal method of data acquisition in archaeology, involving the systematic uncovering of archaeological remains through the removal of the deposits of soil and the other material covering and accompanying it.

### **Feature:**

An irremovable artifact; e.g. hearths, architectural elements, or soil stains.

### **Ground Reconnaissance:**

A collective name for a wide variety of methods for identifying individual archaeological sites, including consultation of documentary sources, place-name evidence, local folklore, and legend, but primarily actual fieldwork.

### **Matrix:**

The physical material within which artifacts is embedded or supported, i.e. the material surrounding it e.g. gravel, clay or sand.

### **Phase 1 Assessments:**

Scoping surveys to establish the presence of and to evaluate heritage resources in a given area.

**Phase 2 Assessments:**

In-depth culture resources management studies which could include major archaeological excavations, detailed site surveys and mapping / plans of sites, including historical / architectural structures and features. Alternatively, the sampling of sites by collecting material, small test pit excavations or auger sampling is required.

**Sensitive:**

Often refers to graves and burial sites although not necessarily a heritage place, as well as ideologically significant sites such as ritual / religious places. *Sensitive* may also refer to an entire landscape / area known for its significant heritage remains.

**Site:**

A distinct spatial clustering of artifacts, features, structures, and organic and environmental remains, as the residue of human activity.

**Surface survey:**

Two basic kinds can be identified: (1) unsystematic and (2) systematic. The former involves field walking, i.e. scanning the ground along one's path and recording the location of artifacts and surface features. Systematic survey by comparison is less subjective and involves a grid system, such that the survey area is divided into sectors and these are walked systematically, thus making the recording of finds more accurate.



## 8...References

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