

Phase 1 Archaeological Survey on the farm Toulon 383 KU located in
Sabie Sand Nature Reserve, Mpumalanga Province.

Compiled by:



For **Henwood Environmental Solutions**

Surveyor: Mr JP Celliers

30 September, 2016

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 area.....	12
4.1.3. The Voortrekkers.....	13
4.1.4. History of the Anglo Boer War (1899-1902) in the area	15
4.1.5. The Easten and Selati Railway Lines.....	15
4.1.6. The Sabie Game Reserve and Kruger National Park.....	19
4.1.7. The Sabi Sand Reserve.....	19
4.1.8. Game Ranger Walter Henry (Harry) Kirkman (1899-1989) and the farm Toulon.....	20
4.2. Archaeology.....	23
4.2.1. Stone Age	23
4.2.2. Early Iron Age.....	26
4.2.3. Late Iron Age.....	28
5. Located sites, description and suggested mitigation	30
6. Findings and recommendations.....	38
7. Bibliography	39
Appendix A.....	41
Appendix B.....	45
Appendix C.....	47
Appendix D.....	51

10.4 The Specialist

I, JEAN-PIERRE CLEWERS, as the appointed specialist hereby declare/affirm the correctness of the information provided as part of the application, and that I:

- in terms of the general requirement to be independent (tick which is applicable):

<input checked="" type="checkbox"/>	other than fair remuneration for work performed/to be performed in terms of this application, have no business, financial, personal or other interest in the activity or application and that there are no circumstances that may compromise my objectivity; or
-------------------------------------	---

<input type="checkbox"/>	am not independent, but another EAP that is independent and meets the general requirements set out in Regulation 13 has been appointed to review my work (Note: a declaration by the review specialist must be submitted);
--------------------------	--

- have expertise in conducting specialist work as required, including knowledge of the Act, regulations and any guidelines that have relevance to the proposed activity;
- will ensure compliance with the EIA Regulations 2014;
- will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the application;
- will take into account, to the extent possible, the matters listed in regulation 18 of the regulations when preparing the application and any report, plan or document relating to the application;
- will disclose to the proponent or applicant, registered interested and affected parties and the competent authority all material information in my possession that reasonably has or may have the potential of influencing any decision to be taken with respect to the application by the competent authority or the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority (unless access to that information is protected by law, in which case I will indicate that such protected information exists and is only provided to the competent authority);
- declare that all the particulars furnished by me in this form are true and correct;
- am aware that it is an offence in terms of Regulation 48 to provide incorrect or misleading information and that a person convicted of such an offence is liable to the penalties as contemplated in section 49B(2) of the National Environmental Management Act, 1998 (Act 107 of 1998).



Signature of the specialist

KUDZALA ANTIQUITY CC

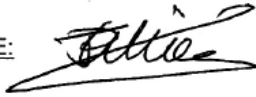
Name of company

05/10/2016

Date

I, Jean-Pierre Celliers as duly authorised representative of Kudzala Antiquity CC, hereby confirm my independence as a specialist and declare that neither I nor the Kudzala Antiquity CC have any interest, be it business, financial, personal or other, in any proposed activity, application or appeal in respect of which the client was appointed as Environmental Assessment practitioner, other than fair remuneration for work performed on this project.

SIGNATURE:

A handwritten signature in black ink, appearing to read 'J. Celliers', written over a horizontal line.

Executive summary

Site name and location: The farm Toulon 383 KU located in Sabie Sand Nature Reserve, Mpumalanga.

Purpose of the study: An Archaeological and historic study in order to identify heritage resources on the farm Toulon 383 KU in respect of proposed expansion of the existing Kirkmans Kamp.

1:50 000 Topographical Map: 2431 DC Skukuza (1988)

EIA Consultant: Henwood Environmental Solutions.

Client: Exeter Holdings & Malamala Game Reserve.

Heritage Consultant: Kudzala Antiquity CC.

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

E-mail: kudzala@lantic.net

Report date: 20 September 2016

Description and findings:

An Archaeological resource survey was undertaken by Kudzala Antiquity CC in respect of the proposed expansion of the existing Kirkmans Kamp in the Sabi Sand Nature Reserve. This historic camp is located on the farm Toulon 383 KU and part of a number of camps and lodges in this well-known Reserve, Mpumalanga Province. The study was done with the aim of identifying sites which are of heritage significance on the 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).

The current land use on the proposed development area is nature reserve on the banks of the Sand River.

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 desktop archival study in combination with social consultation formed the basis on which sites were identified, located and assessed.

A total of eight (8) sites were located and documented. Two (2) of these (sites SO1, 2) are survey orientation points of no significance. The remaining sites range from surface finds (sites KSS 1, 2) which point to previous human activity inside the proposed development area, rated low significance (table 5.1 – 5.4), to significant heritage features outside of the proposed development area which defines a larger heritage landscape. The latter include a late 19th century grave (site KSS 3) the remains of the historic Selati Railway Line (sites KSS 4, 5) and the original farmstead at Kirkmans Kamp (site KSS 6). In terms of the archaeological component of the Act (25 of 1999,

section 35) no sites or features of archaeological significance was recorded inside the proposed development area during the survey. In terms of the built environment (section 34 of the Act) no significant buildings were identified inside the proposed development area. In terms of graves and burial grounds (section 36 of the Act) none were found inside the proposed development area. From a heritage perspective it is therefore recommended that the proposed activities continue. The original farmstead at the main camp (site KSS 6), the remains of the Selati Railway Line (KSS 4, 5) and the lone grave of C.C. Moloney († 22 July 1894) are all considered to be of high heritage significance albeit not located inside the proposed development area. General recommendations about these sites are summarized in section 5 of this report.

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 the farm Toulon 383 KU located in Sabie Sand Nature Reserve, Mpumalanga Province. The survey was conducted for *Henwood Environmental Solutions*.

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 Bushbuckridge Local Municipality, Mpumalanga Province.

The survey was carried out on approximately 20 ha of indigenous Granite Lowveld in the Sabi Sand Reserve not far from the Kruger Gate of the Kruger National Park. Limiting factors include the dense nature of the grass and bush which limits the visibility of archaeological and heritage sites and features.

Veld type: The vegetation is classed as Granite Lowveld comprising tall shrubland with few trees to moderately dense woodland on the deep sandy uplands with *Terminalia sericea*, *Combretum zeyheri* and *C. Tricholaena Eragrostis rigidior*. Dense thicket to open savanna in the bottomlands. The dense herbacious layer contains the dominant *Digitaria eriantha*, *Panicum maximum* and *Astrida congesta* on fine-textured soils. The brackish bottomlands support *Sporobolus nitens*, *Urochloa mosambicensis* and *Chloris virgata* (Mucina and Rutherford, 2009).

Geology: Swazian Goudplaats Gneiss, Makhutswi Gneiss and Nelspruit Suite occur from north to south. Further south, the younger Mpuluzi Granite form the major base geology of the area. Archaean gneiss and granite weather into sandy soils in the uplands and clayey soils with high sodium content in the lowlands.

3. Methodology

The methodological approach for this study meets the requirements of relevant heritage legislation. A desktop archival and historic background 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.

Social Consultation: During the survey, ranger at Sabi Sand Mr reason Mashego was consulted regarding the location of graves or possible heritage features inside the proposed development area. He related that to his knowledge none of these exist in the study area.

Historical maps: 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 artefacts 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
- Historical maps

3.1.1. Previous Archaeological studies in the area

An archaeological impact study (AIA) done in March 2012 by JP Celliers (Celliers, 2012) near Acornhoek indicated no sites of archaeological or heritage significance. Site monitoring during earthworks at Elephant Point near the Kruger Gate of the Kruger National Park conducted by Celliers in September 2012 revealed no archaeologically significant feature or material.

In September of 2012 Mr JP Celliers conducted an Archaeological Monitoring study during residential development works on the Elephant Point Private Resort located on the farm Belfast 291 KU. No archaeological or historic material was encountered during the monitoring.

Archaeological research conducted by Van Vollenhoven, Pelser and Teichert in 2006 at the historic Steinaecker's Horse Post (block house) near the Sabie Bridge in Skukuza Rest Camp revealed archaeological remains associated with the occupation of the site during the Anglo Boer War (1899-1902) where the Block House once stood (Van Vollenhoven, Pelser & Teichert, 2006).

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.

Values used to assign significance to a site 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

The first inhabitants of the eastern Lowveld were probably the San or Bushmen. They were a nomadic people who lived together in small family groups and relied on hunting and gathering of food for survival. Evidence of their existence is to be found in numerous rock shelters throughout the Lowveld where some of their rock paintings are still visible. A number of these shelters have been documented in the Nelspruit area (Bornman, 1995; Schoonraad in Barnard, 1975). It has been argued that the red ochre source for these paintings is to be found at Dumaneni, near Malelane (Bornman, 1995).

Two Late-Holocene (Later Stone Age) sites near Hazyview in the Kruger National Park date to the last 2500 years and are associated with pottery and microlith stone tools (Bergh, 1998: 95). This is contemporary to typical hunter-gatherer lifestyle and may also have been sites frequented by San.

It was only later that Bantu-speaking tribes moved into this area from the northern parts of Southern Africa and settled here. This period is referred to as the Early Iron Age (AD 200-1500 approx.). These were presumably Sotho-Tswana herder groups.

Various historians and ethnographers describe that the Lowveld was frequented by Swazi and Sotho-Tswana groups during historic times i.e. Late Iron Age times during the period AD 1500-1800. (Barnard, 1975; Bergh, 1998; Bornman, 2002; Herbst, 1985; Myburgh, 1949).

Old trade routes were well established before the period of Colonial expansion and these routes mainly existed as a direct consequence of metallurgy and mining for iron, tin, copper and some gold to make weapons, agricultural equipment and ornaments (Bergh, 1998:103). The earliest signs of iron mining and working in the old Transvaal dates to approximately 300 AD and copper mining and working in Southern Africa may have been practiced as early as 620 AD (Bergh, 1998:103).

These people were responsible for the establishment of large centres like Monomotapa the Zimbabwe Complex and also the famed Mapungubwe in the Limpopo valley. At around 900 AD Arab merchants established a trade post at Sofala (Beira). Since the start of the 11th century, these Arabs had trade relations with the people of Zimbabwe. Textiles, porcelain and glass beads were traded for gold, ivory and other minerals.

An ancient trade route passed close-by the current Nelspruit and started from Delagoabay in a westward direction through the Lowveld towards the gold fields of Lydenburg, by passing through Malalapoort, the Nkhomati and Crocodile Rivers to Skipberg in the current Kruger National Park close-by the place where Pretoriuskop Rest Camp is located. From here onwards there were two possible routes up the mountains to reach the goldfields. The first one passed by Spitskop (Sabie) and from there on to Lydenburg. The second passed south of the “Devils Knuckles” to Lydenburg. The Voortrekkers used this route in 1845 when making the wagon route between Ohrigstad and Delagoabay (Berg, 1998: 104). There were also several linking routes to existing main routes, one of which started from Sabie or Lydenburg to the route which linked Delagoabay to the Soutpansberg via Pilgrim’s Rest. It is also believed that a footpath existed at the foothills of the (Transvaal) Drakensberg which led around the mountain to link again with a major route alongside the Olifants River (Bergh, 1998:104).

In 1721 Dutch sailors reached Delagoa Bay and settled there for nine years, during this time they launched a number of expeditions inland. During August 1723 lieutenant Jan Steffler and 17 men launched the first of these expeditions but they were ambushed by natives shortly after crossing the Lebombo Mountains. Exactly where they crossed the mountains is uncertain but it is possible that they were actually in northern Swaziland when they were attacked. Steffler succumbed as a result of this ambush and his followers returned to Delagoa Bay (Bergh, 1998:116).

A second attempt to create an inland route took place two years later in June 1725 when Francois de Cuiper and 34 men departed from Delagoa Bay and travelled in a north-western direction. They reached Gomondwano in the current Kruger National Park where they were also attacked by a local tribe. This resulted in them also having to return to Delagoa Bay. Although this attempt was also not successful, it is seen as the first European intrusion into this northern area (Bergh, 1998:116).

In the (Eastern Transvaal) Lowveld a sub-group of the Northern Sotho, known as the eastern Sotho, were present nearby the eastern escarpment. They are known as the Pulana, Pai (emaMbayi) and Kutswe, these people moved from northern Swaziland further northwards when Swazi expanded into this area during the *mfecane* (Bergh, 1998:107-108). One of the recorded events relates to the attack of the Ndwande under Zwibe on the Pedi in 1825 (Bergh, 1998:114-115). This seems to have started from the Lowveld in the region of the Pretoriuskop area towards Steelpoort.

During the nineteenth century the Lowveld area of Mpumalanga was extensively settled by both Bantu and European groups that migrated into this area. Bantu migration was mainly as a result of political upheaval during the *mfecane* (“the crushing” in Nguni). This was a period of bloody tribal and faction struggles in present-day KwaZulu Natal and on the Highveld area, which occurred around the early 1820’s until the late 1830’s (Bergh, 1998). It came about in response

to heightened competition for land and trade, and caused population groups like gun-carrying Griquas and Shaka's Zulus to attack other tribes (Giliomee, 2003). During this period, a movement of Swazi people took place to the areas north and northwest of Swaziland. As a result reports indicate that the Swazi were living in the Lowveld area by the 1840's (Bergh, 1998).

Before the *mfecane* period (1820's) small farmer groups including the Pai and Pulana resided in the mountainous area surrounding Barberton and Nelspruit. The conflict during the *mfecane*, when the Swazi under Mswati II raided these smaller groups, resulted in scattered settlement of those who managed to escape the Swazi onslaught. Evidence of these scattered settlements are sometimes found in the form of small stone walled enclosures in and around Barberton, Nelspruit and onwards to the Schoemanskloof.

According to Bornman:

“Mswati continued his attacks on the emaMbayi (Sotho) tribes living south of the Ngwenya (Crocodile) and the Mlambongwane (Kaap) Rivers, who fled into the present day Kruger National Park and into the mountainous area of Mphakeni (Crocodile Gorge) and the Three Sisters Mountains. But as soon as the Swazi army had retreated, the emaMbayi returned to their old haunts and reoccupied them.

Again the Swazi regiments drove the emaMbayi from this area. The battle, which took place near the creek, today known as Low's Creek, west of the Three Sisters Mountain, was so fierce that the creek ran red with the blood of the slain. After the battle the Swazi named the creek: the red (or blood) river (Mantibovu) and the Three Sisters they named Mbayiyane, meaning the 'mountain of the emaMbayi'.

Mswati proceeded systematically to settle this area with members of his own family and trusted commoners after they killed Tsibeni and evicted the remnants of his people who fled to an area near Legogote, where they are still living today” (Bornman, 1995).

Archaeological evidence recorded in *Prehistory of the Transvaal: a record of human activity* does however refer to the presence of terraced settlement and a set of “unusual group of walls” that most likely indicates the presence of a small Iron Age agricultural village in the vicinity of the area in which the farm is located in Mpumalanga (Mason, 1962). Information cited in the *Geskiedenisatlas van Suid-Afrika. Die vier noordelike provinsies* confirms the presence of Late Iron Age settlements in the area between ca 1000 and 1800 (Bergh, 1998).

4.1.2. Historic maps of the area

Since the mid 1800's up until the present, South Africa has been divided and re-divided into various different districts. Since 1945, the Bushbuckridge area formed part of the Lydenburg district. This remained the case up until 1902, when the Barberton district was proclaimed.

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.

Railway expansion continued up until the Anglo-Boer War (1899-1902) and thereafter (Bergh, 1999). After the establishment of the Union of South Africa on 31 May 1910 the Transvaal had the most railway track in terms of distance. Some 2 730km of railway connected the economic centres of this province. Railways made a huge contribution towards economic development especially in the Witwatersrand area where it served as important platform for mining and industrial development (Bergh, 1999).



Fig. 4.1. Railway development in the Transvaal between 1889 – 1980 (Bergh, 1999: 79)

The decade after establishment of the Union is characterised by a sharp increase in railway development especially between 1911 – 1916 after which a period of inactivity followed due to the First World War (Bergh, 1999). Most of the development took place in the Eastern Transvaal and five railway lines were constructed in order to promote the growing agricultural industry.

Ermelo was linked with Piet Retief and further to the south with Comondale and Vryheid in Natal. The Komatipoort – Newington line was extended and passed over Acornhoek, Hoedspruit, Letsitele, Tzaneen and Soekmekaar where it connects with the northern line from Pietersburg towards Louis Trichardt and Schoemansdal (fig. 4.1.) (Bergh,1999).

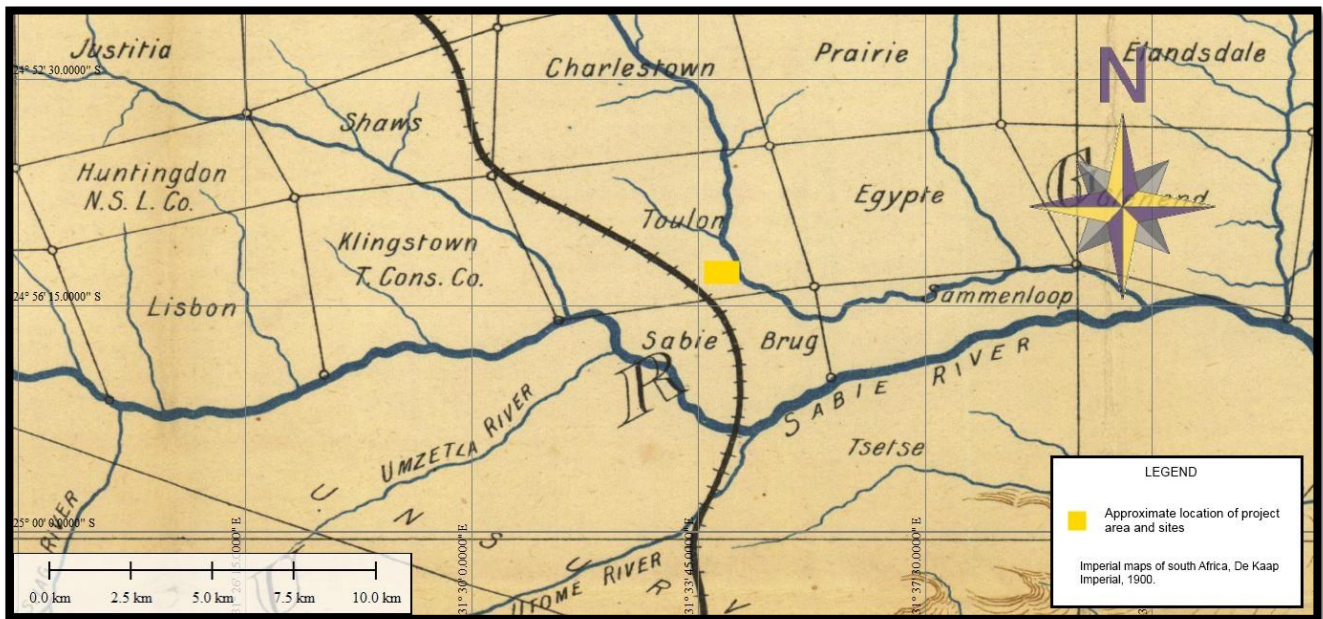


Fig. 4.2. The Imperial Map of South Africa 1900-1919. The farm Toulon and the approximate location of the study area is marked in yellow. Note the Selati Railway Line to the west of the area.

4.1.3. The Voortrekkers

The Groot Trek of the Voortrekkers started with the Tregardt- van Rensburg trek in 1835. The two men met where Tregardt and his followers crossed the Orange River at Buffelsvlei (Aliwal North). Here van Rensburg joined the trek northwards. On August 23, 1837 the Tregardt trek left for Delagoabay from the Soutpansberg. They travelled eastwards alongside the Olifants River to the eastern foothills of the Drakensberg. From here they travelled through the Lowveld and the current Kruger National Park where they eventually crossed the Lebombo mountains in March 1838. They reached the Fortification at Lourenço Marques on 13 April 1838 (Bergh, 1998:124-125).

Permanent European (Voortrekker) settlement of the eastern areas of Mpumalanga can first be traced back to a commission under the leadership of A.H. (Hendrik) Potgieter who negotiated with the Portuguese Governor at Delagoabaai in 1844 for land. It was agreed that these settlers could settle in an area that was four days journey from the east coast of Africa between the 10° and 26° south latitudes. Voortrekkers started migrating into the area in 1845. Andries-Ohrigstad was the first town established in this area in July 1845 after the Voortrekkers successfully negotiated for land with the Pedi Chief Sekwati. Farms were given out as far west as the Olifants River. The western boundary was not officially defined but at a Volksraad meeting in 1849 it was decided that the Elands River would be the boundary between the districts of Potchefstroom and Lydenburg as this eastern portion of the Transvaal was then known (Bergh, 1998).

Due to internal strife and differences between the various Voortrekker groups that settled in the broader Transvaal region, the settlers in the Ohrigstad area now governed from the town of Lydenburg decided to secede from the Transvaal Republic in 1856. The Republic of Lydenburg laid claim to a large area that included not only the land originally obtained from the Pedi Chief Sekwati in 1849 but also other areas of land negotiated for from the Swazis. The Republic of Lydenburg was a vast area and stretched from the northern Strydpoort Mountains to Wakkerstroom in the south and Bronkhortsspruit in the west to the Swazi border and the Lebombo mountains east.

As can be expected, the migration of Europeans into the north would have a significant impact on the indigenous people who populated the land. This was also the case in Mpumalanga. In 1839 Mswati succeeded Sobhuza (also known as Somhlomo) as king of the Swazi. Threatened by the ambitions of his half brothers, including Malambule, who had support from the Zulu king Mpande, he turned to the Ohrigstad Boers for protection. He claimed that the land that the Boers had settled on was Swazi property. The Commandant General of the Ohrigstad settlement, Andries Hendrik Potgieter, responded that the land was ceded to him by the Pedi leader Sekwati, in return for protection of the Pedi from Swazi attacks (Giliomee, 2003).

However, in reaction to the increasingly authoritarian way in which Potgieter conducted affairs at Ohrigstad, the Volksraad of Ohrigstad saw Mswati's offer as a means to obtain more respectable title deeds for the property (Bonner, 1978). According to a sales contract set up between the Afrikaners and the Swazi people on 25 July 1846, the former were the rightful owners of the land that had its southern border at the Crocodile River, which stretched out in a westerly direction up to Elandspruit; of which the eastern border was where the Crocodile and Komati rivers joined and then extended up to Delagoa bay in the north (Van Rooyen, 1951). The Europeans bought the land for a 100 heads of cattle (Huyser).

4.1.4. 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 Switzerland (Bergh, 1999: 51; 54).

4.1.5. The Eastern and Selati Railway Lines

The building of the railway line between Pretoria and Delagoa Bay commenced after the Kruger Government gave the concession for the building of the line to the Nederlandsche Zuid-Afrikaansche Spoorweg-Maatschappij (NZASM). The railway line was completed in 1895 (de Jong et al. 1988).

Before completion of the Eastern, or Delagoa Bay Railway line in 1895, payable gold was discovered in the Lowveld regions of Gravelotte, Leydsdorp, Rubbervale, Trichardtsdal and the Selati Goldfields. This necessitated that a railway line to connect the North-eastern Transvaal with the central markets of the ZAR be constructed (Pienaar, 1990).

President Paul Kruger supported this idea and in July 1890 he managed to convince the "Volksraad" that a proposed railway line connecting the Soutpansberg and Selati Goldfields with the main line to Lourenço Marques (Delagoa Bay) be approved.

This proved to be quite an expensive project and in May of 1893 the first plans for the railway was approved by railway commissioner Mr J.S. Smit (Pienaar, 1990). The Selati railway line would be 307 km long and the project take three years to complete at an estimated cost of £6 000 per km.

The contractor who was commissioned to complete the work was that of Baron Eugène Oppenheim who had to commit the first £500 000 after which the ZAR Government would follow with £1,5 million. The construction company appointed for the work, Westwood & Winby, completed surveying of the line in early 1893 and by July of that year some 40 km of the line was completed (Pienaar, 1990). Unfortunately Oppenheim acted unlawfully in his dealings with the ZAR and after an enquiry initiated by Smit, all work on the railway halted after approximately 120 km between Komatipoort and Newington was completed (fig. 4.1.). After numerous legal battles both in ZAR and abroad, all concessions awarded to Oppenheim was nullified and at that stage the Selati Railway line was left incomplete. Materials and tools used for the construction of the line were left abandoned in the wilderness together with numerous unmarked graves of British workers who succumbed to malaria (Pienaar, 1990). The graveyard in Komatipoort is testament to this and a number of individuals lie buried here including Patrick O'Connor (11 June 1893), Aubrey Drury (24 June 1895), Frank Wilson (18 September 1893), George Charles Bovey (30 November 1893) and John Frederick Farrall (21 August 1894). Although no evidence could be found, it is probable that the grave of C.C. Moloney who died 22 July 1894, located very near the Selati line in the Sabi Sand Reserve and near Kirkmans Kamp is further testimony to the hardships endured by the railway labourers (fig. 4.2.).

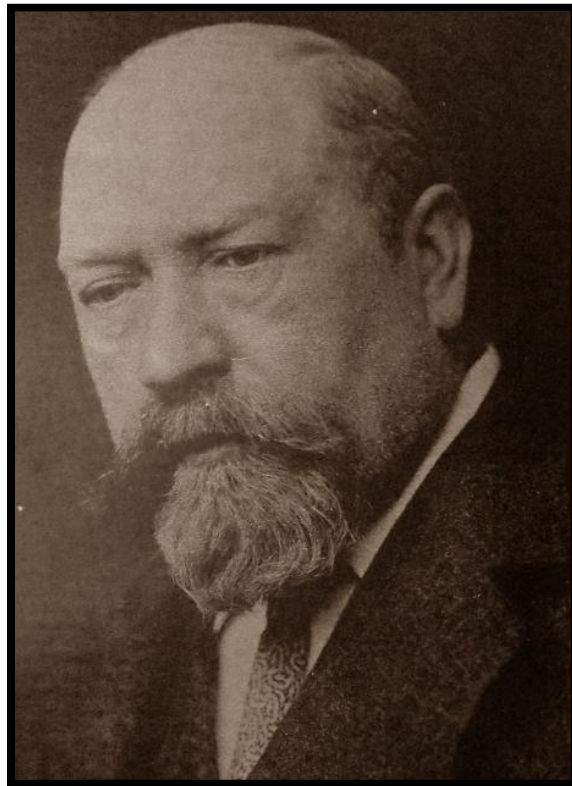


Fig. 4.3. Mr George Pauling was the appointed contractor for the Eastern Railway Line between 1892-1894 and also a section of the Selati Line during 1909-1912 (Pienaar, 1990).

During the Anglo Boer War (1899-1902) a small British regiment under command of Prussian “Baron” Ludwig von Steinaecker, known as Steinaecker’s Horse, was tasked to patrol the border between the Transvaal and Mozambique. Steinaecker used the Selati railway for this purpose and used the train to transport his troops and supplies between Komatipoort and Sabie Bridge. He also erected military outposts along the Swaziland border up to the north of Letaba where he stationed an officer and a few troops at each post (Pienaar, 1990). Two of these outposts would later play an important role in the establishment history of the Kruger National Park, one at Gomondwane and the other on the southern bank of the Sabie River at the Sabie railway bridge.

Pioneer and visionary of the later Kruger National Park, Col. James Stevenson-Hamilton appointed the first field ranger and stationed Mr E.G. (Gaza) Grey at Gomondwane. In 1902 Stevenson-Hamilton made von Steinaecker’s blockhouse at Sabie Bridge his first home. This outpost later developed into the Skukuza Rest Camp (Pienaar, 1990).



Fig. 4.4. Construction of the Selati Line north of the Sabie Bridge in 1911 (Stevenson-Hamilton Collection, Skukuza Archive in Pienaar, 1990).

At this stage, after the War, the area between the Crocodile and Sabie Rivers were re-proclaimed as Nature Reserve and Stevenson-Hamilton served as the keeper. Materials and equipment which were used to construct the Selati Line was used by him to develop infrastructure of the Reserve. He also got permission to utilize the railway for this purpose and fabricated a transport trolley consisting of a railway undercarriage and wheels with a platform to transport materials, staff and equipment (Pienaar, 1990).

After the establishment of the Union of South Africa in 1910 and the resultant S.A.S (South African Railway Services) funds became available to extend the Selati Line towards Tzaneen (fig. 4.1.). Experienced railway contractor, Mr George Pauling (George Pauling & Co.) was awarded the contract and in 1912 it was completed and connected with Tzaneen (Pienaar, 1990). In 1915 the line was extended even further and reached Soekmekaar. At this stage however, the Selati Goldfields were waning and gold mining became less profitable. The economic sustainability of the Selati Line was again compromised and subsequently in 1921 concessions to prospect for coal were awarded along the Selati Line. It was however the vision of Mr Harry Caldecott, marketing manager of the S.A.S, which led to the idea of promoting tourism to the Reserve by making use of the railway line. The S.A.S decided that a package tour for tourists visiting the Eastern and North-eastern Transvaal named “Rondomtalie in nege da” (Round Trip in nine days) was to be implemented. The first of these became reality in 1923. It started and concluded in Johannesburg and included visits to Lourenço Marques (Maputo) and the section through the Sabie Reserve was regarded as the highlight of the tour (Pienaar, 1990).

In the year 1926 the Kruger National Park was established and more and more tourists made use of this service. The visitor experience was enhanced by a regular campfire social event at Huhla station and at certain places the train stopped and passengers guided by a ranger for a short walk in the reserve. A certain highlight of this service was when, in 1925, the Prince of Wales took part in this unique tour (Pienaar, 1990).

The Selati Line was however not without problems which included regular veld fires caused by the train, collisions with game and some very serious train collisions which led to numerous casualties. Commercial activity and mining in the Phalaborwa area led to the Selati Line being busier than ever and it became necessary to electrify the line in order to meet the demand. In light of the problems experienced with fire and game the S.A.S decided to divert the line further and West of the Kruger National Park border. During the construction of this section, one night a train collided with a herd of elephant which led to one being killed and several wounded. In 1968 a new line extending from Kaapmuiden was built West of the Nsikazi River and at Metsi, a few kilometres North of Newington, it joined the Selati Line. Upon completion of this new line traffic diminished drastically and from April 1971 a single daily service between Komatipoort and Skukuza was used for the transport of supplies (Pienaar, 1990).

The role which the Selati Railway Line played in the establishment of the Sabie Reserve is such that without it, the Reserve would probably not have been possible and both the Selati and Eastern Railway Lines were instrumental in the placement of the first field ranger outposts. Sabie Bridge (Skukuza), Crocodile Bridge, Kaapmuiden, Malelane, Msuthu and Rolle were all field ranger outposts which were established as a result of the railway lines.

4.1.6. The Sabie Game Reserve and Kruger National Park

In the late 19th century at presidential level it was decided that a Nature reserve in the Eastern Transvaal Lowveld is necessary to preserve game for future generations. On 26 March 1898 President Paul Kruger signed the proclamation of the “Goevernements wildduin” (Sabie Game Reserve). The outbreak of the Anglo-Boer War (1899-1902) changed this as a result of new British administration and after the War in 1902 the reserve was re-proclaimed albeit now a larger area was included being between the Olifants and Sabie Rivers (Pienaar, 1990). Shortly afterwards Major James Stevenson-Hamilton was appointed as conservator of the reserve. His vision and commitment played a major role in the advent of nature conservation in the Lowveld and culminated in the establishment of the Kruger National Park in the early 20th century. In April 1903 a Game Reserve in the Soutpansberg area was proclaimed and named the Shingwedzi Game Reserve. The Shingwedzi and Sabie Game Reserves were united through the proclamation of a conservation area between these two reserves in December 1914. In 1916 these two reserves were consolidated and it was named the “Transvaal Game Reserves”.

4.1.7. The Sabi Sand Reserve

In the year 1922 the Transvaal Consolidated Land Company tasked Major Percy Greathead to investigate the possibility of establishing a cattle farm near the Sabie Bridge (Skukuza). Before the end of that year some 800 mixed race cattle were introduced on the farm Toulon located approximately six kilometres from Sabie Bridge (Pienaar, 1990).

The newly appointed manager of the Toulon estate, Mr Crosby, soon became friends with the conservator of the Shingwedzi and Sabie Game Reserve, Mr James Stevenson-Hamilton and even arranged tennis matches between staff of both establishments!

In 1926 the Kruger National Park was proclaimed as South Africa’s first national conservation area and it ensured a new era of nature conservation in the country. After the proclamation of the Kruger National Park and its new western boundary, neighbouring land owners established the Sabie Private Game Reserves in 1934. This was followed in 1948 by the formation of the Sabi Sand Reserve. During 1961 as a result of the threat of foot and mouth disease and the continued hunting of game on private land next to the National Park, a fence was erected between the Sabi Sands Reserve and the Kruger National Park. The Sabi Sand Reserve erected fences on the Western boundary to prevent the movement of game from the area. In 1993 the fence between the Kruger National Park and the Sabi Sands Reserve was dropped again and game could roam between the reserves freely.

4.1.8. Game Ranger Walter Henry (Harry) Kirkman (1899-1989) and the farm Toulon

Walter Henry Kirkman was born on 31 March 1899 in district Steytlerville at the foothills of the Winterhoek Mountains. His parents were of Scottish descent and farmed with sheep on their farm Grootvlei. As a youngster (15 years) he participated in the First World War and served in the South African Brigade under General J.L. van Deventer. After contracting malaria during the War in north east Africa he returned home only to return to Potchefstroom for further duty in 1918 where he received training in the artillery corps. From here he was transferred to Kimberley and after peace was declared on 11 November 1918 he returned home to the family farm in the Klein-Karoo (Pienaar, 1990).

Farming conditions here deteriorated and the family decided to pursue more profitable options in the Waterberg District of the Northern Transvaal. It was here where Harry met Mr Bert Tomlinson, the manager of a large estate belonging to the Transvaal Consolidated Land and Exploration Co. Ltd or T.C.L. which was located on the banks of the Sand River in the Southern Lowveld. This was known as the Toulon Estate. Bert convinced Harry to learn the Tsonga language which he mastered within a year. Harry received a letter from Mr Tomlinson informing him that he was offered a job in the newly established Kruger National Park and should Harry be interested, the job at the Toulon Estate was now vacant. After an interview with estate manager Mr Percy Greathead, Harry was appointed farm manager of the Toulon Estate in early 1927, a large cattle farming enterprise (Pienaar, 1990).

This estate was also known as the “Sabie Ranch” and consisted of ten farms namely Belfast, Lisbon, Kingstown, Toulon, Shaws, Dudley, Charleston, Flockfield, Malamala and Marthly with a combined area of 30 835 ha. Mr Kirkman settled at Toulon and was responsible for some 2500 cattle of the Sussex and Hereford variety but was plagued by lions which were responsible for large stock losses. Harry supposedly trapped and killed some 400 lions in a six year period. Despite this the landowners were already concerned with game conservation and as recent as 1928 Harry was empowered with two game rangers who assisted with the fight against unlawful poaching of game. Upon visiting Maj. Stevenson-Hamilton in Skukuza and enquiring about the roles and responsibilities of a game ranger he was immediately interested in the discipline (Pienaar, 1990).

Intense drought during the years 1930-1933 made cattle farming a difficult prospect and this resulted in the T.C.L. selling a number of their farms. Early in the year 1933 Stevenson-Hamilton informed Harry Kirkman that a vacancy with the Kruger National Park would be commencing from 1st of April. Kirkman immediately accepted and started as clerk and substitute game ranger at Skukuza. He was in his element and soon became known as “M'lilwane” (the small fire). He married in Spring of the following year to Ruby Ross, stepdaughter of the shop manager at Skukuza, Mr Albert Cass (Pienaar, 1990).

Harry becomes a full-time field ranger in 1936 and spent most of his time establishing the status and numbers of Black Rhino in the Park. He went on long expeditions in the Nwathimhiri forest in search of these elusive animals.

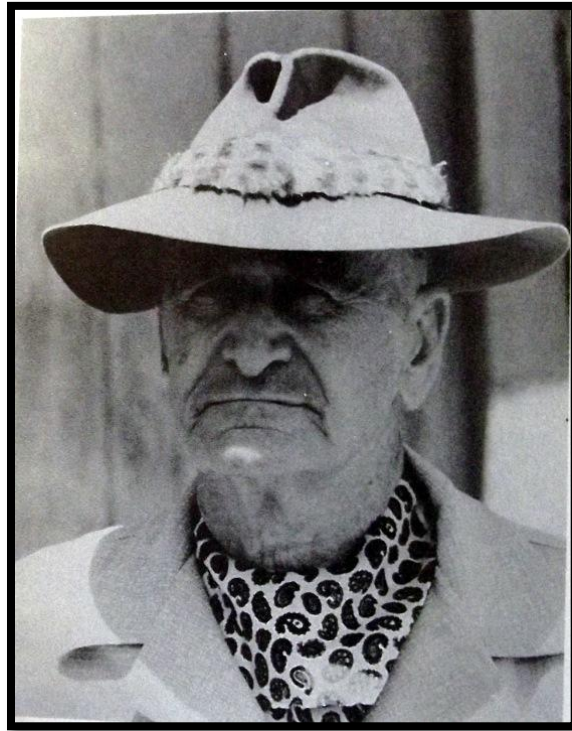


Fig. 4.5. Harry Kirkman who served as field ranger at the KNP (1933-1958) and thereafter at the Sabi Sand Reserve until 1969. Photo from Pienaar, 1990.

During 1936 he finds numerous tracks of Black Rhino near the Nwathimhiri and Mhlupheka confluence and soon thereafter himself and his fellow rangers were the last to see live Black Rhino until 1971 when a few were introduced from Natal (Pienaar, 1990).

In May of 1938 he oversees the building of a new field ranger post at Shangoni at in October of that year he moves in. At Shangoni he had a few close encounters with dangerous game including lion and elephant. During the Second World War Harry joined the armed forces again in October of 1942 and served in North Africa. It was after the War in 1945 when he returned to Shangoni. Stevenson-Hamilton retired in 1946 and was replaced by Col. J.A.B. Sanderbergh and in 1947 Kirkman was re-positioned at Skukuza. From 1950 he was promoted to the Park's manager of roads and maintenance. He played a key role in establishing new roads, maintaining older ones and making firebreaks. He was also instrumental in erosion maintenance and retired in December 1958.

It was at this stage that he was appointed as field ranger at the private Sabi Sand Reserve where he was again based on the farm Toulon where he started his career in the Lowveld 33 years before (Pienaar, 1990). While in service at Sabi Sand he again had a near death experience in June of 1964 when he was attacked by a lion. Fortunately the youngster who accompanied him managed to shoot the lion and Kirkman's life was thus spared. At the age of 70 years in 1969 he retired from service at Sabi Sand and settled at Folly Farm near White River (Pienaar, 1990). He passed away at the ripe age of 90 years on 12 June 1989 in an old age home in Eshowe Zululand, KZN.



Fig. 4.6. Harry Kirkman at a spoor of a Black Rhino on 22 July 1936 next to the Nwatiwambu spruit. Photo from Pienaar, 1990.

As a tribute to Harry Kirkman, Mr Mike Rattray, owner of the farm Toulon, which now forms part of the Sabi Sand Reserve, converted the original Toulon farmstead into a tourist camp and named it "Kirkman's Kamp". Another tourist camp adjacent to the Kruger Park's Western boundary is known as "Harry's Huts". In Swaziland the first conservator of the original National Park of Swaziland, Mr T. Reilly, named this park "M'ililwane" in tribute to his mentor in the Sabi Sand (Pienaar, 1990). One of the well-known large elephant bulls who frequently moved between the Sabi Sand and Kruger National Park, "Mulilwane", was also named after Kirkman.

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 Olduvai Gorge in Tanzania during the 1960s. The stone tools are named after this gorge and 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 ± 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, Roosenekal and Steelpoort. The BaKoni were the architects of the stone-walled enclosures found throughout the escarpment area of Eastern Mpumalanga. 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

Eight (8) sites were documented. Six of the located sites (KSS 1-6) has varying degrees of significance albeit not all are located within the proposed project area (sites KSS 3-6 not in area). graves which are considered to be of high social significance. Two survey orientation locations (SO1 & SO2) make up the remaining sites. The survey orientation locations are not discussed in tables 5.3 and 5.4.

All graves are graded as High Local Significance (LS 3A; table 5.1 & 5.2) those older than 60 years are protected in terms of the NHRA (25 of 1999) section 36. Therefore a permit needs to be obtained from the South African Heritage Resources Agency (SAHRA) before the graves may be impacted upon.

Table 5.1. Summary of located sites and their significance

Type of site	Identified sites	Significance
Graves and graveyards	KSS 3	LS 3A
Late Iron Age	None	N/A
Early Iron Age	None	N/A
Historical buildings/ structures	KSS 6	LS 3B
Historical features	KSS 1, 2; KSS 4, 5	GPC; LS 3B
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 KSS 1.

Location: See Appendix B and D (fig. 1, 2).

Description: A single clay brick and an iron file. The items do not have an immediate spatial historical context i.e. no buildings or structures located nearby.

Impact of the proposed development/ activity:

The site will possibly be impacted upon during the proposed development activity.

Recommendation:

The remains are random and considered to be of low archaeological or historic significance. No mitigation measures recommended.

5.2.2. Site KSS 2.

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

Description: A single lower grinding stone. This item is located very close to site KSS 1 and therefore probably associated with the items at site KSS 1. Similarly the item does not have an immediate spatial historical context and therefore not considered as being of high significance.

Impact of the proposed development/ activity:

The site will possibly be impacted upon during the proposed development activity.

.Recommendation:

The remains are random and considered to be of low archaeological or historic significance. No mitigation measures

5.2.3. Site KSS 3.

Location: See Appendix B and D (fig. 5, 6).

Description: A single grave. The grave is well-marked and fenced. It is aligned in a East-west orientation and the headstone in the form of a cross, reads: "In Loving Memory of C.C. Moloney who died 22 July 1894". More detailed research is needed to confirm suspicions that the grave may have been associated with the construction of the first leg of the Selati Railway Line during the years 1893-1894.

Impact of the proposed development/ activity:

The grave will not be impacted upon during the proposed development activity as it is located outside of the proposed development area.

Recommendation:

Because of the age of the grave (1894), it is historically significant therefore section 36 of the NHRA (25 of 1999) applies. A permit must be issued by SAHRA before the grave may be relocated or exhumed.

5.2.4. Site KSS 4.

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

Description: This is the location of the remains of the historic Selati Railway Line. The rails and sleepers were removed but the ballast and in some cases the sub-ballast and subgrade are still visible. It is a historically significant feature as it played a key role in the development of the Kruger National Park and Sabi Sand Reserve.

Impact of the proposed development/ activity:

The site will probably not be impacted upon during the proposed development activity as it is located outside of the proposed development area.

Recommendation:

The site forms part of a large and geographically extended and historically significant feature. Tourism and historic value can be added by possibly signposting the feature or erecting interpretation panels upon which the history and significance of the Selati Line is displayed.

5.2.5. Site KSS 5.

Location: See Appendix B and D (fig. 8, 9).

Description: This is the location of the remains of the historic Selati Railway Line. The rails and sleepers were removed but the ballast and in some cases the sub-ballast and subgrade are still visible. It is a historically significant feature as it played a key role in the development of the Kruger National Park and Sabi Sand Reserve.

Impact of the proposed development/ activity:

The site will probably not be impacted upon during the proposed development activity as it is located outside of the proposed development area.

Recommendation:

The site forms part of a large and geographically extended and historically significant feature. Tourism and historic value can be added by possibly signposting the feature or erecting interpretation panels upon which the history and significance of the Selati Line is displayed.

5.2.6. Site KSS 6.

Location: See Appendix B and D (fig. 10-13).

Description: This is the location of the current Kirkman's Kamp tourist accommodation and facilities. A key feature is the original Toulon Estate farmstead which is utilised as reception, office and shop space, dining and leisure. The building is in a remarkable condition and a prime example of 1920's colonial architecture.

Impact of the proposed development/ activity:

The buildings will probably not be impacted upon by the proposed development activity as it is not located within the proposed development area.

Recommendation:

The buildings will not be impacted upon by the proposed development activity. The historic farmstead is well and originally maintained and this should remain the norm.

5.2.7. Site SO 1.

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

Description: Survey orientation location.

Impact of the proposed development/ activity:

N/A

Recommendation:

N/A

5.2.8. Site SO 2.

Location: See Appendix B and D (fig. 16, 17).

Description: Survey orientation location.

Impact of the proposed development/ activity:

N/A

Recommendation:

N/A

TABLE 5.3. General Significance of located sites and field rating.

Site No.	Description	Type of significance	Degree of significance	NHRA heritage resource & rating
KSS 1	Clay brick & file	Historic and/or Social	Archaeological: None Historic: Low	Archaeology. Low significance GPC.
KSS 2	Lower grinder	Historic and/or Social	Archaeological: None Historic: Low	Archaeology. Low significance GPC.
KSS 3	Grave	Historic and/or Social	Archaeological: Medium Historic: High	Burial Grounds & graves. High. LS GPA.
KSS 4	Railway Line	Historic and/or Social	Archaeological: None Historic: High	Buildings & Structures. Local significance LS 3B.
KSS 5	Railway Line	Historic and/or Social	Archaeological: None Historic: High	Buildings & Structures. Local significance LS 3B.
KSS 6	Historic farmstead	Historic and/or Social	Archaeological: None Historic: High	Buildings & Structures. Local significance LS 3B.

TABLE 5.4. Site condition assessment and management recommendations.

Site no.	Type of Heritage resource	Integrity of cultural material	Preservation condition of site	Relative location	Quality of archaeological/historic material	Quantity of site features	Recommended conservation management
KSS1	Archaeology & History	Poor	Poor	Toulon 383 KU	Poor	2	None
KSS2	Archaeology & History	Poor	Poor	Toulon 383 KU	Poor	1	None
KSS3	Burial grounds & graves	Good	Good	Toulon 383 KU	Good	1	Avoid if possible or relocation permit. More research.
KSS4	Buildings, structures & History	Good	Fair-good	Toulon 383 KU	Good	1	Interpretation plaques & management plan
KSS5	Buildings, structures & History	Good	Fair-good	Toulon 383 KU	Good	1	Interpretation plaques & management plan
KSS6	Buildings, structures & History	Good	Excellent	Toulon 383 KU	Good	1	Interpretation plaques & management plan

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**. A total of eight (8) sites were located and documented. Two (2) of these (sites SO1, 2) are survey orientation points of no significance. The remaining sites range from surface finds (sites KSS 1, 2) which point to previous human activity inside the proposed development area, rated low significance (table 5.1 – 5.4), to significant heritage features outside of the proposed development area which defines a larger heritage landscape. The latter include a late 19th century grave (site KSS 3) the remains of the historic Selati Railway Line (sites KSS 4, 5) and the original farmstead at Kirkman's Kamp (site KSS 6). In terms of the archaeological component of the Act (25 of 1999, section 35) no sites or features of archaeological significance was recorded inside the proposed development area during the survey. In terms of the built environment (section 34 of the Act) no significant buildings were identified inside the proposed development area. In terms of graves and burial grounds (section 36 of the Act) none were found inside the proposed development area. From a heritage perspective it is therefore recommended that the proposed activities continue. The original farmstead at the main camp (site KSS 6), the remains of the Selati Railway Line (KSS 4, 5) and the lone grave of C.C. Moloney († 22 July 1894) are all considered to be of high heritage significance albeit not located inside the proposed development area. The grave (site KSS 3) has heritage status (older than 60 years) as discussed in section 5 and is protected under section 36 of the NHRA. Any planned activity which may compromise the grave must be permitted by SAHRA.

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.

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. Celliers, J.P. 2012. Report on Phase 1 Archaeological Impact Assessment on Portion 17 of the farm Acornhoek 212 KU located in Bushbuckridge Local Municipality, Mpumalanga Province.
8. Celliers, J.P. 2012. Second Progress Report on the Archaeological Monitoring of construction activity at Elephant Point located on Portion 10 of the farm Belfast 291 KU, Mpumalanga Province.
9. Delius, P. 2007. *Mpumalanga History and Heritage*. University of KwaZulu-Natal Press.
10. Du Preez, S. J. *Peace attempts during the Anglo Boer War until March 1901*. Magister Artium thesis in History. Pretoria: University of Pretoria.
11. Evers, T.M. in Voight, E.A. 1981. *Guide to Archaeological Sites in the Northern and Eastern Transvaal*. Transvaal Museum, Pretoria.
12. Giliomee, H. 2003. *The Afrikaners – biography of a people*. Tafelberg, Cape Town & Charlottesville.
13. Hall, H.L. 1938 (1990). *I Have Reaped my Mealies. An Autobiography*. Whitnall Simonsen.
14. Huyser, J. D. *Die Naturelle-Politiek van die Suid-Afrikaanse Republiek*. D. LITT. Verhandeling, Universiteit van Pretoria.
15. Huffman, T. N. 2007. *Handbook to the Iron Age: The Archaeology of Pre-Colonial Farming Societies in Southern Africa*. Kwa-Zulu Natal Press.
16. Jones, H. M. & Jones G. M. 1999. *A Gazetteer of the Second Anglo-Boer War. 1899-1902*. Buckinghamshire: The Military Press.
17. Mason, R. 1962. *Prehistory of the Transvaal: a record of human activity*. Witwatersrand University Press, Johannesburg.
18. Massie, R.H. 1905. *The Native tribes of Transvaal. Prepared for the general staff war office*. Harrison and Sons, London.
19. Myburgh, A.C. 1956. *Die Stamme van die Distrik Carolina*. Staatsdrukker. Pretoria.

20. 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.
21. Pienaar, U. De V. 1990. **Neem uit die Verlede.** Nasionale Parkeraad, Pretoria.
22. Ross, R. 2002. **A Concise History of South Africa.** Cambridge.
23. Van der Walt, J. 2003. **Phase 1 Archaeological Impact Assessment: Cultural Heritage Evaluation for the Proposed Service Station in Acornhoek.** An unpublished report on file at SAHRA as: 2003-SAHRA-0064.
24. Van Schalkwyk, J.A. 2001. **Archaeological Investigation of Two Sites in the Acornhoek Area.** An unpublished report by the National Cultural History Museum on file at SAHRA as: 2001-SAHRA-0056.
25. Van Schalkwyk, J.A. 2001. **A Survey of Cultural Resources in Two Potential Borrow Pit Areas, Acornhoek, Northern Province.** An unpublished report by the National Cultural History Museum on file at SAHRA as: 2001-SAHRA-0064.
26. Van Schalkwyk, L.O. 2006. **Heritage Impact Assessment of Acornhoek Dam, Klaserie, Limpopo Province, South Africa.** An unpublished report by eThembeni Cultural Heritage on file at SAHRA as: 2006-SAHRA-0256.
27. Van Vollenhoven, A.C. 2002. **Die Metodiek van Kultuurhulpbronbestuur (KHB).** S.A. Tydskrif vir Kultuurgeskiedenis 16(2).
28. Van Vollenhoven, A.C. 1995. **Die bydrae van Argeologie tot Kultuurhulpbronbestuur.** Referaat gelewer voor die Suid-Afrikaanse Vereniging vir Kultuurgeskiedenis, Transvaal Streektak, Sunnyside.
29. Van Vollenhoven, A.C., Pelser, A.J., Teichert, F. E., 2006. **A historical archaeological investigation of the Sabi Bridge Post of Steinaecker’s Horse, Skukuza District, Kruger National Park (Report No. 1).** Unpublished report. SAHRIS database: 2006-SAHRA-0447.

MAPS:

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]

<http://www.sabisandgamereserve.co.za/history.html>. [Cited 29 September 2016]

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;
- palaeontological 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

Tables of site locations

A total of eight sites were located on the proposed development area and numbered KSS 1-6 and SO 1, 2 respectively. The initials “KSS” represent “Kirkman’s Kamp” and the “Sabi Sand” Reserve, followed by the number of the site. The initials “SO” represent Survey Orientation, followed by the number of the site. A spatial location with the aid of a GPS (Global Positioning System) was added to each site.

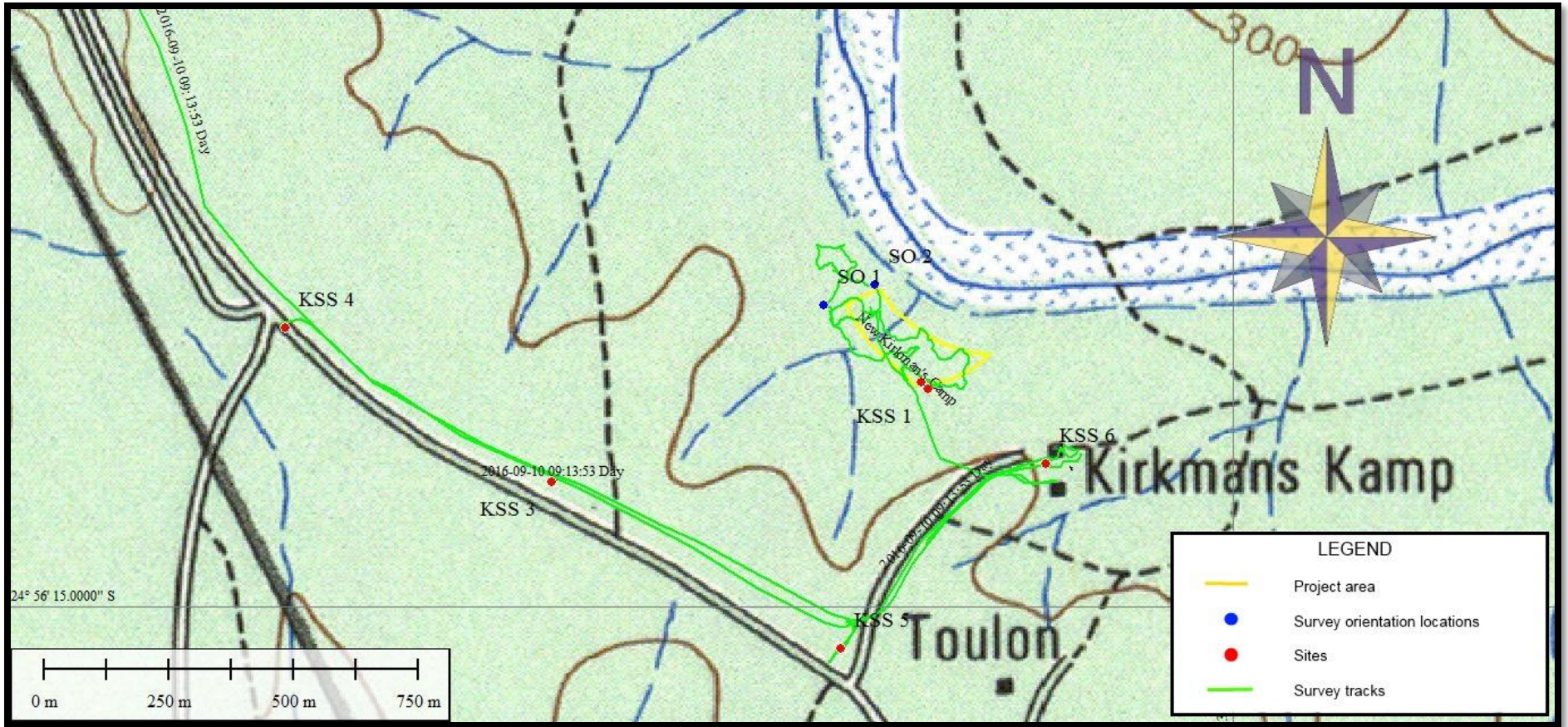
Table A. Site Locations.

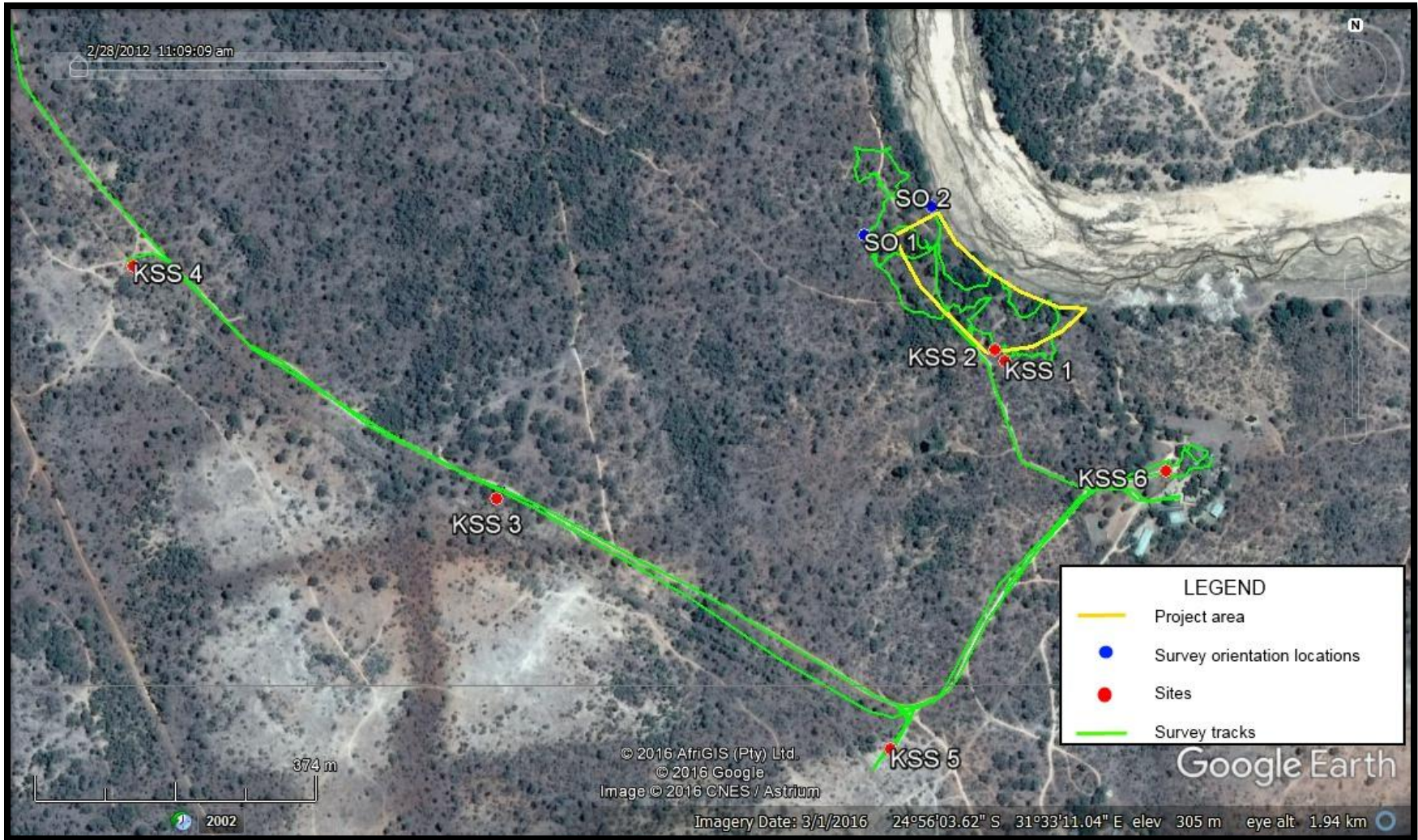
Site Name	Date of compilation	GPS Coordinates		Photo figure No.
KSS 1	10/09/2016	S24°56'00.95"	E031°33'25.26"	1, 2
KSS 2	10/09/2016	S24°56'00.45"	E031°33'24.79"	3, 4
KSS 3	10/09/2016	S24°56'06.92"	E031°33'00.86"	5, 6
KSS 4	10/09/2016	S24°55'56.91"	E031°32'43.59"	7
KSS 5	10/09/2016	S24°56'17.72"	E031°33'19.61"	8, 9
KSS 6	10/09/2016	S24°56'05.74"	E031°33'32.88"	10-13

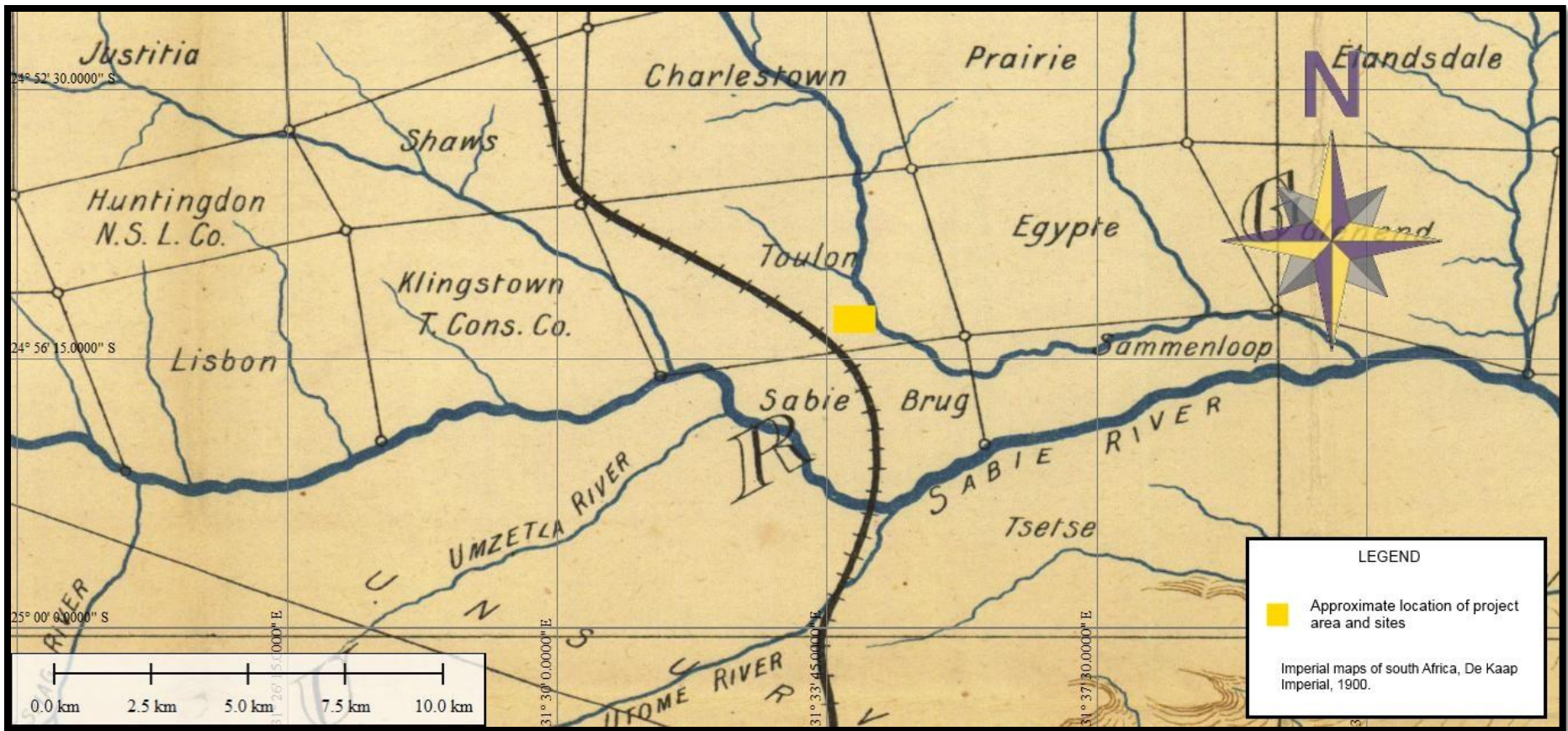
Table B. Survey Orientation Locations.

Site Name	Date of compilation	GPS Coordinates		Photo figure No.
SO 1	10/09/2016	S24°55'55.44"	E031°33'18.45"	14, 15
SO 2	10/09/2016	S24°55'54.14"	E031°33'21.77"	16, 17

Appendix C







Historic Imperial Map of South Africa, 1900, sheet 102 De Kaap, shows the approximate location of study area and located sites. Note the Selati railway line West of the project area.

Appendix D

Photos of located sites



Fig. 1. Site KSS 1. Informant Mr Reason Mashego at the location of the remains of an iron file and Piece of clay brick which are evidence of previous human activity. Photo taken in a Northern direction.



Fig. 2. Site KSS 1. A close-up photo of the file and clay brick.



Fig. 3. Site KSS 2. A single lower grinding stone located near Site KSS 1 (indicated by the yellow arrow). The photo was taken in a North-western direction.



Fig. 4. Site KSS 2. A detail photo of the lower grinder. This is probably associated with site KSS 1 and indicates previous human food preparation activity.



Fig. 5. Site KSS 3. A single grave located East of the historic Selati Railway Line. The photo was taken in a South-western direction.



Fig. 6. Site KSS 3. The lone grave of Mr C.C. Moloney who passed away on 22 July 1894 may have been one of many casualties who succumbed during construction of the Selati Railway Line.



Fig. 7. Site KSS 4. The historic Selati Railway Line passes through the Sabi Sand Reserve. It fell into disuse in the 1960's and 70's. All which remains are the remains of its route through the bush in the form of track ballast. The photo was taken in a South-eastern direction.



Fig. 8. Site KSS 5. The remains of the Selati Railway track near Kirkman's Kamp. The photo was taken in a North-eastern direction.



Fig. 9. Site KSS 5. View towards the South-west.



Fig. 10. Site KSS 6. The original Toulon Estate Farmstead was named in tribute to Mr Harry Kirkman, former conservator at Sabi Sand Reserve as Kirkman's Kamp.



Fig. 11. Site KSS 6. Chalets at Kirkman's Kamp reminds of the original farmstead's colonial style and architecture.



Fig. 12. Site KSS 6. A splendid and remarkably well preserved original farmstead of the former Toulon Estate now serves as a tourist camp in the Sabi Sand Reserve. It is an exquisite example of 1920's colonial architecture.



Fig. 13. Site KSS 6. Kirkman's Kamp, Sabi Sands Reserve.

Survey orientation photos



Fig. 14. Site SO 1. The photo was taken in an Eastern direction.



Fig. 15. Site SO 1. The photo was taken in a Southern direction with informant Mr Reason Mashego.



Fig. 16. Site OBS 2. A panoramic view of the Sand River in an Eastern direction.



Fig. 17. Site OBS 2. The photo was taken in a South-eastern direction.