Phase 1 Archaeological Survey on Portions of the farm Boschrand 283 JT, in respect of the Riveside Park development (Northern Area) by Hall's Properties, Nelspruit, Mpumalanga Province.

Compiled by:



For Enpact Environmental Consultants

Surveyor: Mr JP Celliers 15 August, 2013

Table of Contents

| Executive summary | 1 |
|--|----|
| 1. Introduction | 3 |
| 2. Description of surveyed area | 5 |
| 3. Methodology | 5 |
| 4. History and Archaeology | 9 |
| 4.1. Historic period | 9 |
| 4.1.1. Early History | 9 |
| 4.1.2. Historic maps of the farms under investigation | 12 |
| 4.1.3. History of the Anglo Boer War (1899-1902) in the area | 15 |
| 4.1.4. Historical overview of the ownership and development of the farm Boschrand 283 JT | 16 |
| 4.2. Archaeology | 21 |
| 4.2.1. Stone Age | 21 |
| 4.2.2. Early Iron Age | 24 |
| 4.2.3. Late Iron Age | 26 |
| 5. Located sites, description and suggested mitigation | 27 |
| 6. Findings and recommendations | 37 |
| 7. Bibliography | 38 |
| Appendix A – Terminology | 41 |
| Appendix B – List of located sites | 46 |
| Appendix C – Maps | 50 |
| 1:50 000 location map | |
| Aerial photo location | |
| Appendix D – Photos of located sites | 57 |

Executive summary

Site name and location: Portions of the farm Boschrand 283 JT located near the city of Nespruit, Mpumalanga Province. This report deals with the proposed Riverside Park 3 development, Northern area.

Purpose of the study: An Archaeological and historic study in order to identify heritage resources on the farm Boschrand 283 JT in respect of the proposed Riverside Park 3 residential development. Extent 65 ha.

1:50 000 Topographical Map: 2530 BD (1984)

EIA Consultant: Enpact EnvironmentalConsultants

Client: Hall's Properties

Heritage Consultant: Kudzala Antiquity CC.

Contact person: Jean-Pierre (JP) Celliers Tel: +27 82 779 3748

E-mail: kudzala@lantic.net

Report date: 15 August 2013

Description and findings:

An Archaeological resource survey was undertaken by Kudzala Antiquity CC in respect of a proposed residential and mixed use development on portions of the farm Boschrand 283 JT in Mpumalanga Province. This report deals with the Northern proposed area of approximately 65 ha. The study was done with the aim of identifying sites which are of heritage significance on Hall's property and assessing their current preservation condition, significance and possible impact of the proposed development. This forms part of legislative requirements as appears in section 38 of the National Heritage Resources act (25 of 1999) and the NEMA (17 of 1998). Current land use on the proposed development area is intensive agriculture (sugarcane). The survey was conducted on foot and with the aid of a motor vehicle in an effort to locate archaeological remains and historic features. A detailed archival study in combination with social consultation formed the basis on which sites were identified, located and assessed. A total of twelve (12) sites were documented. There is one recorded graveyard site (NTN 1) which is considered to be of high local social significance (LS 3A, table 5.1, 5.2). The remaining sites range from those consisting of ruined remains of farm worker's dwellings and rated with low significance (NTN 2, 3, 5-8; GPC; table 5.1, 5.2) to existing dwellings and structures with medium and low significance (NTN 9-11; GPB & GPC; table 5.1, 5.2) and also sites associated with agricultural irrigation rated with low significance (NTN 12; GPC; table 5.1, 5.2). An historic canal (site NTN 4) is rated with medium significance but is located on the western side of the proposed development area. Evidence suggests that one of the existing houses (site NTN 10) is an historic

house (older than 60 years). This is in terms of section 34 of the NHRA (25 of 1999) and signifies that before the houses are demolished, a valid permit must be obtained from the local (Provincial) heritage resources authority.

Disclaimer: Although all possible care is taken to identify all sites of cultural importance during the investigation of study areas, it is always possible that hidden or sub-surface sites could be overlooked during the study. Kudzala Antiquity CC will not be held liable for such oversights or for costs incurred as a result of such oversights.

Copyright: Copyright in all documents, drawings and records whether manually or electronically produced, which form part of the submission and any subsequent report or project document shall vest in Kudzala Antiquity CC. None of the documents, drawings or records may be used or applied in any manner, nor may they be reproduced or transmitted in any form or by any means whatsoever for or to any other person, without the prior written consent of Kudzala Antiquity CC. The Client, on acceptance of any submission by Kudzala Antiquity CC and on condition that the Client pays to Kudzala Antiquity CC the full price for the work as agreed, shall be entitled to use for its own benefit and for the specified project only:

- The results of the project;
- The technology described in any report
- · Recommendations delivered to the Client.

1. Introduction

Kudzala Antiquity CC was commissioned to conduct an Archaeological and Heritage resources survey on a number of portions of the farm Boschrand 283 JT, Nelspruit, Mpumalanga Province. In this report, sites and features located on the <u>Northern proposed</u> development area, are discussed. The survey was conducted for Hall's Properties through Enpact Environmental Consultants CC.

The National Heritage Resources Act (Act 25, 1999, section 38) and the NEMA (National Environmental Management Act No. 107 of 1998) requires of individuals (engineers, farmers, mines and industry) or institutions to have specialist heritage impact assessment studies undertaken whenever any development activities are planned. This is to ensure that heritage features or sites that qualify as part of the national estate are properly managed and not damaged or destroyed.

Heritage resources considered to be part of the national estate include those that are of Cultural, historical significance or have other special value to the present community or future generations.

The national estate may include:

- places, buildings, structures and equipment of cultural significance;
- places to which oral traditions are attached or which are associated with living
- heritage;
- historical settlements and townscapes;
- landscapes and natural features of cultural significance;
- · geological sites of scientific or cultural importance;
- archaeological and paleontological sites;
- graves and burial grounds including:
- (i) ancestral graves;
- (ii) royal graves and graves of traditional leaders;
- (iii) graves of victims of conflict;
- (iv) graves of individuals designated by the Minister by notice in the Gazette;
- (v) historical graves and cemeteries; and

other human remains which are not covered in terms of the Human Tissue Act, 1983 (Act No. 65 of 1983);

- sites of significance relating to slavery in South Africa;
- movable objects including:

- (i) objects recovered from the soil or waters of South Africa, including archaeological and paleontological objects and material, meteorites and rare geological specimens;
- (ii) objects to which oral traditions are attached or which are associated with living heritage
- (iii) ethnographic art and objects;
- (iv) military objects
- (v) objects of decorative or fine art;
- (vi) objects of scientific or technological interest; and

books, records, documents, photographic positives and negatives, graphic, film or video material or sound recordings, excluding those that are public records as defined in section 1 of the National Archives of South Africa Act, 1996 (Act No. 43 of 1996).

Cultural resources are unique and non-renewable physical phenomena (of natural occurrence or made by humans) that can be associated with human (cultural) activities (Van Vollenhoven 1995:3).

These would be any man-made structure, tool, object of art or waste that was left behind on or beneath the soil surface by historic or pre-historic communities. These remains, when studied in their original context by archaeologists, are interpreted in an attempt to understand, identify and reconstruct the activities and lifestyles of past communities. When these items are disturbed from their original context, any meaningful information they possess is lost, therefore it is important to locate and identify such remains before construction or development activities commence.

An AIA consists of three phases, this document deals with the first phase. This (phase 1) investigation is aimed at getting an overview of cultural resources in a given area, thereby assessing the possible impact a proposed development may have on these resources.

When the archaeologist encounters a situation where the planned project will lead to the destruction or alteration of an archaeological site, a second phase in the survey is normally recommended. During a phase two investigation, the impact assessment of development activities on identified cultural resources is intensified and detailed investigation into the nature and origin of the cultural material is undertaken. Often at this stage, archaeological excavation is carried out in order to document and preserve the cultural heritage.

Phase three consists of the compiling of a management plan for the safeguarding, conservation, interpretation and utilization of cultural resources (Van Vollenhoven, 2002).

Continuous communication between the developer and surveyor after the initial report have been compiled may result in the modification of a planned route or development to incorporate into the development or protect existing archaeological sites.

2. Description of surveyed area

The study area falls within the Mbombela Local Municipality, Nelspruit, Mpumalanga Province. Province. The survey was carried out on approximately 65 ha of indigenous Sour Bushveld and agricultural land (sugar cane and avocado) near Nelspruit. Limiting factors include the dense nature of the grass and bush and in some areas granite outcrops which are hard of access as well as sugarcane all of which limits the visibility of archaeological and heritage sites and features.

<u>Veld type:</u> The vegetation is classed as Legogote Sour Bushveld comprising gently to moderately sloping upper pediment with dense woodland including many medium to large shrubs. Short thicket occur on less rocky sites. Low vegetation cover on exposed granite outcrops.

Geology: Most of the area is underlain by gneiss and migmatite of the Nelspruit Suite (Mucina and Rutherford, 2009). The survey was conducted on foot and with the use of a motor vehicle in an effort to locate cultural remains.

3. Methodology

The methodological approach for this study meets the requirements of relevant heritage legislation. A desktop archival study followed by a physical survey of the proposed development area was conducted. This was done to assess whether graves or features of historical or archaeological value exist on the property.

<u>Social Consultation:</u> During the survey, employees on the property were consulted to establish whether any graves and other sites of possible heritage significance are located in the area. The informant consulted in this regard was Mr. Kobus Claassens, employee of Hall's and resident on the property.

<u>Historical maps</u>: Historical maps obtained during the archival search were scrutinized and features that were regarded as important in terms of heritage value were identified and if they were located within the boundaries of the project area they were physically visited in an effort to determine whether they:

- (i) still exist
- (ii) assess their current condition, and
- (iii) significance

SAHRA (South African Heritage Resources Agency) and the relevant legislation (Act 25 of 1999, National Heritage Resources Act) require that the following components be included in an Archaeological impact assessment:

- Archaeology
- Shipwrecks
- Battlefields
- Graves
- Structures older than 60 years
- Living heritage
- Historical settlements
- Landscapes
- Geological sites
- Paleontological sites and objects

All the above-mentioned heritage components are addressed in this report, except shipwrecks, geological sites and paleontological sites and objects.

The *purpose* of the archaeological study is to establish the whereabouts and nature of cultural heritage sites should they occur on the surveyed area. This includes settlements, structures and artifacts which have value for an individual or group of people in terms of historical, archaeological, architectural and human (cultural) development.

The aim of this study is to locate and identify such objects or places in order to assess whether they are of significance and warrant further investigation or protection. This is done by means of foot surveys, a desktop or detailed archival study as well as a study of the results of previous archaeological work in the area.

3.1. Desktop study

The purpose of the desktop study is to compile as much information as possible on the heritage resources of the area. This helps to provide an historical context for located sites. Sources used for this study include published and unpublished documents, archival material and maps. Information obtained from the following institutions or individuals were consulted:

- Lydenburg Museum, Lydenburg
- Published and unpublished archaeological reports and articles
- Published and unpublished historical reports and articles
- Archival documents from the National Archives in Pretoria
- Historical maps

3.1.1. Previous Archaeological studies in the area

An archaeological impact study focusing on two rock art sites on the farms Marathon and Riverside, the property of H.L. Hall and Sons Co., was conducted in 1996 by van Schalkwyk et al. Recommendations were given as to the conservation of the sites. A number of formal and informal gravesites as well as farm workers dwellings were documented by Celliers, 2005, on portions of the farms Dingwell 276 JT, Marathon, 275 JT and Boschrand 283 JT. Van Schalckwyk, 2005, conducted another archaeological impact assessment on Portion 5 of the farm Boschrand 283 JT and did not record any sites of heritage significance.

The same author conducted a heritage survey report in respect of the Marathon Delta power line during 2008. This report consists of recommendations regarding the management and possible mitigation of heritage sites and features along the planned route of the power line. No specific sites or features were referred to.

3.2. Significance of sites

The South African Heritage Resources Agency (SAHRA) formulated guidelines for the conservation of all cultural resources and therefore also divided such sites into three main categories. These categories might be seen as guidelines that suggest the extent of protection a given site might receive. They include sites or features of local (Grade 3) provincial (Grade 2) national (Grade 1) significance, grades of local significance and generally protected sites with a number of degrees of significance (*Also see table 5.2.Significance rating guidelines for sites*).

For practical purposes the surveyor uses his own classification for sites or features and divides them into three groups, those of low or no significance, those of medium significance, those of high significance.

Within the establishment of the significance of a site or feature there are certain values or dimensions connected to significance which may be allocated to a site. These include:

Types of significance

The site's scientific, aesthetic and historic significance or a combination of these is established.

Degrees of significance

The archaeological or historic site's rarity and representative value is considered. The condition of the site is also an important consideration.

Spheres of significance

Sites are categorized as being significant in the international, national, provincial, regional or local context. Significance of a site for a specific community is also taken into consideration.

It should be noted that to arrive at the specific allocation of significance of a site or feature, the specialist considers the following:

- Historic context
- Archaeological context or scientific value
- Social value
- Aesthetic value
- Research value

More specific criteria used by the specialist in order to allocate value or significance to a site include:

- The unique nature of a site
- The integrity of the archaeological deposit
- The wider historic, archaeological and geographic context of the site
- The location of the site in relation to other similar sites or features
- The depth of the archaeological deposit (when it can be determined or is known)
- The preservation condition of the site
- Quality of the archaeological or historic material of the site
- Quantity of sites and site features

In short, archaeological and historic sites containing data which may significantly enhance the knowledge that archaeologists currently have about our cultural heritage should be considered highly valuable. In all instances these sites should be preserved and not damaged during construction activities. When development activities do however jeopardize the future of such a site, a second and third phase in the Cultural Resource Management (CRM) process is normally advised which entails the excavation or rescue excavation of cultural material along with a management plan to be drafted for the preservation of the site or sites.

Graves are considered very sensitive sites and should never under any circumstances be jeopardized by development activities. Graves are incorporated in the National Heritage Resources Act under section 36 and in all instances where graves are found by the surveyor, the recommendation would be to steer clear of these areas. If this is not possible or if construction activities have for some reason damaged graves, specialized consultants are normally contacted to aid in the process of exhumation and re-interment of the human remains.

4. History and Archaeology

4.1. Historic period

4.1.1. Early History

In Southern Africa the domestication of the environment began only a couple of thousands of years ago, when agriculture and herding were introduced. At some time during the last half of the first millennium BC, people living in the region where Botswana, Zambia and Angola are today, started moving southward, until they reached the Highveld and the Cape in the area of modern South Africa. As time passed and the sub-continent became fully settled, these agro-pastoralists, who spoke Bantu languages, started dominating all those areas which were ecologically suitable for their way of life. This included roughly the eastern half of modern South Africa, the eastern fringe of Botswana and the north of Namibia. Historians agree that the earliest Africans to inhabit in the Lowveld in Mpumalanga were of Sotho, or more particularly Koni-origin.

In J. S. Bergh's source, a map indicates the migration of Swazi tribes from Swaziland in north western and north eastern directions, passing close by the present-day Nelspruit district. This took place during the "Difaqane" period, which occurred roughly from the early 1820's to the late 1830's, when many tribes were displaced throughout South Africa. The Difaqane (Sotho), or Mfecane ("the crushing" in Nguni) was a time of bloody upheavals in Natal and on the Highveld, which occurred around the early 1820's until the late 1830's. It came about in response to heightened competition for land and trade, and caused population groups like gun-carrying Griguas and Shaka's Zulus to attack other tribes (Bergh, 1999).

During the first half of the nineteenth century, the Tsetse fly was prolific in this area. It seems logical that pastoralists would have preferred to avoid the moist, low-lying valleys and thickly wooded regions where these insects preferred to congregate. It is unlikely that populations would be dense in areas where malaria and the "sleeping sickness" transferred by Tsetse flies was a constant threat to humans and their stock. Various sources confirm that Boschrand was situated in an area where malaria would sporadically appear in the nineteenth century during the rainy season (Bergh 1999; Hall, 1938; Shillington 1995). H.L. Hall mentions in his autobiography "I have reaped my mealies" that they struggled with malaria where they stayed on Mataffin since 1890. Thus large populations of European and native people did not occur during that time.

In his book on the tribes of the Carolina district, A. C. Myburgh speaks of the results of European settlement in this area. The two major results of European settlement was, firstly, that only Europeans could own land, except in two released areas in the extreme east of the district. This left several tribes of note without any sufficient land where they could live undisturbed. The European farmers with cattle required few herdsmen, and were averse to large, permanent black populations on their farms. Vegetable farmers would also employ several workers, including

mainly women and children. These people would stay in self-made shelters on the farms. There were also some stable, permanently settled workers on farms. Those black workers with too much cattle were often asked to move from a farm if the farmer felt that his grazing area was threatened. The second result of the European settlement was the institution of a migrant labour system in the area and some workers flocked to the area from beyond the country's borders. (Myburgh 1956: 9-10)

From 1860 to 1881, the population of Europeans in the central Transvaal was already very dense and the administrative machinery of their leaders was firmly in place. Many of the policies that would lead the apartheid laws later on had already been developed. In November 1864, for example, the broad design of the guidelines concerning the pass-system for blacks, the provision of labour, the obligatory tax and the carrying of firearms, had been published in the Government Gazette. In 1860, the Transvaal was again divided into a number of districts, facilitating the administration of blacks through the instalment of a greater number of officers. While there were only seven districts in 1860, the Transvaal was divided into 15 districts by 1886. Native people in isolated regions would especially feel the threat to their autonomy as European control became increasingly rigid. About half of the black population in the Transvaal was living on private land, owned by Europeans or companies, in 1904. According to the Squatters' Law of 1895, no more than five families of "natives" could live on any farm or divided portion of a farm, without special permission from the Government. This law was however not rigidly enforced in practice and large numbers of blacks still occupied certain places (Bergh 1999; Massie 1905).

The black people living on white-owned properties paid an annual rent in labour or money, varying in amount. Those adult black cultivators living on Crown Lands paid an annual rental of £1, in addition to poll tax. They were, however, not charged for water, wood or grazing, and they were not restricted as to the amount of land that they could cultivate. There are several indications that the Swazi people in the Transvaal had good relations with its European (Boer and British) inhabitants. In 1876, for example, when war broke out between the Republic and the BaPedi under Sekhukuni, Swazi forces assisted the burgher army (Massie 1905; Ross 1995).

Some of the blacks, who used to stay on farms during the first part of the twentieth century, were probably labour tenants. Through the system of labour tenancy, black people could live on farmers' land, whereas a large part of the black population was restricted to the Natives Reserves, as set out in the Natives Land Act of 1913, which established a clear legal distinction between the African Reserves and white farming areas. Though the Natives Land Committee saw labour tenancy as an evil, they acknowledged that it was the only system by means of which the average farmer could develop his land by 1918. Farmers were indeed opposed to any restriction of the system (Union of South Africa 1918).

A large Homeland was located a small distance to the east of Nelspruit, and later became known as Kangwane. This area was proclaimed by the Land Act of 1936. In the Surplus People Project Report, the forced removal of people to the Kangwane area, or homeland, is discussed. This area could be regarded as a "dumping ground" that was allocated to South Africa's Swazis, and consisted of two blocks of land. The first of these, the Nsikazi reserve, was a finger of land stretching along the western boundary of the Kruger National Park, and had been under black occupation for over 50 years. The second block was adjacent to the western and northern boundaries of Swaziland, and consisted of the Nkomazi and Mswati/Mlondozi reserves released under the 1935 Land Act (Bergh 1999; Surplus people project 1983).

4.1.2. Historic maps of the farms under investigation

Since the mid 1800's up until the present, South Africa has been divided and re-divided into various different districts. Since 1945, Nelspruit and the surrounding farm area formed part of the Lydenburg district. This remained the case up until 1902, when the Barberton district was proclaimed. The farm area fell under the jurisdiction of the White River ward in the Barberton district. In 1930 the Nelspruit district was proclaimed and in 1977 the area was reclassified as the Nelspruit Magisterial District. By 1994 the farm area was still located within this district (Bergh, 1999: 17, 20-27).

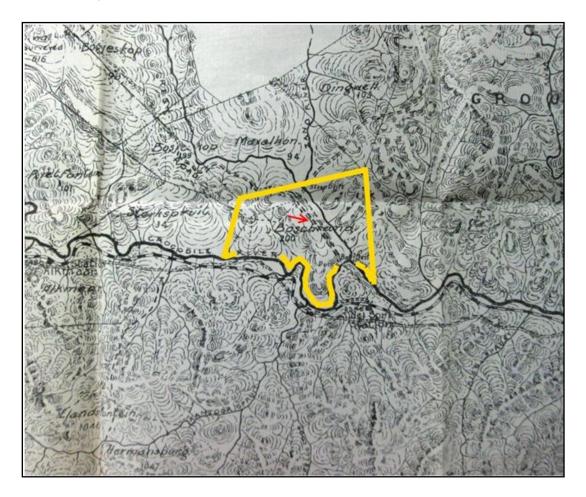
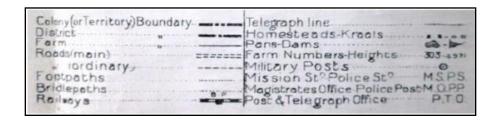


Fig. 4.1. Major Jackson series map (1902).



The previous figure (fig. 4.1.) is a 1902 Map of the Barberton District, in which Boschrand (at that time known as Boschrand 200) was situated. A steep drift is indicated near the most northern corner of the farm, and the farm has its southern border on the Crocodile River. Near the most south eastern corner of the farm, "Bad Drift" is indicated. One can also see that there was a river ferry on the southern border of the property. A road crossed the property from the north to the south (red arrow) and ended where the Crocodile River begins. When the following maps are scrutinized, it appears that this "road" may also represent the railway (Imperial Maps of South Africa 1900-1919). Some smaller roads also intersected the property.

Because of Boschrand 283 JT's proximity to Nelspruit, the history of this city is relevant. In 1873 gold was discovered in Pilgrims Rest, 80 kilometres north of Nelspruit. Consequently scores of prospectors to moved into the region. The establishment of Barberton in 1884, after the discovery of the Sheba gold reef, also brought about greater activity in the area. In April/May of 1884, the Nel brothers met railway surveyors in the area of a creek (where Nelspruit is located today). These surveyors reported their findings in August 1884, and when their report was published in the government Gazette of 28 August 1884, the Nelspruit settlement first received official recognition. In 1889 a survey of the area around the Nelspruit Station sets out 120 stands for future development (Bornman, 1979; South African History Online 2013).

By June 1892, the new railway constructed from Lourenco Marques to Pretoria, reached Nelspruit. In November 1891 the Hall family opened a new hotel, mainly to accommodate railway construction workers. This hotel was moved to the centre of the town in June 1892 and was named the Fig Tree Hotel. The first school in Nelspruit, as well as Barclays Bank opened in 1916. In 1918 the town had its first Post Office. In 1922 Nelspruit was officially upgraded to the status of a town. In 1927 the foundation stone was laid for the first NG Kerk in Nelspruit. By 1931 Nelspruit was declared a magisterial district, no longer a part of the Barberton district. Nelspruit experienced a population boom between the 1950s and 1970s and continued expanding from there on (Bornman, 1979; South African History Online 2013).

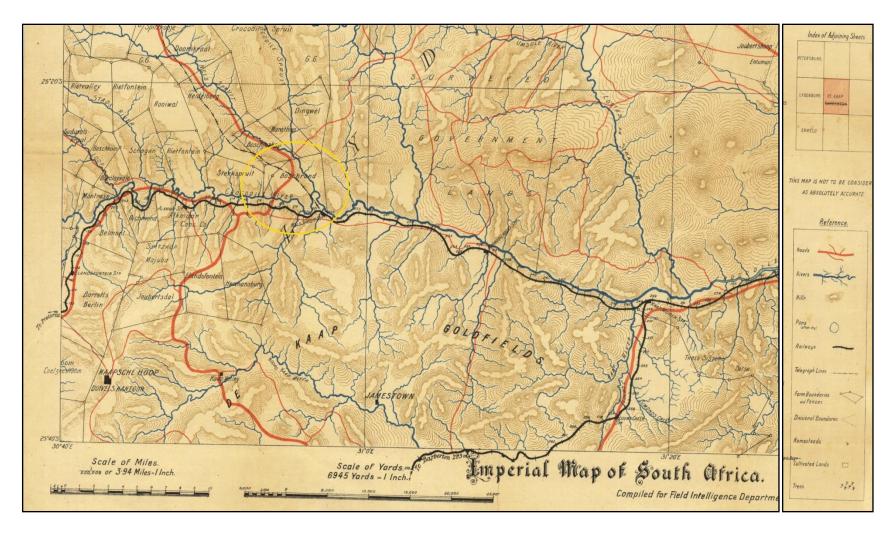


Fig. 4.2. The Imperial Map of South Africa 1900-1919. De Kaap Area, Boschrand encircled in yellow.

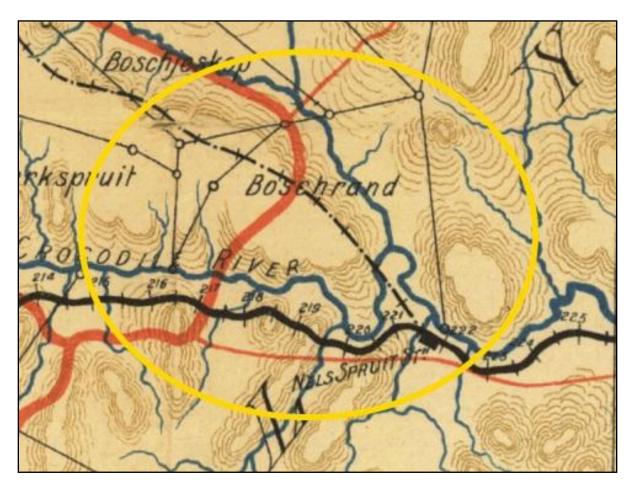


Fig. 4.3. Enhancement of Boschrand farm as it appears on the Imperial Map of South Africa (1900-1919).

4.1.3. History of the Anglo Boer War (1899-1902) in the area

The Anglo-Boer War, which took place between 1899 and 1902 in South Africa, was one of the most turbulent times in South Africa's history. Even before the outbreak of war in October 1899 British politicians, including Sir Alfred Milner and Mr Chamberlain, had declared that should Britain's differences with the Z.A.R. result in violence, it would mean the end of republican independence. This decision was not immediately publicized, and as a consequence republican leaders based their assessment of British intentions on the more moderate public utterances of British leaders. Consequently, in March 1900, they asked Lord Salisbury to agree to peace on the basis of the status quo ante bellum. Salisbury's reply was, however, a clear statement of British war aims (Du Preez 1977).

General Louis Botha, with his Boer forces, marched through Nelspruit on 11 September 1900. A week later, on 18 September 1900, the British battalion of Lieutenant General F. Roberts arrived in Nelspruit. No major skirmishes in the war took place near Nelspruit, but a black concentration

camp was established a small distance to the north of the town. The reason for this is possibly that there was a railway station at Nelspruit. Another event of import in the area was the arrival of the President of the Transvaal, Paul Kruger, in Nelspruit on 29 May 1900, where he received a message saying Lord Roberts had annexed the Transvaal. Kruger declared the annexation illegitimate on 3 September 1900, the same day that Nelspruit was proclaimed the administrative capital of the Transvaal Republic. Kruger left Nelspruit in June of that year and travelled to board a ship to Swaziland (Bergh, 1999: 51; 54).

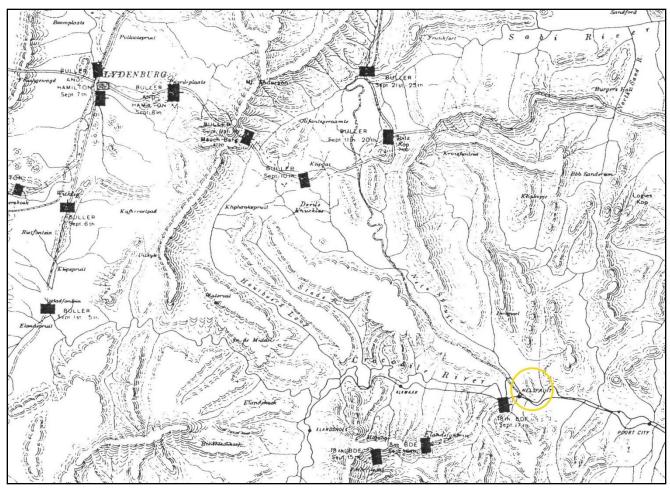


Fig. 4.4. Anglo Boer War map showing "The second stage of the combined advance on Koomati Poort, Sept. 3rd -24th 1900.

4.1.4. Historical overview of the ownership and development of the farm Boschrand 283 JT It should be noted that by 1902, the property under investigation was known as Boschrand 200. It is not certain when the farm number was changed, but there is evidence that the farm was known as Boschrand 125 by 1922, and was still known by this name by 1960. The first reference to Boschrand 283 JT was found in a document that dates to 1973, and the property is still known by this number today.

In 1922, The Boschrand Citrus Company made a request to lay out agricultural holdings on the farm Boschrand 125 and adopt the name of Boschrand Citrus Estates. The name was granted and registered by the Townships Board. The company's idea was to start a citrus farm and they already had a nursery with thousands of trees ready for transplanting. A large steel water wheel furnished machinery with power for a saw mill in order to make boxes. A government and educational site was to be erected on holding No.45 as it was on level and well drained land. It would also serve future extensions to the holdings. By 1923 the farm was to be sold to Boschrand Citrus Estates. No further communication with regards to the Company's plans to go ahead with a citrus farm is however noted in the documents (NASA SAB, CDB: 3/997 TAD13/1/85).

In March 1929 Messrs Clarke & Hamman considered purchasing Portion E of the farm Boschrand 125, but decided against it. The portion was consequently returned to government ownership (NASA *SAB*, *JUS*: 1108 1/4/29/2).

By March 1936 Portion K of the farm Boschrand belonged to Abraham Jacobus Buys and was 10 morgen in extent. He farmed citrus fruit and legumes (NASA SAB, VWR: 109 B645/195/5).

A Crown Grant was issued to Johannes Petrus Botha Uys on 11 August 1938 for Portion G and Portion H of Boschrand 125, at the price of £979.1.4. The sizes of the farms were 10 morgen 326 square roods and one morgen respectively. This grant also included half the rights to all minerals, mineral products, mineral oils, metals and precious stones, if found on the land (NASA *SAB*, *URU:* 1738 2155).

On the 6th March 1945 Hendrik Lodewyk Pepler received a Crown Grant for Portion C of the farm Boschrand 125. The portion was 25 morgen 290 square rood in extent and sold at the price of £1078.10.1. (NASA *SAB*, *URU*: 2221 722).

A Crown Grant was awarded to Johan Frederic Pepler on 6 March 1945 for Portion B of Boschrand 125. This portion measured 31 morgen 418 square roods. The property was sold for the price of £1078.8.5. (NASA *SAB*, *URU*: 2221 723).

Portion 1 of Portion E of Boschrand 125 was awarded to Louis Philippus de Villiers as Crown Land on 22 June 1951. The portion was 100 morgen in size and was sold for £2107.0.0. (NASA *SAB, URU: 2885 1609*).

Evidence was found that by August 1973 HL Hall en Seuns Beperk was the owner of Portion 14 of Boschrand 283 JT (NASA *SAB*, *URU:* 6375 1092).

On 16 November 1959 the Department of Water Affairs granted permission to the owner of Section D (Portion 4) of Boschrand 283 JT to draw water from the Nels River at a maximum of 27.20 "morgvoet" water per year (NASA SAB, RLA: 150 20/2/22/5/10).

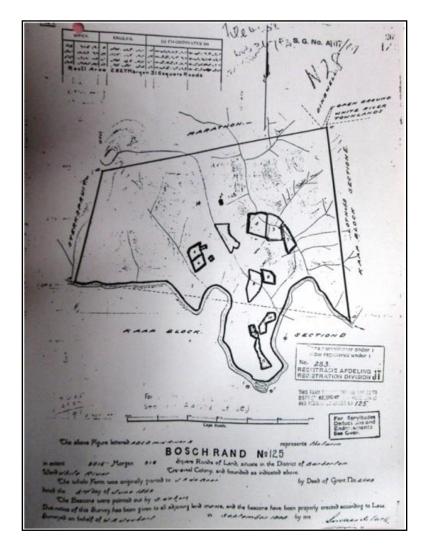


Fig. 4.5. Sketch map showing various portions of the farm Boschrand (NASA *SAB*, *RLA*: 150 20/2/22/5/10).

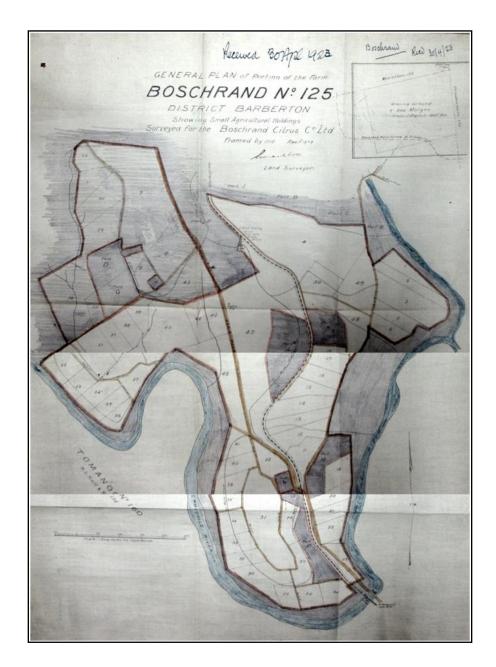


Fig. 4.6. A 1922 Map of the farm Boschrand 125, showing the various portions of the farm (NASA *SAB*, *CDB*: 3/997 TAD13/1/85).

Etienne Malherbe (born 7 February 1906) sold Portion 4 of Boschrand 283 JT to Francois Paulus Theron (born 2 July 1942) on 30 July 1981. Theron paid R90 000.00 for the 10 278 hectare piece of land (NASA *SAB*, *RLA*: 150 20/2/22/5/10).

In the year 1987 Dr. F. P. Theron requested to have a Retirement Village built on his farm, Portion 4 of Boschrand 283 JT, where his practice could be continued as well as where other doctors could rehabilitate their patients. His request was denied in October 1990 by the Deputy

Minister of Planning and Provincial Affairs. The reasons for the denial of the application were as follows:

- The farm consisted of high potential agricultural land
- The farm already had irrigation rights of 195 000 liters per day
- The farm was especially suited for a wide variety of subtropical fruits, crops and flowers
- The farm was surrounded by intensive agricultural activities and a retirement village as proposed by Theron should rather be built in town (NASA SAB, RLA: 150 20/2/22/5/10).

On 26 November 1991 an article was published in *The Lowvelder* newspaper, and it was noted that grade one students could enrol at Penryn College to start school in January 1992. Penryn College's phase one buildings would be built in the next year on the Remaining Extent of Portion 14 of the farm Boschrand. The proposed development of Penryn College was a joint effort by major local business enterprises, being H L and Sons, St. Stithians College – a brother school in Randburg – and the Lowveld Community (NASA SAB, RLA: 155 20/2/22/5/32).

A study of Boschrand will be incomplete without reference to the pioneer Mr Hugh Lanion (H.L.) Hall. Born (3 May 1858) and raised in Devoran, Cornwall, his family re-located to South Africa in 1869. He attended Bishop's College in Cape Town. As a young man, he had an adventurous life in the Lowveld when he and Sir Percy Fitzpatrick were transport riding during the years when Pilgrim's Rest and Barberton (late 1870' and early to mid 1880's) bloomed as a result of the gold mining industry.

In 1890 Hall acquired the farm he named Riverside (along the banks of the Crocodile River) and later named it Mataffin after the Swazi chief who built his homestead on a hill close-by Hall's residence Barnard, 1975; Hall, 1938). There he traded, farmed and had a hotel. He also stated planting vegetables for selling to the local market and this was a big success. In 1921 Hall started the company H.L. Hall & Sons with himself and his family (sons) the only shareholders. At that time also they bought a number of farms namely Perry's, Buffelshoek, Rietvallei, Ledzee, Boschrand and Woodhouse. Boschrand, mataffin and Woodhouse had plenty of water and all located close or next to the railway therefore during winter months they grew mainly vegetables. Citrus was also a large export from these farms. Hall mentions that because of the sub-tropical climate a number of fruits did well including papayas, avocados, mangoes, litchi and pecan nuts Hall, 1938).

His large enterprise also ensured that many local families were employed.

4.2. Archaeology

4.2.1. Stone Age

In Mpumalanga Province the Drakensberg separates the interior plateau also known as the Highveld from the low-lying subtropical Lowveld which stretches to the Indian Ocean. A number of rivers amalgamate into two main river systems, the Olifants River and the Komati River. This fertile landscape has provided resources for humans and their predecessors for more than 1,7million years (Esterhuizen & Smith in Delius, 2007).

The initial attraction of abundant foods in the form of animals and plants eventually also led to the discovery of and utilisation of various minerals including ochre, iron and copper. People also obtained foreign resources by means of trade from the coast. From 900AD this included objects which were brought across the ocean from foreign shores.

The Early Stone Age (ESA)

In South Africa the ESA dates from about 2 million to 250 000 thousand years ago in other words from the early to middle Pleistocene. The archaeological record shows that as the early ancestors progressed physically, mentally and socially, bone and stone tools were developed. One of the most influential advances was their control of fire and diversifying their diet by exploitation of the natural environment (Esterhuizen & Smith in Delius, 2007).

The earliest tools date to around 2, 5 million years ago from the site of Gona in Ethiopia. Stone tools from this site shows that early hominids had to cognitive ability to select raw material and shape it for a specific application. Many bones found in association with stone tools like these have cut marks which lead scientists to believe that early hominids purposefully chipped cobblestones to produce flakes with a sharp edge capable of cutting and butchering animals carcasses. This supplementary diet of higher protein quantities ensured that brain development of hominids took place more rapidly.

Mary Leaky discovered tools like these in the Olduwai Gorge in Tanzania during the 1960s. The tools are named after this gorge and is known as the Oldowan industry. These tools, only found in Africa, are mainly simple flakes which were struck from cobbles. This method of manufacture remained for about 1,5 million years. Although there is continuing debate about who made these tools, two hominids may have been responsible. The first of these was an early form of *Homo* and the second was *Parathropus robustus*, which became extinct about 1 million years ago (Esterhuizen & Smith in Delius, 2007).

Some time later, around 1, 7 million years ago more specialised tools known as Acheulean tools, appeared. These are named after tools from a site in France by the name of Saint Acheul, where they were first discovered in the 1800s. It is argued that these tools had their origin in Africa and then spread towards Europe and Asia with the movement of hominids out of Africa. These tools

had longer and sharper edges and shapes which suggest that they could be used for a larger range of activities which included the butchering of animals, chopping of wood, digging roots and cracking bone. Homo ergaster was probably responsible for the manufacture of Acheulean tools in South Africa. This physical type was arguably physically similar to modern humans, a larger brain and modern face, body height and proportion are all characteristics which are very similar to us. Homo ergaster was able to flourish in a variety of habitats in part because they were dependent on tools. They adapted to drier, more open grassland settings. Because these early people were often associated with water sources such as rivers and lakes, sites where they left evidence of their occupation are very rare. Most tools of these people have been washed into caves, eroded out of riverbanks and washed downriver. An example in Mpumalanga is Maleoskop on the farm Rietkloof where ESA tools have been found. This is one of only a handful of such sites in Mpumalanga.

Middle Stone Age (MSA)

A greater variety of tools with diverse sizes and shapes appeared by 250 000 BP. These replaced the large hand axes and cleavers of the ESA. This technological advancement introduces the Middle Stone Age (MSA). This period is characterised by tools which are smaller in size but different in manufacturing technique (Esterhuizen & Smith in Delius, 2007).

In contrast to the ESA technology of removing flakes from a core, MSA tools were flakes to start with. They were of a predetermined size and shape and were made by preparing a core of suitable material and striking off the flake so that it was flaked according to a shape which the toolmaker desired. Elongated, parallel-sided blades, as well as triangular flakes are common finds in these assemblages. Mounting of stone tools onto wood or bone to produce spears, knives and axes became popular during the MSA. These early humans not only settled close to water sources but also occupied caves and shelters. The MSA represents the transition of more archaic physical type (*Homo*) to anatomically modern humans, *Homo sapiens*.

The MSA has not been extensively studied in Mpumalanga but evidence of this period has been excavated at Bushman Rock Shelter, a well-known site on the farm Klipfonteinhoek in the Ohrigstad district. This cave was excavated twice in the 1960s by Louw and later by Eloff. The MSA layers show that the cave was repeatedly visited over a long period. Lower layers have been dated to over 40 000 BP while the top layers date to approximately 27 000 BP (Esterhuizen & Smith in Delius, 2007; Bergh, 1998).

Later Stone Age (LSA)

Early hunter gatherer societies were responsible for a number of technological innovations and social transformations during this period starting at around 20 000 years BP. Hunting of animals proved more successful with the innovation of the bow and link-shaft arrow. These arrows were

made up of a bone tip which was poisoned and loosely linked to the main shaft of the arrow. Upon impact, the tip and shaft separated leaving the poisoned arrow-tip imbedded in the prey animal. Additional innovations include bored stones used as digging stick weights to uproot tubers and roots; small stone tools, mostly less than 25mm long, used for cutting of meat and scraping of hides; polished bone tools such as needles; twine made from plant fibres and leather; tortoiseshell bowls; ostrich eggshell beads; as well as other ornaments and artwork (Esterhuizen & Smith in Delius, 2007).

At Bushman Rock Shelter the MSA is also represented and starts at around 12 000 BP but only lasted for some 3 000 years. The LSA is of importance in geological terms as it marks the transition from the Pleistocene to the Holocene which was accompanied by a gradual shift from cooler to warmer temperatures. This change had its greatest influence on the higher lying areas of South Africa. Both Bushman Rock Shelter and a nearby site, Heuningneskrans, have revealed a greater use in plant foods and fruit during this period (Esterhuizen & Smith in Delius, 2007; Bergh, 1998).

Faunal evidence suggests that LSA hunter-gatherers trapped and hunted zebra, warthog and bovids of various sizes. They also diversified their protein diet by gathering tortoises and land snails (*Achatina*) in large quantities.

Ostrich eggshell beads were found in most of the levels at these two sites. It appears that there is a gap of approximately 4 000 years in the Mpumalanga LSA record between 9 000 BP and 5 000 BP. This may be a result of generally little Stone Age research being conducted in the province. It is, however, also a period known for rapid warming and major climate fluctuation which may have led people to seek out protected environments in this area. The Mpumalanga Stone Age sequence is visible again during the mid-Holocene at the farm Honingklip near Badplaas in the Carolina district (Esterhuizen & Smith in Delius, 2007; Bergh, 1998).

At this location, two LSA sites were located on opposite sides of the Nhlazatshe River, about one kilometre west of its confluence with the Teespruit. These two sites are located on the foothills of the Drakensberg where the climate is warmer than the Highveld but also cooler than the lowveld (Esterhuizen & Smith in Delius, 2007; Bergh, 1998).

Nearby the sites, dated to between 4 870 BP and 200 BP are four panels which contain rock art. Colouring material is present in all the excavated layers of the site which makes it difficult to determine whether the rock art was painted during the mid- or later Holocene. Stone walls at both sites date from the last 250 years of hunter gatherer occupation and they may have served as protection from predators and intruders (Esterhuizen & Smith in Delius, 2007; Bergh, 1998).

4.2.2. Early Iron Age

The period referred to as the Early Iron Age (AD 200-1500 approx.) started when presumably Karanga (north-east African) herder groups moved into the north eastern parts of South Africa. It is believed that these people may have been responsible for making of the famous Lydenburg Heads, ceramic masks dating to approximately 600AD.

Ludwig von Bezing was a boy of more or less 10 years of age when he first saw pieces of the now famous Lydenburg heads in 1957 while playing in the veld on his father's farm near Lydenburg. Five years later von Bezing developed an interest in archaeology and went back to where he first saw the shards. Between 1962 and 1966 he frequently visited the Sterkspruit valley to collect pieces of the seven clay heads. Von Bezing joined the archaeological club of the University of Cape Town when he studied medicine at this institution.

He took his finds to the university at the insistence of the club. He had not only found the heads, but potsherds, iron beads, copper beads, ostrich eggshell beads, pieces of bones and millstones. Archaeologists of the University of Cape Town and WITS Prof. Ray Innskeep and Dr Mike Evers excavated the site where von Bezing found the remains. This site and in particular its unique finds (heads, clay masks) instantly became internationally famous and was henceforth known as the Lydenburg Heads site.

Two of the clay masks are large enough to probably fit over the head of a child, the other five are approximately half that size. The masks have both human and animal features, a characteristic that may explain that they had symbolic use during initiation- and other religious ceremonies. Carbon dating proved that the heads date to approximately 600 AD and were made by Early Iron Age people. These people were Bantu herders and agriculturists and probably populated Southern Africa from areas north-east of the Limpopo river. Similar ceramics were later found in the Gustav Klingbiel Nature Reserve and researchers believe that they are related to the ceramic wares (pottery) of the Lydenburg Heads site in form, function and decorative motive. This sequence of pottery is formally known as the Klingbiel type pottery. No clay masks were found in similar context to this pottery sequence.

Two larger heads and five smaller ones make up the Lydenburg find. The heads are made of the same clay used in making household pottery. It is also made with the same technique used in the manufacture of household pottery. The smaller heads display the modeling of a curved forehead and the back neck as it curves into the skull. Around the neck of each of the heads, two or three rings are engraved horizontally and are filled in with hatching marks to form a pattern. A ridge of clay over the forehead and above the ears indicates the hairline. On the two larger heads a few rows of small clay balls indicate hair decorations. The mouth consists of lips – the smaller heads also have teeth. The seventh head has the snout of an animal and is the only head that represents an animal.

Some archaeological research was done during the 1970's at sites belonging to the EIA (Early Iron Age), location Plaston, a settlement close to White River (Evers, 1977). This site is located on a spur between the White River and a small tributary. It is situated on holding 119 at Plaston.

The site was discovered during house building operations when a collection of pottery shards was excavated. The finds consisted of pottery shards both on the surface and excavated.

Some of the pottery vessels were decorated with a red ochre wash. Two major decoration motifs occurred on the pots:

- Punctuation, using a single stylus and
- Broadline incision, the more common motif

A number of Early Iron Age pottery collections from Mpumalanga and Limpopo may be compared to the Plaston sample. They include Silver Leaves, Eiland, Matola, Klingbiel and the Lydenburg Heads site. The Plaston sample is distinguished from samples of these sites in terms of rim morphology, the majority of rims from Plaston are rounded and very few beveled. Rims from the other sites show more beveled rims (Evers, 1977:176).

Early Iron Age pottery was also excavated by archaeologist, Prof. Tom Huffman during 1997 on location where the Riverside Government complex is currently situated (Huffman, 1998). This site known as the Riverside site is situated a few kilometers north of Nelspruit next to the confluence of the Nelspruit and Crocodile River. It was discovered during the course of an environmental impact assessment for the new Mpumalanga Government complex/ offices. A bulldozer cutting exposed storage pits, cattle byres, a burial and midden on the crest of a gentle slope. Salvage excavations conducted during December 1997 and March 1998 recovered the burial and contents of several pits.

One of the pits contained among other items, pottery dating to the eleventh century (AD 1070 \pm 40 BP) this relates the pottery to the Mzonjani and Broederstroom phases. The early assemblage belongs to the Kwale branch of the Urewe tradition.

During the early 1970's Dr Mike Evers of the University of the Witwatersrand conducted fieldwork and excavations in the Eastern Transvaal. Two areas were studied, the Letaba area south of the Groot Letaba River, west of the Lebombo Mountains, east of the great escarpment and north of the Olifants River. The second area was the Eastern Transvaal escarpment area between Lydenburg and Machadodorp.

These two areas are referred to as the Lowveld and escarpment respectively. The earliest work on Iron Age archaeology was conducted by Trevor and Hall in 1912. This revealed prehistoric copper-, gold- and iron mines. Schwelinus (1937) reported smelting furnaces, a salt factory and

terraces near Phalaborwa. In the same year D.S. van der Merwe located ruins, graves, furnaces, terraces and soapstone objects in the Letaba area.

Mason (1964, 1965, 1967, 1968) started the first scientific excavation in the Lowveld which was followed by N.J. van der Merwe and Scully. M. Klapwijk (1973, 1974) also excavated an Early Iron Age (EIA) site at Silverleaves and Evers and van den Berg (1974) excavated at Harmony and Eiland, both EIA sites.

Recent research by the National Cultural History Museum resulted in the excavation of an Early Iron Age site in Sekhukuneland, known as Mototolong (Van Schalkwyk, 2007). The site is characterized by four large cattle kraals containing ceramics which may be attributed to the Mzonjani and Doornkop occupational phases.

4.2.3. Late Iron Age

The farm area is located within a large Late Iron Age (1000-1800 A.C.) terrain. (Ross 1995: 6-7; Packard 2001: 594; Bergh 1999: 6-8; 82-83)

The later phases of the Iron Age (AD 1600-1800's) is represented by various tribes including Ndebele, Swazi, BaKoni, Pedi marked by extensive stonewalled settlements found throughout the escarpment and particularly around Lydenburg, Badfontein, Sekhukuneland, Roossenekal and Steelpoort. The BaKoni were the architects of the stone-walled enclosures found throughout the escarpment area of Eastern Mpumlanga. These settlement complexes may be divided into three basic features: homesteads, terraces and cattle tracks. Researchers such as Mike Evers (1975) and Collett (1982) identified three basic settlement layouts in this area. Basically these sites can be divided into simple and complex ruins. Simple ruins are normally small in relation to more complex sites and have smaller central cattle byres and fewer huts. Complex ruins consist of a central cattle byre which has two opposing entrances and a number of semi-circular enclosures surrounding it. The perimeter wall of these sites is sometimes poorly visible. Huts are built between the central enclosure and the perimeter wall. These are all connected by track-ways referred to as cattle tracks. These tracks are made by building stone walls which forms a walkway for cattle to the centrally located cattle byres.

Smaller tribes such as the Pai and Pulana who resided in the Lowveld were attacked by and made to flee from the aggressive Swazi, especially during the *mfecane* (difaqane). They (Swazi) were particularly active in the Lowveld during the difaqane period (1820's) and it is well-known that they frequently attacked and ousted smaller herder groups like the Pai and Pulana, especially in the area today known as Low's Creek. They were however prevented from settling in the low-lying areas due to the presence of the tsetse fly and malaria. Consequently there is little evidence of large scale settlement in the Crocodile River valley until the time of colonial settlement (1890's) and later. Small, isolated dry-packed stone-walled enclosures found near Nelspruit and surrounding areas may be attributed to these smaller groups who hid away from the

Swazi onslaught. The sites were probably not used for extended periods as they were frequently on the move as a result of the onslaught and therefore small, indistinct and with little associated cultural material.

5. Located sites, description and suggested mitigation

A total of twelve (12) sites were documented. The sites range from a formal graveyard to existing houses and structures, demolished houses and structures and include features associated with historic agricultural irrigation. The gravesite (site NTN 1) is regarded as being of high significance but it is not located within the proposed development area. The existing houses (sites NTN 9 & 10) are regarded as being of low significance and medium significance (generally protected GPC, and GPB, table 5.1 & 5.2) respectively, and in terms of the NHRA (25 of 1999) section 34. Therefore a permit needs to be obtained from the local heritage agency before the house at site NTN 10 may be demolished. The farm shed (site NTN 11) is not significant. The demolished houses and structures (sites NTN 2-8) are not significant at all. Aerial images of 2004 indicated that the houses and structures were still intact at the time. Similar images indicate that the structures and houses were demolished in 2010 (see aerial images, Appendix C). An historic canal (site NTN 4) is rated with medium significance but is located on the western side of the proposed development area. Although the small water crossover in the avocado orchard (site NTN 12) represents historic irrigation on the farm it is not regarded as being significant.

Table 5.1. Summary of located sites and their significance

| Type of site | Identified sites | Significance |
|-----------------------|------------------|--------------------------|
| Graves and graveyards | NTN 1 | High, Local, Grade LS 3A |
| Late Iron Age | None | N/A |
| Early Iron Age | None | N/A |
| Historical buildings | NTN 10 | Medium, GPB |
| Historical features | None | N/A |
| Stone Age sites | None | N/A |

Table 5.2. Significance rating guidelines for sites

| Field Rating | Grade | Significance | Recommended Mitigation |
|------------------------------|----------|------------------------------|---|
| National Significance (NS) | Grade 1 | | Conservation, nomination as national site |
| Provincial Significance (PS) | Grade 2 | | Conservation; Provincial site nomination |
| Local significance (LS 3A) | Grade 3A | High Significance | Conservation, No mitigation advised |
| Local Significance (LS 3B) | Grade 3B | High Significance | Mitigation but at least part of site should be retained |
| Generally Protected A (GPA) | | High/ Medium Significance | Mitigation before destruction |
| Generally Protected B (GPB) | | Medium Significance | Recording before destruction |
| Generally Protected C (GPC) | | Low Significance | Destruction |

5.2. Description of located sites

5.2.1. Site NTN 1.

Location: See Appendix B and D (fig.3, 4, 5).

Description: A graveyard with some 39 graves. Mostly unmarked.

Impact of the proposed development/ activity:

The graves will not be impacted upon by the development activity as they are located outside of the development area

Recommendation:

To minimise possible impact on the graves it is recommended that the graveyard be fenced and relatives allowed access.

5.2.2. Site NTN 2.

Location: See Appendix B and D (fig. 6).

Description: The remains of a house which was probably used by farm workers.

Impact of the proposed development/ activity:

The ruins will probably be impacted upon during the proposed development activity.

Recommendation:

No recommendations.

5.2.3. Site NTN 3.

Location: See Appendix B and D (fig. 7, 8).

Description: The remains of a house which was probably used by farm workers.

Impact of the proposed development/ activity:

The ruins will probably be impacted upon during the proposed development activity.

Recommendation:

No recommendations.

5.2.4. Site NTN 4.

Location: See Appendix B and D (fig. 9).

Description: A historic irrigation canal. Medium significance (**GPB**, table 5.1, 5.2)

Impact of the proposed development/ activity:

The canal will not be impacted upon during the proposed development activity as it is located to the west of the proposed development area boundary.

Recommendation:

No recommendations.

5.2.5. Site NTN 5.

Location: See Appendix B and D (fig.10).

Description: The remains of a house or houses which was probably used by farm workers. Low significance.

Impact of the proposed development/ activity:

The ruins will probably be impacted upon during the proposed development activity.

Recommendation:

No recommendations.

5.2.6. Site NTN 6.

Location: See Appendix B and D (fig.11, 12).

Description: The remains of a house or houses which was probably used by farm workers. Low significance.

Impact of the proposed development/ activity:

The ruins will probably be impacted upon during the proposed development activity.

Recommendation:

No recommendations.

5.2.7. Site NTN 7.

Location: See Appendix B and D (fig.13).

Description: The remains of a concrete platform which was probably used as a dwelling of sorts. Approximately 2m x 5m large. Low significance.

Impact of the proposed development/ activity:

The remains will probably be impacted upon during the proposed development activity.

Recommendation:

No recommendations.

5.2.8. Site NTN 8.

Location: See Appendix B and D (fig.14, 15).

Description: The remains of a very large shed or packaging facility. The size is approximately 7m x 40m north-south and 7m x 45 m east-west. Low significance.

Impact of the proposed development/ activity:

The remains will probably be impacted upon during the proposed development activity.

Recommendation:

No recommendations.

5.2.9. Site NTN 9.

Location: See Appendix B and D (fig.16).

Description: A farm house. The house is probably not older than 60 years and therefore considered to be of low significance (**GPC** table 5.2).

Impact of the proposed development/ activity:

The house may possibly be impacted upon during the proposed development activity.

Recommendation:

No recommendations.

5.2.10. Site NTN 10.

Location: See Appendix B and D (fig.17).

Description: An historic farm house. The house is probably older than 60 years and therefore considered to be of medium significance and generally protected in terms of Section 34 of the NHRA, Act 25 of 1999 (**GPB** table 5.2).

Impact of the proposed development/ activity:

The house may possibly be impacted upon during the proposed development activity.

Recommendation:

To minimise impact on this house it is recommended that the house be incorporated into the proposed development, if this is not possible, heritage legislation guides alternative options (section 34, NHRA Act 25 of 1999). Because the house is older than 60 years, it is protected by heritage legislation. Therefore, a permit must be obtained from the local heritage authority known as the PHRA (Provincial Heritage resources Agency) before the house is demolished.

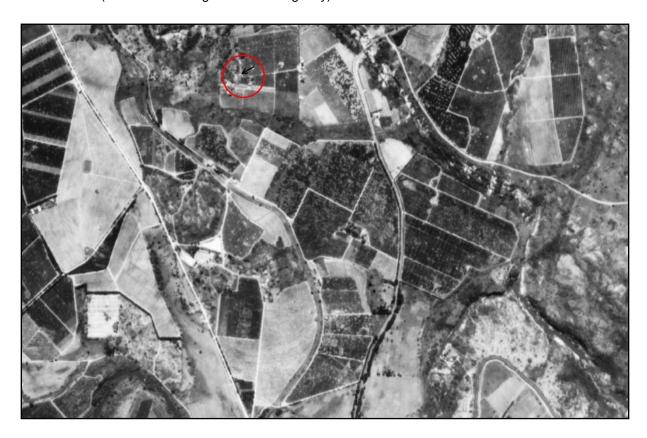


Fig. 5.1. An aerial photo of 1959. The black arrow indicates the house at site NTN 10. The house at site NTN 9 is not visible on this aerial photo.

5.2.11. Site NTN 11.

Location: See Appendix B and D (fig.18).

Description: A farm shed. Low significance (GPC, table 5.2).

Impact of the proposed development/ activity:

The shed may possibly be impacted upon during the proposed development activity.

Recommendation:

No recommendations.

5.2.12. Site NTN 12.

Location: See Appendix B and D (fig.19, 20).

Description: An irrigation system, motor crossing in the avocado orchard.

Impact of the proposed development/ activity:

The structure will probably be impacted upon during the proposed development activity.

Recommendation:

Although the small water crossover in the avocado orchard represents historic irrigation on the farm it is not regarded as being significant.

TABLE 5.1. General Significance of located sites and field rating.

| Site No. | Description | Type of significance | Degree of significance | Sphere of significance and rating |
|-------------|----------------|----------------------|------------------------|---------------------------------------|
| NTN 1 Ruin | None | Archaeological: None | Boschrand 283 JT. Low | |
| | | Historic: Low | | |
| NTN 2 Ruin | None | Archaeological: None | Boschrand 283 JT. Low | |
| | | | Historic: Low | |
| NTN 3 Ruin | None | Archaeological: None | Boschrand 283 JT. Low | |
| | | | Historic: Low | |
| NTN 4 Canal | Canal | Historic | Archaeological: None | Boschrand 283 JT. Generally Protected |
| | | | Historic: Medium | GPB. |
| NTN 5 | Ruin | None | Archaeological: None | Boschrand 283 JT. Low |
| | | | Historic: Low | |
| NTN 6 | Ruin | None | Archaeological: None | Boschrand 283 JT. Low |
| | | | Historic: Low | |
| NTN 7 Ruin | None | Archaeological: None | Boschrand 283 JT. Low | |
| | | | Historic: Low | |
| NTN 8 Ruin | None | Archaeological: None | Boschrand 283 JT. Low | |
| | | | Historic: Low | |
| NTN 9 | Farm House | Local farming | Archaeological: None | Boschrand 283 JT. Low |
| | | community | Historic: Low | |
| NTN 10 | Historic house | Historic | Archaeological: None | Boschrand 283 JT. Generally Protected |
| | | | Historic: Medium | GPB. |
| NTN 11 | Shed | Local farming | Archaeological: None | Boschrand 283 JT. Low |
| | | community | Historic: Low | |
| NTN 12 | Irrigation | Historic | Archaeological: None | Boschrand 283 JT. Generally Protected |
| | feature | | Historic: Low | GPC. |

TABLE 5.2. Significance allocation of located sites

| Unique nature | Integrity of archaeological | Wider context | Relative location | Depth of | Quality of archaeological/ | Quantity of site | Preservation condition of |
|----------------|--|--|--|---|--|---|---|
| | | | | | | | |
| Not unique, | N/A | History of | Hall's | N/A | Archaeologically: | 39 | Poor |
| ruin | | Hall's | Properties, | | N/A | | |
| | | Properties | Boschrand | | | | |
| | | | 283 JT | | Historically: Low | | |
| Not unique, | N/A | History of | Hall's | N/A | Archaeologically: | 1 | Poor |
| ruin | | Hall's | Properties, | | N/A | | |
| | | Properties | Boschrand | | | | |
| | | | 283 JT | | Historically: Low | | |
| Not unique, | N/A | History of | Hall's | N/A | Archaeologically: | 1 | Poor |
| ruin | | Hall's | Properties, | | N/A | | |
| | | Properties | Boschrand | | | | |
| | | | 283 JT | | Historically: Low | | |
| Feature of the | N/A | History of | Hall's | N/A | Archaeologically: | 1 | Good |
| farm | | Hall's | Properties, | | N/A | | |
| infrastructure | | Properties | Boschrand | | | | |
| | | | 283 JT | | Historically: Medium | | |
| Not unique, | N/A | History of | Hall's | N/A | Archaeologically: | 1 | Poor |
| ruin | | Hall's | Properties, | | N/A | | |
| | | Properties | Boschrand | | | | |
| | | | 283 JT | | Historically: Low | | |
| Not unique, | N/A | History of | Hall's | N/A | Archaeologically: | 1 | Poor |
| ruin | | Hall's | Properties, | | N/A | | |
| | | Properties | Boschrand | | | | |
| | | | 283 JT | | Historically: Low | | |
| Not unique, | N/A | History of | Hall's | N/A | Archaeologically: | 1 | Poor |
| ruin | | Hall's | Properties, | | N/A | | |
| | | Properties | Boschrand | | | | |
| | | | 283 JT | | Historically: Low | | |
| Not unique, | N/A | History of | Hall's | N/A | Archaeologically: | 1 | Poor |
| ruin | | Hall's | Properties, | | N/A | | |
| | | Properties | Boschrand | | | | |
| I | | I | 283 JT | | Historically: Low | İ | |
| | Not unique, ruin Not unique, ruin Not unique, ruin Feature of the farm infrastructure Not unique, ruin Not unique, ruin Not unique, ruin | Not unique, ruin Not unique, ruin N/A History of Hall's Properties N/A History of Hall's Properties N/A History of Hall's Properties Not unique, ruin N/A Not unique, ruin N/A Not unique, ruin N/A History of Hall's Properties Not unique, ruin N/A History of Hall's Properties Not unique, ruin N/A History of Hall's Properties Not unique, ruin Not unique, ruin N/A History of Hall's Properties Not unique, ruin N/A History of Hall's Properties | archaeological deposit context location Not unique, ruin N/A History of Hall's Properties, Boschrand 283 JT Not unique, ruin N/A History of Hall's Properties, Boschrand 283 JT Not unique, ruin N/A History of Hall's Properties, Boschrand 283 JT Feature of the farm infrastructure N/A History of Hall's Properties, Boschrand 283 JT Not unique, ruin N/A History of Hall's Properties, Boschrand 283 JT Not unique, ruin N/A History of Hall's Properties, Boschrand 283 JT Not unique, ruin N/A History of Hall's Properties, Boschrand 283 JT Not unique, ruin N/A History of Hall's Properties, Boschrand 283 JT Not unique, ruin N/A History of Hall's Properties, Boschrand 283 JT Not unique, ruin N/A History of Hall's Properties, Boschrand 283 JT Not unique, ruin N/A History of Hall's Properties, Boschrand 283 JT | Not unique, ruin N/A History of Hall's Properties, Properties Boschrand 283 JT N/A Properties Boschrand 283 JT Not unique, ruin N/A History of Hall's Properties, Properties, Boschrand 283 JT N/A Properties, Boschrand 283 JT Not unique, ruin N/A History of Hall's Properties, Boschrand 283 JT N/A Properties, Boschrand 283 JT Feature of the farm infrastructure N/A History of Hall's Properties, Boschrand 283 JT N/A Properties, Boschrand 283 JT Not unique, ruin N/A History of Hall's Properties, Boschrand 283 JT N/A Properties, Boschrand 283 JT Not unique, ruin N/A History of Hall's Properties, Boschrand 283 JT N/A Properties, Boschrand 283 JT Not unique, ruin N/A History of Hall's Properties, Boschrand 283 JT N/A Properties, Boschrand 283 JT Not unique, ruin N/A History of Hall's Properties, Boschrand 283 JT N/A Properties, Boschrand 283 JT Not unique, ruin N/A History of Hall's Properties, Boschrand 283 JT N/A Properties, Boschrand 283 JT | Archaeological deposit context deposit location of deposit archaeological/ historic material Not unique, ruin N/A History of Hall's Properties, Boschrand 283 JT N/A Archaeologically: N/A Historically: Low Not unique, ruin N/A History of Hall's Properties, Properties, Boschrand 283 JT N/A Archaeologically: N/A Historically: Low Not unique, ruin N/A History of Hall's Properties, Boschrand 283 JT N/A Archaeologically: N/A Archaeologically: N/A Historically: Low Feature of the farm infrastructure N/A History of Hall's Properties, Boschrand 283 JT N/A Archaeologically: N/A Historically: Medium Not unique, ruin N/A History of Hall's Properties, Boschrand 283 JT N/A Archaeologically: N/A Historically: Low Not unique, ruin N/A History of Hall's Properties, Boschrand 283 JT N/A Archaeologically: N/A Historically: Low Not unique, ruin N/A History of Hall's Properties, Boschrand 283 JT N/A Archaeologically: N/A Historically: Low Not unique, ruin N/A History of Hall's Properties, Boschrand 283 JT N/A Archaeologically: N/A Historically: Low Not unique, ruin N/A History of Hall's Properties, Boschrand 283 JT N/A Archaeologically: N/A Historically: Low | Not unique, ruin N/A History of Hall's Properties, Properties Boschrand 283 JT Not unique, ruin N/A History of Hall's Properties, Properties Boschrand 283 JT N/A Archaeologically: N/A Historically: Low N/A History of Hall's Properties, |

| NTN9 | Farm house | N/A | History of | Hall's | N/A | Archaeologically: | 1 | Good |
|-------|----------------|-----|------------|-------------|-----|-------------------|---|------|
| | | | Hall's | Properties, | | N/A | | |
| | | | Properties | Boschrand | | | | |
| | | | | 283 JT | | Historically: Low | | |
| | | | | | | | | |
| NTN10 | Farm house | N/A | History of | Hall's | N/A | Archaeologically: | 1 | Good |
| | | | Hall's | Properties, | | N/A | | |
| | | | Properties | Boschrand | | | | |
| | | | | 283 JT | | Historically: | | |
| | | | | | | Medium | | |
| | | | | | | | | |
| NTN11 | Farm shed | N/A | History of | Hall's | N/A | Archaeologically: | 1 | Good |
| | | | Hall's | Properties, | | N/A | | |
| | | | Properties | Boschrand | | | | |
| | | | | 283 JT | | Historically: Low | | |
| | | | | | | | | |
| NTN12 | Feature of the | N/A | History of | Hall's | N/A | Archaeologically: | 1 | Fair |
| | farm | | Hall's | Properties, | | N/A | | |
| | infrastructure | | Properties | Boschrand | | | | |
| | | | | 283 JT | | Historically: Low | | |
| | | | | | | | | |

6. Findings and recommendations

Mitigation measures were allocated to each site as discussed in section 5: Located sites and their description, tables 5.1 and 5.2. Twelve (12) sites were documented. There is one recorded graveyard site (NTN 1) which is considered to be of high local social significance (LS 3A, table 5.1, 5.2). The remaining sites range from those consisting of ruined remains of farm worker's dwellings and rated with low significance (NTN 2, 3, 5-8; GPC; table 5.1, 5.2) to existing dwellings and structures with medium and low significance (NTN 9-11; GPB & GPC; table 5.1, 5.2) and also sites associated with agricultural irrigation rated with low significance (NTN 12; GPC; table 5.1, 5.2). An historic canal (site NTN 4) is rated with medium significance but is located on the western side of the proposed development area. Evidence suggests that one of the existing houses (site NTN 10) is an historic house (older than 60 years). This is in terms of section 34 of the NHRA (25 of 1999) and signifies that before the houses are demolished, a valid permit must be obtained from the local (Provincial) heritage resources authority.

A *Heritage Management Plan* is recommended as a tool for the landowner to effectively manage the heritage aspect of the landscape in accordance with relevant Heritage Legislation. When any earth-moving activities are planned for this study area it is recommended that at least a desktop palaeontology (fossil remains) study is undertaken and that a qualified archaeologist monitors proceedings.

The bulk of archaeological remains are normally located beneath the soil surface. It is therefore possible that some significant cultural material or remains were not located during this survey and will only be revealed when the soil is disturbed. Should excavation or large scale earth moving activities reveal any human skeletal remains, broken pieces of ceramic pottery, large quantities of sub-surface charcoal or any material that can be associated with previous occupation, a qualified archaeologist should be notified immediately. This will also temporarily halt such activities until an archaeologist have assessed the situation. It should be noted that if such a situation occurs it may have further financial implications.

7. Bibliography

- 1. Amery, L.S. (ed),1909. *The times history of the war in South Africa 1899-1902*, Vol VI. London.
- 2. Barnard, C. 1975. Die Transvaalse Laeveld. Komee van 'n Kontrei.
- 3. Bergh, J.S. (ed.) 1998. *Geskiedenisatlas van Suid-Afrika. Die vier noordelike provinsies.* (J.L. van Schaik, Pretoria).
- 4. Bornman, H. 1995. Pioneers of the Lowveld.
- 5. Bornman, H. (red.) 1979. Nelspruit: 75 in '80. Stadsraad van Nelspruit.
- 6. Breutz, P.L. 1985. Pre-Colonial Africa: The South-Eastern Bantu Cultural Province.
- 7. Delius, P. 2007. *Mpumalanga History and Heritage*. University of KwaZulu-Natal Press.
- 8. Du Preez, S. J. *Peace attempts during the Anglo Boer War until March 1901.* Magister Artium thesis in History. Pretoria: University of Pretoria.
- 9. Evers, T.M. in Voight, E.A. 1981. *Guide to Archaeological Sites in the Northern and Eastern Transvaal.* Transvaal Museum, Pretoria.
- 10. Giliomee, H. 2003. *The Afrikaners biography of a people*. Tafelberg, Cape Town & Charlottsville.
- 11. Hall, H.L. 1938 (1990). I Have Reaped my Mealies. An Autobiography. Whitnall Simonsen.
- 12. Huyser, J. D. *Die Naturelle-Politiek van die Suid-Afrikaanse Republiek.* D. LITT. Verhandeling, Universiteit van Pretoria.
- 13. Huffman, T. N. 2007. *Handbook to the Iron Age: The Archaeology of Pre-Colonial Farming Societies in Southern Africa*. Kwa-Zulu Natal Press.
- 14. Jones, H. M. & Jones G. M. 1999. *A Gazetteer of the Second Anglo-Boer War.* 1899-1902. Buckinghamshire: The Military Press.
- 15. Mason, R. 1962. *Prehistory of the Transvaal: a record of human activity.* Witwatersrand University Press, Johannesburg.

- 16. Massie, R.H. 1905. The Native tribes of Transvaal. Prepared for the general staff war office. Harrison and Sons, London.
- 17. Myburgh, A.C. 1956. *Die Stamme van die Distrik Carolina*. Staatsdrukker. Pretoria.
- 18. Packard, P. 2001. "Malaria blocks development" revisited: the role of disease in the history of agricultural development in the Eastern and Northern Transvaal Lowveld. 1890-1960. Journal of Southern African Studies 27 (3), September 2001.
- 19. Ross, R. 2002. A Concise History of South Africa. Cambridge.
- 20. Van Vollenhoven, A.C. 2002. *Die Metodiek van Kultuurhulpbronbestuur (KHB).* S.A. Tydskrif vir Kultuurgeskiedenis 16(2).
- 21. Van Vollenhoven, A.C. 1995. *Die bydrae van Argeologie tot Kultuurhulpbronbestuur.* Referaat gelewer voor die Suid-Afrikaanse Vereniging vir Kultuurgeskiedenis, Transvaal Streektak, Sunnyside.
- 22. Surplus people project 1983 : *forced removal in South Africa. Volume 5: Transvaal.* Cape Town.
- 23. Union of South Africa. 1918. *Majority Report of the Eastern Transvaal Natives Land Committee.* Cape Town.

Primary Sources:

ARCHIVAL SOURCES (National Archive, Pretoria):

National Archives of South Africa. 1919-1922. SAB, CDB: 3/997 TAD13/1/85. Plaaslike bestuur. Landbouhoewes. Boschrand Citrus Estates. Distrik Barberton. Plaas Boschrand 125.

National Archives of South Africa. 1929. SAB, JUS: 1108 1/4/29/2. Transfer Portion E of "Boschrand" 125 Barberton Sellers: The Boschrand Citrus Company (Beyers, Brink and Hofner).

National Archives of South Africa. 1936. SAB, VWR: 109 B645/195/5. Aansoek deur plaaseienaar Boschrand 125. AJ Buys. Bywoner JJ Carstens.

National Archives of South Africa. 1938. SAB, URU: 1738 2155. Issue of Crown Grant to JBP Uys in respect of holding comprising 2 portions of farm Boschrand, No 125, Nelspruit.

National Archives of South Africa. 1945. SAB, URU: 2221 722. Issue of Crown Grant to HL Pepler in respect of Portion "C" of farm Boschrand No 125, Nelspruit.

National Archives of South Africa. 1945. SAB, URU: 2221 723. Issue of Crown Grant to JF Pepler in respect of Portion "B" of the farm Boschrand No 125, Nelspruit.

National Archives of South Africa. 1951. SAB, URU: 2885 1609. Uitreiking van Kroongrondbrief ten aansien van Ged 1 van Ged 1 van Boschrand Nr 125, distrik Nelspruit.

National Archives of South Africa. 1973. SAB, URU: 6375 1092. Minuut waarin aanbeveel word dat die Elektrisiteitsvoorsieningskommissie deurgangsreg vir die oprigting en instandhouding van en toesighouding oor 'n transmissielyn oor die volgende eiendomme by Resterende Gedeelte van die plaas Marathon no. 275 JT en Resterende Gedeelte van Gedeelte 14 – van die plaas Boschrand No. 238 - JT beide gelee in die distrik Nelspruit, wat aan Mnre. HL Hall en Seuns Beperk behoort.

National Archives of South Africa. 1990. SAB, RLA: 150 20/2/22/5/10. Fisiese beplanning. Gidsbeplanning. Nelspruit, Witrivier. Wysiging van die gidsplan. Gedeelte 4 van die plaas Boschrand 283 JT.

National Archives of South Africa. 1992. SAB, RLA: 155 20/2/22/5/32. Fisiese beplanning. Gidsbeplanning. Nelspruit, Witrivier. Wysiging van die gidsplan. 'n Gedeelte van die Restant van Gedeelte 14 van die plaas Boschrand 283 JT.

MAPS:

Major Jackson, H. M. 1902. *Transvaal Major Jackson Series Map. Sheet No. 8. Barberton.* Pretoria: Field Intelligence Department.

Topographical Map. 1984. *South Africa. 1:50 000 Sheet. 2530BD Nelspruit. Third Edition* Pretoria: Government Printer.

Imperial Maps of South Africa. 1900-1919. Compiled from farm survey data by the Field Intelligence Dept.

ELECTRONIC SOURCES:

South African History Online. 2013. 1999. *Nelspruit Timeline 1815-1996*. [Online]. Available: http://www.sahistory.org.za/topic/nelspruit-timeline-1815-1996?page=2. [Cited 22 May 2013]

Appendix A

Terminology

"Alter" means any action affecting the structure, appearance or physical properties of a place or object, whether by way of structural or other works, by painting, plastering or other decoration or any other means.

"Archaeological" means -

- Material remains resulting from human activity which are in a state of disuse and are in or on land and which are older than 100 years, including artifacts, human and hominid remains and artificial features or structures;
- Rock Art, being any form of painting, engraving or other graphic representation on a fixed rock surface or loose rock or stone, which was executed by human agency and which is older than 100 years, including any area within 10m of such representation;
- Wrecks, being any vessel or aircraft, or any part thereof, which was wrecked in South Africa, whether on land, in the internal waters, the territorial waters or in the maritime culture zone of the Republic, as defined respectively in sections 3, 4 and 6 of the Maritime Zones Act, 1994 (Act No. 15 of 1994), and any cargo, debris or artifacts found or associated therewith, which is older than 60 years or which SAHRA considers to be worthy of conservation; and
- Features, structures and artefacts associated with military history which are older than 75 years and the sites on which they are found;

"Conservation", in relation to heritage resources, includes protection, maintenance, preservation and sustainable use of places or objects so as to safeguard their cultural significance;

"Cultural significance" means aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value or significance;

"Development" means any physical intervention, excavation, or action, other than those caused by natural forces, which may in the opinion of a heritage authority in any way result in a change to the nature, appearance or physical nature of a place, or influence its stability and future well-being, including –

- construction, alteration, demolition, removal or change of use of a place or a structure at a place;
- carrying out any works on or over or under a place;

- subdivision or consolidation of land comprising, a place, including the structures or airspace of a place;
- constructing or putting up for display signs or hoardings;
- any change to the natural or existing condition or topography of land; and
- any removal or destruction of trees, or removal of vegetation or topsoil;

"Expropriate" means the process as determined by the terms of and according to procedures described in the Expropriation Act, 1975 (Act No. 63 of 1975);

"Foreign cultural property", in relation to a reciprocating state, means any object that is specifically designated by that state as being of importance for archaeology, history, literature, art or science;

"Grave" means a place of internment and includes the contents, headstone or other marker of such a place, and any other structure on or associated with such place;

"Heritage resource" means any place or object of cultural significance;

"Heritage register" means a list of heritage resources in a province;

"Heritage resources authority" means the South African Heritage Resources Agency, established in terms of section 11, or, insofar as this Act (25 of 1999) is applicable in or in respect of a province, a provincial heritage resources authority (PHRA);

"Heritage site" means a place declared to be a national heritage site by SAHRA or a place declared to be a provincial heritage site by a provincial heritage resources authority;

"Improvement" in relation to heritage resources, includes the repair, restoration and rehabilitation of a place protected in terms of this Act (25 of 1999);

"Land" includes land covered by water and the air space above the land;

"Living heritage" means the intangible aspects of inherited culture, and may include -

- cultural tradition;
- oral history;
- performance;
- ritual;
- popular memory;
- skills and techniques;

- indigenous knowledge systems; and
- the holistic approach to nature, society and social relationships;

"Management" in relation to heritage resources, includes the conservation, presentation and improvement of a place protected in terms of the Act;

"Object" means any moveable property of cultural significance which may be protected in terms of any provisions of the Act, including –

- any archaeological artifact;
- paleontological and rare geological specimens;
- meteorites:
- other objects referred to in section 3 of the Act;

"Owner" includes the owner's authorized agent and any person with a real interest in the property and –

- in the case of a place owned by the State or State-aided institutions, the Minister or any other person or body of persons responsible for the care, management or control of that place;
- in the case of tribal trust land, the recognized traditional authority;

"Place" includes -

- a site, area or region;
- a building or other structure which may include equipment, furniture, fittings and articles associated with or connected with such building or other structure;
- a group of buildings or other structures which may include equipment, furniture, fittings
 and articles associated with or connected with such group of buildings or other structures;
- an open space, including a public square, street or park; and
- in relation to the management of a place, includes the immediate surroundings of a place;

"Site" means any area of land, including land covered by water, and including any structures or objects thereon;

"Structure" means any building, works, device or other facility made by people and which is fixed to land, and includes any fixtures, fittings and equipment associated therewith.

Appendix B

List of located sites

A total of twelve sites were located on the surveyed area and numbered NTN 1-12. The initials "NTN" represent "Nelspruit Township Northern (area), followed by the number of the site. A spatial location with the aid of a GPS (Global Positioning System) was added to each site.

9.1. Site name: NTN 1 (Site 1)

Date of compilation: 03/08/2013

GPS reading: S25°25'14.25" E030°57'02.20"

Photo: Fig. 3, 4, 5.

9.2. Site name: NTN 2 (Site 2)

Date of compilation: 03/08/2013

GPS reading: S25°25'21.64" E030°57'00.98"

Photo: Fig. 6.

9.3. Site name: NTN 3 (Site 3)

Date of compilation: 03/08/2013

GPS reading: S25°25'25.64" E030°57'00.40"

Photo: Fig. 7, 8.

9.4. Site name: NTN 4 (Site 4)

Date of compilation: 03/08/2013

GPS reading: S25°25'28.83" E030°56'58.30"

Photo: Fig. 9.

9.5. Site name: NTN 5 (Site 5)

Date of compilation: 03/08/2013

GPS reading: S25°25'28.51" E030°57'00.33"

Photo: Fig. 10.

9.6. Site name: NTN 6 (Site 6)

Date of compilation: 03/08/2013

GPS reading: S25°25'31.09" E030°57'00.81"

Photo: Fig.11, 12.

9.7. Site name: NTN 7 (Site 7)

Date of compilation: 03/08/2013

GPS reading: S25°25'38.74" E030°57'06.75"

Photo: Fig. 13.

9.8. Site name: NTN 8 (Site 8)

Date of compilation: 03/08/2013

GPS reading: S25°25'39.00" E030°57'08.68"

Photo: Fig. 14, 15.

9.9. Site name: NTN 9 (Site 9)

Date of compilation: 03/08/2013

GPS reading: S25°25'42.77" E030°57'23.56"

Photo: Fig. 16.

9.10. Site name: NTN 10 (Site 10)

Date of compilation: 03/08/2013

GPS reading: S25°25'41.13" E030°57'25.91"

Photo: Fig. 17.

9.11. Site name: NTN 11 (Site 11)

Date of compilation: 03/08/2013

GPS reading: S25°25'43.31" E030°57'27.32"

Photo: Fig. 18.

9.12. Site name: NTN 12 (Site 12)

Date of compilation: 03/08/2013

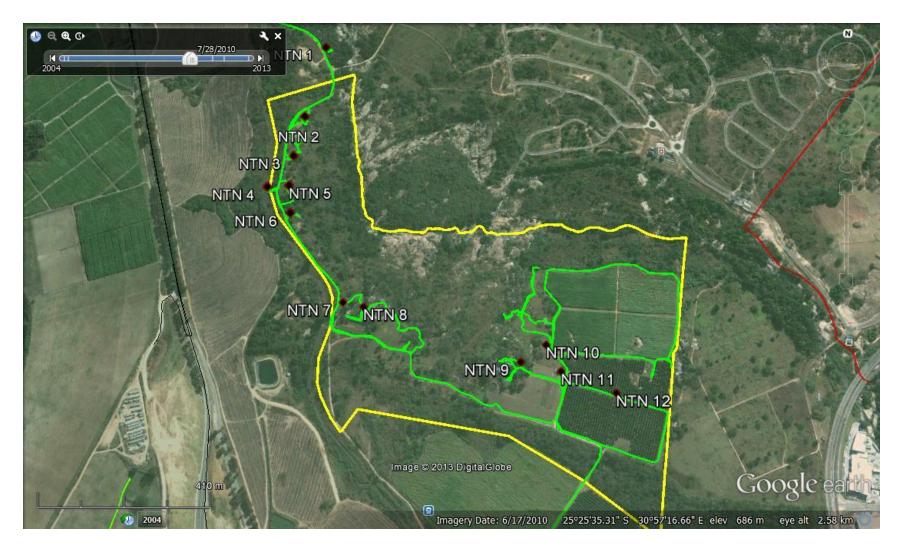
GPS reading: S25°25'44.81" E030°57'32.43"

Photo: Fig. 19, 20.

Appendix C



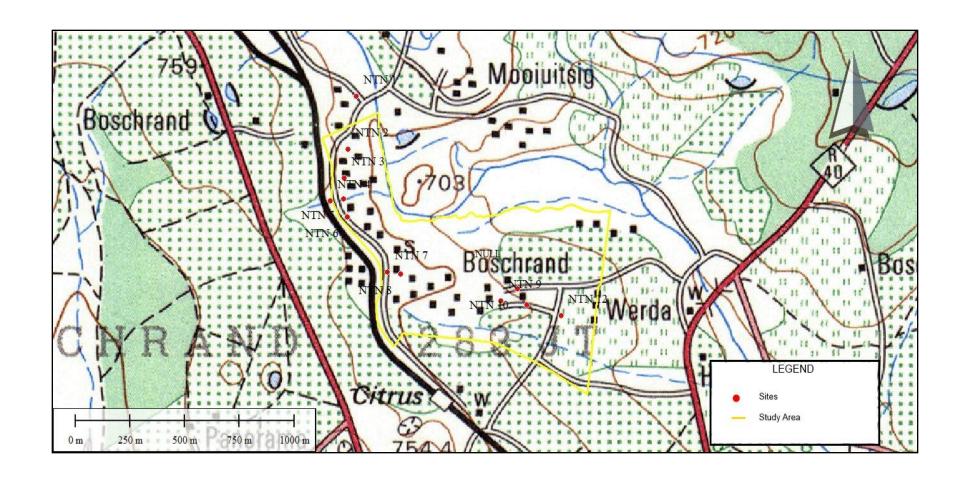
An aerial image of 2004. The black arrows indicate existing dwellings and buildings.

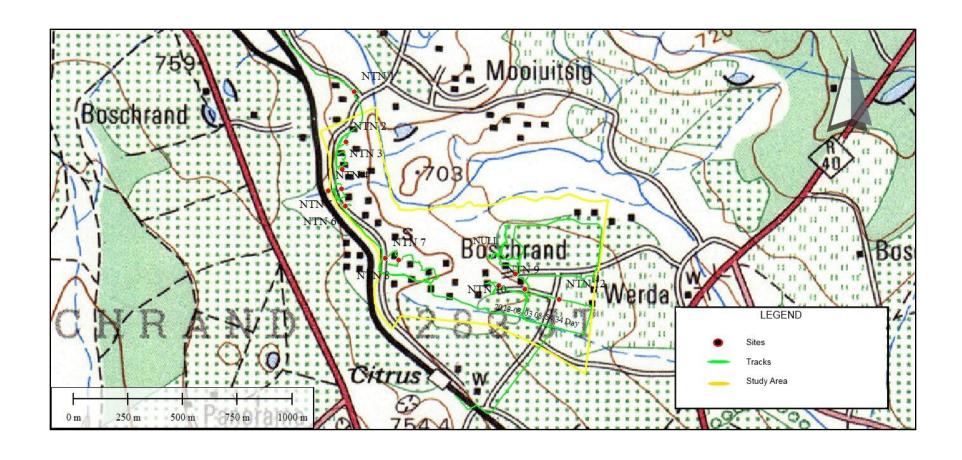


An aerial image of 2010. All the dwellings and structures have been demolished. Except those at sites NTN 9 and NTN 10.









Appendix D

Photos of located sites



Fig. 1. General view of the study area taken in a north-eastern direction.



Fig. 2. A general view (east) of the avocado orchard.



Fig. 3. Site NTN 1. A view of the graveyard in a northern direction.



Fig. 4. Site NTN 1. Graves in the foreground, view to the west.



Fig. 5. Site NTN 1. Some of the graves are marked. Approx 39 graves located in the graveyard.



Fig. 6. Site NTN 2. The location of a house ruin. Note avocado tree and bamboo bush.



Fig. 7. Site NTN 3. Remains of a house were located near the avocado tree. Also note the banana trees to the left. The often impenetrable thick grass impairs visibility on the ground.



Fig. 8. Site NTN 3. A second photo, view towards the south.



Fig. 9. Site NTN 4. The irrigation canal passes by the western border of the study area.



Fig. 10. Site NTN 5. Remains of a former house or dwelling was located here.



Fig. 11. Site NTN 6. Remains of a dwelling visible on the soil surface.



Fig. 12. Site NTN 6. Earth mounds point to the activity of earth-moving equipment responsible for the demolishing of the houses.



Fig. 13. Site NTN 7. A concrete platform. Photo taken in southern direction.



Fig. 14. Site NTN 8. The remains of a large building, possible a farm shed or packing facility. Photo north.



Fig. 15. Site NTN 8. A view to the east.



Fig. 16. Site NTN 9. A farm house, currently in use.



Fig. 17. Site NTN 10. A farm house which probably has historic significance as it is visible on old aerial photos.



Fig. 18. Site NTN 11. A farm shed.



Fig. 19. Site NTN 12. An irrigation system, motor crossing in the avocado orchard.



Fig. 20. Site NTN 12. A closer view of the feature. The irrigation system does not function anymore.