

*SPECIALIST REPORT*  
**PHASE 1 ARCHAEOLOGICAL / HERITAGE IMPACT ASSESSMENT FOR A PROPOSED  
AGRICULTURAL DEVELOPMENT ON THE FARM KROKODILSPRUIT 248 JT,  
WHITE RIVER, MPUMALANGA PROVINCE**

**REPORT PREPARED FOR  
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## EXECUTIVE SUMMARY

A Phase 1 Heritage Impact Assessment (HIA) regarding archaeological and other cultural heritage resources was conducted on the footprint of *the farm KROKODILSPRUIT 248JT*, near White River. The 1300ha study area is situated on topographical map 1:50 000, 2530BD NELSPRUIT, which is in the Mpumalanga Province. This area falls under the jurisdiction of the Ehlanzeni District Municipality, and Mbombela Local Municipality.

The National Heritage Resources Act, no 25 (1999)(NHRA), protects all heritage resources, which are classified as national estate. The NHRA stipulates that any person who intends to undertake a development, is subjected to the provisions of the Act.

The applicant, DANROC (Pty) Ltd., in co-operation with RHENGU Environmental Services, is requesting an agricultural development on the farm. Large sections on the property were cultivated with bluegum plantations and agricultural lands. Many drainage lines from the rocky slopes, feed into two main rivers (Sandspruit and Krokodilspuit), which flow through the farm. The rocky sections on the property are natural and undisturbed with indigenous vegetation cover. Bluegum plantations are currently being converted to Macadamia orchards. Several concrete water furrows were constructed to channel the water to the cultivated lands. The area is zoned as agricultural and no rezoning will take place.

Large sections of the farm were burnt at the time of the survey, which made visibility excellent. Sections which were not burnt, were previous agricultural fields.

Heritage features within the study area were observed during the site survey and consisted of fragments of clay potsherds, lower grinders, structures and ruins. Mitigation measures are recommended where applicable (see discussion in text).

Burial sites and graves were observed during the survey. Some of the graves will be affected by the development and mitigation measures are recommended (see discussion in text). Graves are of high priority and must be kept intact. Development around it must be done with certain conditions. The other alternative is to relocate the graves to an approved site / cemetery with certain conditions.

It is recommended that the applicant be made aware that distinct archaeological material or human remains may only be revealed during the development phase. Such sub-surface finds must be assessed by a qualified archaeologist after which an assessment can be made. Based on the survey and the findings in this report, Adansonia Heritage Consultants state that there are no compelling reasons which may prevent the proposed agricultural development, within the study area, to continue.

**Disclaimer:** *Although all possible care is taken to identify all sites of cultural significance during the investigation, it is possible that hidden or sub-surface sites could be overlooked during the study. Christine Rowe trading as Adansonia Heritage Consultants will not be held liable for such oversights or for costs incurred by the client as a result.*

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- 3) Recommendations delivered to the Client.*

November 2018



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C. Rowe

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**PHASE 1 ARCHAEOLOGICAL / HERITAGE IMPACT ASSESSMENT FOR A PROPOSED  
AGRICULTURAL DEVELOPMENT OF THE FARM, KROKODILSPRUIT 248 JT, WHITE  
RIVER, MPUMALANGA PROVINCE**

**A. BACKGROUND INFORMATION TO THE PROJECT**

DANROC (Pty) Ltd, in co-operation with RHENGU Environmental Services, is requesting an agricultural development on historically disturbed fallow lands on the *farm Krokodilspruit 248JT*, in the White River district of Mpumalanga. The development is for approximately 1300ha.

The proposed site for the development is situated approximately 8km west of the town of White River. Large sections on the property were bluegum plantations (see Map 3), which is currently converted into agricultural lands (macadamias). An interview with Mr. Peter Beckenstrater (the previous owner) revealed that the farm was bought in 1942 by his father, who bought the farm from a Mr. Webster in 1942. Webster farmed extensively with maize and cattle. The plantations were only established in 1977.<sup>1</sup> Aerial maps from 1936 were studied and showed the sections which were cultivated at the time (see Maps 4 & 5). These are situated roughly in the middle of the farm and have been fallow for many years. Many drainage lines are sloping from low hills towards the Sand- and Krokodilspruit streams which flow through the farm. Several earth water furrows were constructed (by Webster), to channel water to the cultivated areas in earlier years. The water furrows were lined with concrete in 1960.<sup>2</sup>

The rocky sections on the property are natural and undisturbed with indigenous vegetation cover and consist of granite outcrops (east, west and sections in the north-east). Most of the rocky sections are in the north-western corner of the farm and will be kept as a Nature Reserve (see Map 3). The area is zoned as agricultural and no rezoning will take place.

Adansonia Heritage Consultants were appointed by RHENGU Environmental Services, to conduct a Phase 1 heritage impact assessment (HIA) on archaeological and other heritage resources. A literature study, relevant to the study area as well as a foot survey was done, to determine that no archaeological or heritage resources will be impacted upon by the proposed development (See Map 6: topographical map 1:50 000, 2530BD NELSPRUIT).

The aims of this report are to source all relevant information on archaeological and heritage

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<sup>1</sup> Personal communication: Mr. P. Beckenstrater, 2018-10-08.

<sup>2</sup> Personal communication: Mr. P. Beckenstrater, 2018-10-08.

resources in the study area, and to advise the client on sensitive heritage areas as well as where it is viable for the development to take place in terms of the specifications as set out in the National Heritage Resources Act no., 25 of 1999 (NHRA). Recommendations for maximum conservation measures for any heritage resources will also be made. The study area is indicated in Maps 1 - 10, & Appendix 1 - 4.

- This study forms part of an EIA, Consultant: RHENGU Environmental Services, Mr. Ralf Kalwa, P.O. Box 1046, Malelane, 1320, Cell: 0824147088 / Fax: 0866858003 / e-mail: rhengu@mweb.co.za.
- Type of development: Agricultural development on *the farm KROKODILSPRUIT 248JT*, White River, Mpumalanga Province.
- The study area consists of natural indigenous vegetation cover as well as historically disturbed or transformed land. The farm has rocky outcrops to the east, west and north-east which slopes towards the valley floor where the Sand- and Krokodilspruit streams are situated (see Map 6). The area is zoned as agricultural and no rezoning will take place.
- Location of Province, Magisterial district / Local Authority and Property (farms): The area falls within the Mpumalanga Province under the jurisdiction of the Ehlanzeni District Municipality and Mbombela Local Municipality.
- Land owner & applicant: DANROC (Pty) Ltd, Mr. Warren Hearne.

**Terms of reference:** As specified by section 38 (3) of the NHRA, the following information is provided in this report.

- a) The identification and mapping of heritage resources where applicable;
- b) Assessment of the significance of the heritage resources;
- c) Alternatives given to affected heritage resources by the development;
- d) Plans for measures of mitigation.

**Legal requirements:**

The legal context of the report is grounded within the National Heritage Resources Act no. 25, 1999, as well as the National Environmental Management Act (Act No. 107 of 1998) (NEMA as amended).

- **Section 38 of the NHRA**

This report constitutes a heritage impact assessment investigation linked to the environmental

impact assessment required for the development. The proposed development is a listed activity in terms of Section 38 (1) of the NHRA. Section 38 (2) of the NHRA requires the submission of an HIA report for authorisation purposes to the responsible heritage resources agency, (SAHRA).

Heritage conservation and management in South Africa is governed by the NHRA and falls under the overall jurisdiction of the South African Heritage Resources Agency (SAHRA) and its provincial offices and counterparts.

Section 38 of the NHRA requires a Heritage Impact Assessment (HIA) to be conducted by an independent heritage management consultant, for the following development categories:

- The construction of a road, wall, powerline, pipeline, canal or similar form of linear development or barrier exceeding 300m in length;
- Any development or other activity which will change the character of a site: exceeding 5000m<sup>2</sup> in extent;
- the rezoning of a site exceeding 10 000m<sup>2</sup> in extent;

In addition, the new EIA regulation promulgated in terms of NEMA, determines that any environmental report will include cultural (heritage) issues.

The end purpose of this report is to alert RHENGU Environmental Services as well as the applicant, interested and affected parties about existing heritage resources that may be affected by the proposed development, and to recommend mitigation measures aimed at reducing the risks of any adverse impacts on these heritage resources. Such measures could include the recording of any heritage buildings or structures older than 60 years prior to demolition, in terms of section 34 of the NHRA and also other sections of this act dealing with archaeological sites, buildings and graves.

The NHRA section 2 (xvi) states that a “heritage resource” means any place or object of cultural significance, and in section 2 (vi) that “cultural significance” means aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value or significance. Apart from a heritage report assisting a client to make informed development decisions, it also serves to provide the relevant heritage resources authority with the necessary data to perform their statutory duties under the NHRA. After evaluating the heritage scoping report, the heritage resources authority will decide on the status of the resource, whether the development may

proceed as proposed or whether mitigation is acceptable, and whether the heritage resources require formal protection such as Grade I, II or III, with relevant parties having to comply with all aspects pertaining to such a grading.

- **Section 35 of the NHRA**

Section 35 (4) of the NHRA stipulates that no person may, without a permit issued by SAHRA, destroy, damage, excavate, alter or remove from its original position, or collect, any archaeological material or object. This section may apply to any significant archaeological sites that may be discovered. In the case of such chance finds, the heritage practitioner will assist in investigating the extent and significance of the finds and consult with an archaeologist about further action. This may entail removal of material after documenting the find or mapping of larger sections before destruction. Fragments of clay potsherds, lower grinders and iron slag were observed during the survey.

- **Section 36 of the NHRA**

Section 36 of the NHRA stipulates that no person may, without a permit issued by SAHRA, destroy, damage, alter, exhume or remove from its original position or otherwise disturb any grave or burial ground older than 60 years, which is situated outside a formal cemetery administered by a local authority. It is possible that chance burials might be discovered during development of road infrastructure or agricultural activities. Several graves / burial grounds were identified on the farm. One large cemetery is located near the eastern border of the farm, and consist of the graves of the Beckenstrater family members (previous owners of the farm), as well as approximately 40 unmarked graves. Not all of the graves are within the study area but mitigation measures are recommended for all burial sites.

- **Section 34 of the NHRA**

Section 34 of the NHRA stipulates that no person may alter, damage, destroy, relocate etc., any building or structure older than 60 years without a permit issued by SAHRA or a provincial heritage resources authority. Several buildings (houses / workshops etc.) and historic water furrows were identified during the survey. See discussion in text.

- **Section 37 of the NHRA**

This section deals with public monuments and memorials but does not apply in this report.

- **NEMA**

The regulations in terms of Chapter 5 of the National Environmental Management Act, (107/1998), provides for an assessment of development impacts on the cultural (heritage) and social environment and for specialist studies in this regard.

## **B BACKGROUND TO ARCHAEOLOGY AND HISTORY OF THE STUDY AREA**

- **Literature review, museum databases & previous relevant impact assessments**

The study area on the *farm KROKODILSPRUIT 248JT*, is located approximately 8km west of White River, turning towards Sabie on the R537.

The wider area is quite rich in archaeological history and the first evidence of ancient mining occurred between 46 000 and 28 500 years ago during the Middle Stone Age. Hematite or red ochre was mined at Dumaneni (near Malelane, approximately 45km south-east of the study area) and is regarded as one of the oldest mines in the world. Iron ore was also mined in the area, and a furnace as well as iron slag was documented.<sup>3</sup>

Bushman (or San) presence is evident in the area as research by rock art enthusiasts revealed 109 sites in the Kruger National Park,<sup>4</sup> and over 100 rock art sites at Bongani Mountain Lodge and its immediate surrounds<sup>5</sup> (south-east of the study area), as well as many sites in the Nelspruit, Rocky's Drift and White River (Legogote). Thirty- one rock art sites were recorded by the author on the Mpumalanga Drakensberg Escarpment, of which three sites are near Sabie. Rock art sites were also recorded in Swaziland.<sup>6 7</sup> The Bushman painters most probably obtained the ochre which was used as a pigment in the paintings, from the Dumaneni ochre mine.<sup>8 9</sup>

History in the wider vicinity is closely connected to the study area and is briefly outlined below. The name Komati appears in historical records for the first time in 1589, in the form *Macomates*.

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<sup>3</sup> Bornman, H., *The Pioneers of the Lowveld*, p. 1.

<sup>4</sup> English, M. Die Rotskuns van die Boesmans in die NKW, in *De Vos Pienaar, U., Neem uit die Verlede*, p. 18-24.

<sup>5</sup> Hampson, et al., The rock art of Bongani Mountain Lodge, *SA Archaeological Bullitin* 57: p. 15.

<sup>6</sup> Rowe, C. 2009. Heritage Management of Archaeological, Historical and Industrial resources on the Blyde River Canyon Nature Reserve, MA dissertation. Pretoria: UP.

<sup>7</sup> Masson, J. 2008. Views from a Swaziland Cave. *The Digging Stick*, Vol. 25 no 1: 1-3.

<sup>8</sup> Bornman, H. *The Pioneers of the Lowveld*, p. 1.

<sup>9</sup> Masson, J. 2008. Views from a Swaziland Cave. *The Digging Stick*, Vol. 25 no 1: 1-3.

It was recorded by a traveler on board the Portuguese ship Sao Thome, which sailed from Cochin, South India and ran aground on the shores of the *Land of the Makomati*, near Lake Sibayi, in what became known as KwaZulu Natal. The Land of Makomati comprised the entire hinterland as far north as the Limpopo River, as far south as St Lucia, and as far west as the Drakensberg escarpment, therefore the study area is included. It was the trading zone of the Komati gold and ivory traders who had established themselves in Delagoa Bay (which was known up to the 17<sup>th</sup> century as Makomati), long before the arrival of the first Portuguese in 1498.<sup>10</sup>

Primary and secondary sources were consulted to place the surrounding area in an archaeological context. Ethnographical and linguistic studies by early researchers such as Ziervogel and Van Warmelo shed light on the cultural groups living in the area since ca 1600. Historic and academic sources by Meyer, Voight, Bergh, De Jongh, Evers, Myburgh, Thackeray and Van der Ryst were consulted, as well as historic sources by Makhura and Webb.

Primary sources were consulted from the Pilgrim's Rest Museum Archives for a background on the pre-history and history of the study area. Several circular stone-walled complexes and terraces as well as graves have been recorded in the vicinities of Hazyview<sup>11</sup>, Bushbuckridge, Graskop and Sabie. Clay potsherds and upper as well as lower grinders, are scattered at most of the sites.<sup>12</sup> Many of these occur in caves as a result of the Swazi attacks during the 1900's on smaller groups. The 1972 topographical map show several footpaths and huts on the farm (outside the study area), as well as structures, cultivated lands, orchards & plantations as well as natural bush sections. The 1920 topographical map (Degree Sheet 21) of *Machadodorp* revealed no historic black settlements in the immediate area (see Map 2).<sup>13</sup> Granite rocky outcrops to the east, west and north-east slope towards the Sand- & Krokodilspruit streams, which cuts through the property.

The author was also involved in desktop studies and surveys in the area, such as:

- *Study for the Proposed Eskom Powerlines, Hazyview – Dwarsloop* (2008);
- *Inspection of Umbhaba Stone-walled settlement, Hazyview*, (2001);

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<sup>10</sup> Bornman, H., *The Pioneers of the Lowveld*, p. 9.

<sup>11</sup>PRMA: Information file 9/2.

<sup>12</sup>D. Ziervogel, *The Eastern Sotho, A Tribal, Historical and Linguistic Survey*, p. 3.

<sup>13</sup> Map: 1920 Topographical Map: Machadodorp Degree Sheet no. 21.

- a *Phase 1 Archaeological and Heritage Impact Assessment for 132Kv Powerlines from Kiepersol substation (Hazyview), to the Nwarele substation Dwarsloop (2002)*;
- a *Phase 1 Archaeological and Heritage Impact Assessment for a proposed traffic training academy, Calcutta, Mkhuhlu, Bushbuckridge (2013)*;
- *Phase 1 Archaeological and Heritage Impact Assessment for the proposed Nkambeni cemetery in Numbi, Hazyview (2013)*;
- *Phase 1 Archaeological and Heritage Impact Assessment for a Development on the farm Agricultural Holding no 56 JU, White River (2013)* was done in the wider area;
- *Phase 1 Archaeological and Heritage Impact Assessment for proposed agricultural development on the farm SIERAAD, Komatipoort area, (2013)* revealed one possible Late Stone Age borer which was identified in a soil sample, one meter below the surface;
- *Phase 1 AIA / HIA for proposed debushing of natural land for agricultural use: Portion 10 of the farm Thankerton 175JU, Hectorspruit, Mpumalanga Province (2013)*; revealed some Later Stone Age artifacts which were all out of context and a burial site;
- *Phase 1 AIA / HIA for the proposed residential township, Tekwane extension 2, portion 7 of the farm Tekwane 537 JU. No archaeological material of significance was identified.*
- *Report on Grave site found at portion 7 of the farm Tekwane 537 JU, in way of amended Bulk Sewer Pipeline, Kanyamazane, Mpumalanga Province (2017) – Large graveyard identified.*
- *Phase 1 AIA / HIA for the proposed construction of a 0.75ML/D water treatment plant and bulk line on government land at Makoko Village (near White River) Kabokweni, Mpumalanga Province (2017) residential township, Tekwane extension 2, portion 7 of the farm – no significant archaeological sites were observed;*
- *Letter of recommendation for the exemption from a Phase 1 AIA / HIA for the proposed new position for the Gutshwa substation, Gutshwa (near White River) (2016)*;
- *Phase 1 AIA / HIA for the proposed 2ha development of the Msogwaba Youth Development Centre on a portion of the farm Nyamasaan 647JU, Msogwaba, Mpumalanga province - no significant archaeological sites were observed (2018).*

The SAHRA database for archaeological and historical impact assessments was consulted and revealed other recent Archaeological Impact assessment reports in the wider area:

- *J. Van Schalkwyk: Proposed new Lebombo Port of Entry and upgrade of Komatipoort railway station between Mpumalanga (SA) and Mozambique (2008) – Some historic buildings were identified but no archaeological remains were identified;*

- A. Van Vollenhoven: *Report on a cultural Heritage Impact Assessment for the proposed Kangwane Antracite Mine, Komatipoort (2012)* – An archaeological site with Middle and Late Stone Age tools were identified as well as some Iron Age artifacts and decorated pottery. Mitigation measures were recommended by exclusion from the development or a Phase 2 study;
- JP Celliers: *Report on Phase 1 Archaeological Impact assessment on erven at Komatipoort 182 JU Extension 4, Komatipoort (2012)* – Revealed two pieces of undecorated sherds of pottery which was of low significance. It was recommended that any earthmoving activities be monitored by a qualified archaeologist.
- A. Van Vollenhoven: *Archaeological Impact Assessment for Border site at Komatipoort (2012)* – Revealed historic remains linked to the Steinaeker's Horse regiment during the South African War.
- A. Van Vollenhoven: *A Report on a basic assessment relating to cultural heritage resources for the proposed ESKOM Tekwane North line and substations, Mupumalanga Province (2013)* – revealed historic remains of low significance and a cemetery.

Very little contemporary research has been done on prehistoric African settlements in the study area. Later Stone Age sites in the Kruger National Park date to the last 2500 years and are associated with pottery and microlith stone tools.<sup>14</sup> The only professionally excavated Early Iron Age site near the area, besides those in the Kruger National Park, was the Plaston site near White River, dating ca 900 AD.<sup>15</sup> No other archaeological excavations have been conducted to date within the study area, which have been confirmed by academic institutions and specialists in the field.<sup>16 17</sup> A stone walled settlement with terracing was recorded by C. Van Wyk (Rowe) close to Hazyview,<sup>18</sup> as well as several which were documented in the southern parts of the Kruger National Park.<sup>19</sup> The southern Kruger Park and Nelspruit / Bongani Nature Reserve areas have an abundance of San rock art sites,<sup>20</sup> as mentioned above, but none were identified on the farm *Krokodilspruit 248JT*.

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<sup>14</sup> J.S. Bergh (red.), *Geskiedenis Atlas van Suid Afrika: Die vier Noordelike Provinsies*, p. 95.

<sup>15</sup> M.M. Van der Ryst., *Die Ystertydperk*, in J.S. Bergh (red.), *Geskiedenis Atlas van Suid Afrika: Die vier Noordelike Provinsies*. p. 97.

<sup>16</sup> Personal information: Dr. J. Pistorius, Pretoria, 2008-04-17.

<sup>17</sup> Personal information: Dr. MS. Schoeman, University of Pretoria, 2008-03-27.

<sup>18</sup> C. Van Wyk, *Inspection of Umbhaba Stone-walled settlement, Hazyview*, pp. 1-2.

<sup>19</sup> Eloff J.F., *Verslag oor Argeologiese Navorsing in die Krugerwildtuin*, June / July, 1982.

<sup>20</sup> Hampson, J., et al., *The rock art of Bongani Mountain Lodge and its environs*, *South African Archaeological Bulletin* 57: pp. 17-28.

Several early ethnographical and linguistic studies by early researchers such as D. Ziervogel and N.J. Van Warmelo, revealed that the study area was mainly inhabited by the Sotho groups (Pulana & Pai), Swazi from before the 18<sup>th</sup> century, as well as small groups of Tsonga (Nhlanganu and Tšhangana).<sup>21 22</sup> (See Map 1: 1935: Map of Van Warmelo). When concentrating on ethnographical history, it is important to include a slightly wider geographical area for it to make sense. Van Warmelo based his 1935 survey of *Bantu Tribes of South Africa* on the number of taxpayers in an area. The survey does not include the extended households of each taxpayer, so it was impossible to reliably indicate how many people were living in one area.<sup>23</sup>

The whole district is divided in two, with the Drakensberg Escarpment in the west, and the Low Veld (in which the study area is situated) towards the east. Today, we found that the boundaries of groups are intersected and overlapping.<sup>24</sup> Languages such as Zulu, Xhosa, Swazi, Nhlanganu, Nkuna, sePedi, hiPau and seRôka, are commonly spoken throughout this area.<sup>25</sup>

During the middle of the 18<sup>th</sup> century some Sotho and Swazi groups combined under a fighting chief Simkulu. The tribe so formed became known as the BakaNgomane. The principal settlement of Simkulu was in the vicinity of the confluence of the Crocodile and Komati Rivers. It is believed that the BakaNgomane chiefs were buried there.<sup>26</sup>

The Swazi under Mswati II (1845), commenced on a career of largescale raids, on the prosperous tribal lands to the north of Swaziland. His regiments such as the *Nyatsi* and the *Malelane* brought terror to African homes as far afield as Mozambique.<sup>27</sup> During their northern expansion they forced the local inhabitants out of Swaziland, or absorbed them.<sup>28</sup> There is evidence of resistance, but the Eastern Sotho groups who lived in the northern parts of Swaziland, moved mainly northwards.<sup>29</sup> This appears to have taken place towards the end of

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<sup>21</sup>N.J. Van Warmelo, *A Preliminary Survey of the Bantu Tribes of South Africa*. pp. 90-92 & 111.

<sup>22</sup>H. S. Webb, *The Native Inhabitants of the Southern Lowveld, in Lowveld Regional Development Association, The South-Eastern Transvaal Lowveld*. p.16.

<sup>23</sup>N.J. van Warmelo, *A Preliminary Survey of the Bantu Tribes of South Africa*, p.9.

<sup>24</sup>N.J. van Warmelo, *A Preliminary Survey of the Bantu Tribes of South Africa*, p. 51.

<sup>25</sup>M. De Jongh (ed)., *Swatini*, p. 21.

<sup>26</sup>Bornman H., *The Pioneers of the Lowveld* pp. 10-11.

<sup>27</sup>Bornman H., *The Pioneers of the Lowveld* p 11.

<sup>28</sup>A.C. Myburgh, *The Tribes of Barberton District*, p. 10.

<sup>29</sup>N.J. Van Warmelo, *A Preliminary Survey of the Bantu Tribes of South Africa*. p. 111.

the 18<sup>th</sup> century,<sup>30</sup> when these groups fled from Swaziland to areas such as Nelspruit, White River, Bushbuckridge, Klaserie, Blyde River and Komatipoort.<sup>31</sup>

Mswati II built a line of military outposts from west to east of the upper Komati River and the Mlambongwane (Kaaop River). At each outpost, he stationed regiments to watch and stop the BaPedi returning to their old haunts.<sup>32</sup> Shaka in the course of his military actions, came into conflict with Zwide Mkhathshwa (1819). Notwithstanding Zwide's numerical superiority, Shaka defeated him. The remnants of Zwide's tribe fled into the Eastern Transvaal where they settled. They ultimately found a new kingdom in Gaza land, which extended from just north of the current Maputo, up the east coast as far as the Zambezi river.<sup>33</sup>

Soshangane was a very powerful chief of the Gaza people, even though he was under the rule of Zwide. Soshangane decided to leave and was given full passage through Swaziland. He passed on his way through the Komati gorge, today known as Komatipoort, taking with him a great booty of cattle and women. Meanwhile more Shangaane arrived and by 1896 some 2000 refugees settled between Bushbuckridge and Acornhoek where they are still living today. With the establishment of the Sabie Game Reserve (later known as the Kruger National Park), the BakaNgomane, their Shangaan protégés and Swazis who lived within its borders, were evicted in 1902, and went westward into Klaserie and Bushbuckridge areas, or south of the Crocodile River and established themselves in the Tenbosch and Coal Mine (Strijdom Block) areas, west and south of Komatipoort. The Swazi of Khandzalive moved to Mjejane or Emjejane, the current name for Hectorspruit,<sup>34</sup> east of the study area (see also: Map 1: 1935 Van Warmelo).

## **Swazi**

The Swazi people descend from the southern Bantu (Nguni) who migrated from central Africa in the 15<sup>th</sup> and 16<sup>th</sup> centuries.<sup>35</sup> The differences between the Swazi and the Natal Nguni were probably never great, their culture as far as is known from the comparatively little research being carried out, does not show striking differences. Their language is a 'Tekeza' variation of Zulu, but through having escaped being drawn into the mainstream of the Zulus of the *Shaka*

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<sup>30</sup>H. S. Webb, *The Native Inhabitants of the Southern Lowveld, in Lowveld Regional Development Association, The South-Eastern Transvaal Lowveld.* p. 14

<sup>31</sup>*Ibid.*, p. 16.

<sup>32</sup>Bornman H., *The Pioneers of the Lowveld* p. 12.

<sup>33</sup>Bornman, H., *The Pioneers of the Lowveld*, p.17.

<sup>34</sup>Bornman, H., *The Pioneers of the Lowveld*, p.19.

<sup>35</sup><http://en.wikipedia.org/wiki/Swaziland> p.1.

period, they became independent and their claim to be grouped apart as a culture is now well founded.<sup>36</sup>

### **Eastern Sotho group: The Pai**

Van Warmelo identified the groups in northern Swaziland and the Pilgrim's Rest district before 1886 (including Sabie, Hazyview and White River), as Eastern Sotho (Pulana, Pai and Kutswe). According to Von Wielligh, the **Pai** occupied the area as far south as the Komati River (umLumati). Most of the younger generation has adopted the Swazi language.<sup>37</sup>

The Swazi constantly attacked the Eastern Sotho groups during the nineteenth century. The Pai fled to the caves in the mountains near MacMac (between Sabie and Pilgrim's Rest), while some of them (which were subjugated by a Swazi leader) fled from *Mswazi* in about 1853 to Sekukuniland (Steelpoort area), but decided to turn back towards their country along the Sabie River (1882). By this time, Europeans had already settled in this area when gold was discovered in 1873.<sup>38</sup>

### **Eastern Sotho group: The Pulana**

The history of the **Pulana** goes back to the Barberton area from where they trekked via Krokodilpoort (Nelspruit district) to settle north-east of Pretoriuskop (near Hazyview). When the Swazi invaded them, they moved on and split up under several chieftainships,<sup>39</sup> of who chief Kobêng (after which Kowyns' Pass was named), is well-known in the area's history.

The Pulana roughly lived in the following areas: north of the Crocodile River, west of the western boundary of the Kruger National Park as far north as its crossing the Sabie River, south of the Sabie river until its cutting through the main road from Pretoriuskop (including Hazyview and close to White River), to Bushbuckridge, west of this road as far as Klaserie, south of a line drawn from Klaserie to the confluence of the Blyde and Orighstad rivers, and east of the Blyde River. This large area is divided in two by the main road from Pilgrim's Rest to Bushbuckridge. This road was since ancient times the only connection between the Low Veld and Escarpment, and became known as "Kowyns' Pass".<sup>40</sup> The majority of Pulana lived to the north of this line,

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<sup>36</sup> N.J. Van Warmelo, *A Preliminary Survey of the Bantu Tribes of South Africa*, p. 83.

<sup>37</sup> D. Ziervogel, *The Eastern Sotho, A Tribal, Historical and Linguistic Survey*, pp. 3-5.

<sup>38</sup> D. Ziervogel, *The Eastern Sotho, A Tribal, Historical and Linguistic Survey*, p. 11.

<sup>39</sup> *Ibid.*, p. 108.

<sup>40</sup> M. De Jongh, (ed)., *Swatini*, p. 21.

while south of this line the Pulana are scattered in groups into which are wedged Pai groups on both sides of the Sabie River, and Swazi peoples in the south, and south-eastern portions.<sup>41 42</sup>

### **Eastern Sotho group: The Kutswe**

The **Kutswe** trekked from the northern parts of Swaziland northwards as a result of pressure from the Swazi in the south.<sup>43</sup> The Kutswe settled north-east of the present Nelspruit at a river called Kutswe (Gutshwa)<sup>44</sup> from where they got their present name. From here they moved on and settled at various places, and ruins of their kraals are scattered from Pretoriuskop, Hazyview (Phabeni) as well as on the farms Welgevonden 364, Lothian 258, Boschhoek 47, Sandford 46, Culcutta 51 and Oakley 262.<sup>45</sup> They occupied additional areas between **White River and Sabie**, and had sufficient influence amongst the Pai during the early 20<sup>th</sup> century, to establish authority over more than 2000 individuals living on farms on both sides of the Sabie River from the town of Sabie as far as the main road from **White River / Hazyview to Bushbuckridge**.<sup>46</sup>

### **Tsonga groups: The Nhlangu and Tšhangana**

The Nhlangu and Tšhangana (also generally known as the Shangaan-Tsonga)<sup>47</sup> form part of the larger Tsonga group, who occupied the whole of Mozambique (Portuguese East Africa), and it has been recorded that by 1554, they were already living around the Delagoa Bay area (Maputo).<sup>48</sup> They fled from the onslaughts of the Zulu (Nguni) nation from the Natal area, and great numbers of emigrants sought safety in the “Transvaal” as recently as the 19<sup>th</sup> century, especially in the greater Pilgrim's Rest district (including the study area that we are concerned with). The Tsonga also moved west from Mozambique into the “Transvaal”. They have never formed large powerful tribes but were mostly always subdivided into loosely-knit units, and absorbed under the protection of whichever chief would give them land.<sup>49</sup> They were originally of Nguni origin.<sup>50</sup> The term “Shangaan” is commonly employed to refer to all members of the Tsonga division.<sup>51</sup>

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<sup>41</sup>D. Ziervogel, *The Eastern Sotho, A Tribal, Historical and Linguistic Survey*, p. 107.

<sup>42</sup>N.J. Van Warmelo, *A Preliminary Survey of the Bantu Tribes of South Africa*. p. 111.

<sup>43</sup>*Ibid.*, p. 110.

<sup>44</sup>T. Makhura, Early Inhabitants, in *Delius, P. (ed.)*, *Mpumalanga: History and heritage*. p.105.

<sup>45</sup>D. Ziervogel, *The Eastern Sotho, A Tribal, Historical and Linguistic Survey*, p. 110.

<sup>46</sup>*Ibid.*, pp. 4-10.

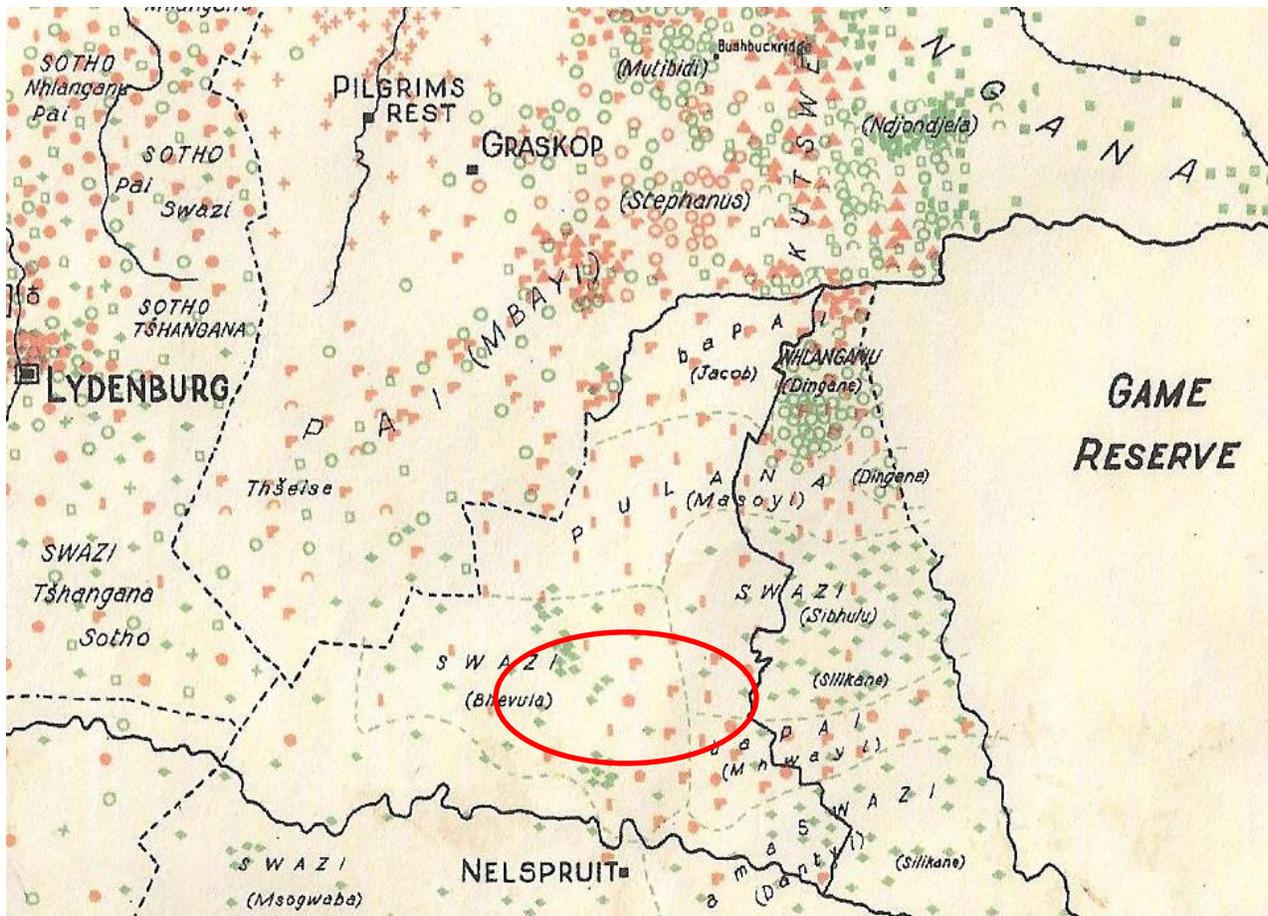
<sup>47</sup>M. De Jongh (ed.)*.*, *Swatini*, p. 24.

<sup>48</sup>N.J. Van Warmelo, Grouping and Ethnic History, in *Schapera I., The Bantu-Speaking Tribes of South Africa. An Ethnographical survey*, p. 55.

<sup>49</sup>N.J. Van Warmelo, *A Preliminary Survey of the Bantu Tribes of South Africa*, pp. 90-91.

<sup>50</sup>N.J. Van Warmelo, Grouping and Ethnic History, in *Schapera I., The Bantu-Speaking Tribes of South Africa. An Ethnographical survey*, p. 55.

<sup>51</sup>N.J. Van Warmelo, *A Preliminary Survey of the Bantu Tribes of South Africa*, p. 92



**MAP 1:** Van Warmelo: 1935:  
The study area is indicated with the red oval.

The **Nhlanguu** occupied the Low Veld area in their efforts to escape the Zulu raids

during 1835-1840. They lived side by side with the Tshangana, and the differences between the two are inconsiderable. They have mixed extensively with other tribes.<sup>52</sup>

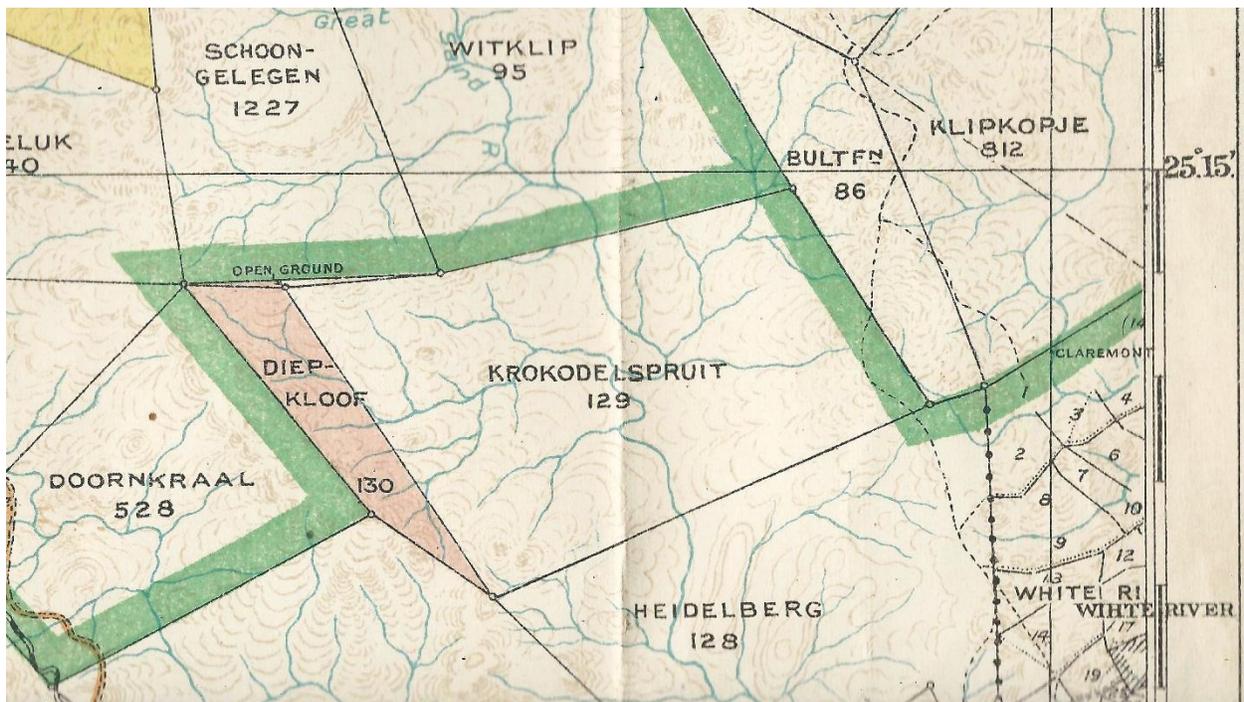
The **Tshangana** are also of Nguni origin who fled in the same way as the Nhlanguu, and settled in the "Transvaal" a little later than the former. Most of the Tsonga were subjects to

KEY	
■	PULANA (various)
□	do. (Mutibidi)
+	do. (Kabiše)
○	do. (Tseindiyadya)
○	do. (Stephanus)
○	do. (Nariše)
>	do. (Matiuse)
∨	do. (Thšeise)
∨	do. (Stephen)
∨	do. (Sehlare)
∨	do. (Makuke)
▲	KUTSWE
▲	bapAI
▲	BAROKA
●	SOTHO (various)
●	do. (Marole)
●	do. (Mcraba)
+	do. (Mahuše)
●	TSHANGANA (various)
●	do. (Thullamahashe)
●	NHLANGANU (various)
●	do. (Sobyana)
●	do. (Ndjondjela)
●	do. (Matches)
●	SWAZI
●	NDZUNDA (amaNdebele)

<sup>52</sup>*Ibid.*, pp. 91-92.

*Soshangane*, who came from Zululand.<sup>53</sup> The downfall of *Ngungunyana* (son of *Soshangane*) saw his son seeking sanctuary in the “Transvaal”, and the latter became known as *Thulamahashi*,<sup>54</sup> the name that is still used for the area east of Bushbuckridge.

The historical background of the study area confirmed that it was occupied since the 17<sup>th</sup> century by the Tsonga groups (Nhlangu and Tšhangana). These groups have intermarried extensively or were absorbed by other groups in time.<sup>55</sup>



**MAP 2:** 1920 Topographical map (Degree Sheet: Machadodorp No 21). No features of interest were indicated on this map.

- **History of White River**

Early white settlers reported that there were relatively few black people in the district at the turn of the century, due to a combination of malaria, tsetse fly and the marauding Swazi impi's. There were however isolated kraals from the present Drum Rock Hotel in White River to Bushbuckridge (south-east of the study area).<sup>56</sup>

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<sup>53</sup>N.J. Van Warmelo, Grouping and Ethnic History, in *Schapera I., The Bantu-Speaking Tribes of South Africa. An Ethnographical survey*, p. 57.

<sup>54</sup>N.J. Van Warmelo, *A Preliminary Survey of the Bantu Tribes of South Africa*, p. 92.

<sup>55</sup>M. De Jongh (ed.), *Swatini*, p. 40.

<sup>56</sup> Nevill C., *White River Remembered*, p. 68.

Just after the Anglo-Boer War, the High Commissioner of South Africa, Lord Alfred Milner, was investigating areas with favorable and healthy climates, fertile soil and lots of water, for farming. The ideal area that was identified was White River (or the White River Valley as it was then known).<sup>57</sup> Many ex-servicemen settled in the area but conditions were harsh and by 1911 only a Scot named Macdonald successfully farmed with citrus.<sup>58</sup> Today, citrus from this area is one of the main forms of agriculture in the Province.<sup>59</sup> Massive timber plantations were planted around White River and one of the biggest timber mills with the latest technology was built in 1982 in the town.<sup>60</sup>



**Fig. a:** White River in 1905, consisted of a hotel, a general dealer and the managers' house.

Photo copied from: *Baanbrekers van die Laeveld*, p. 39: Photo by Shirley Swanepoel.

- **Water furrows in the White River area**

Water was (and is) a precious commodity on every farm. A farm without water rights was almost useless. During the early 20<sup>th</sup> century, after the First World War, a greater demand for winter vegetables, sub-tropical fruit and citrus, gave impetus to irrigation. Many canals were taken out from streams and agricultural lands were cleared and put under irrigation. Even after the Second World War a new boom started and the demand for irrigation land increased. The White River reached the limit of its water resources and needed stabilizing dams to regulate the river flow.<sup>61</sup>

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<sup>57</sup> Borman, H., *Baanbrekers van die Laeveld*, p. 39.

<sup>58</sup> Nevill, C., *White River Remembered*, p. 3.

<sup>59</sup> Delius, P. & Hay, M., *Mpumalanga, an illustrated history*, p. 156.

<sup>60</sup> *Ibid.* p. 162.

<sup>61</sup> WEBB, H. S., The Native Inhabitants of the Southern Lowveld, in *Lowveld Regional Development Association, The South-Eastern Transvaal Lowveld*. p. 80.

Water rights had to be stipulated and managed efficiently as it could and have resulted in hefty debates and arguments. A body was needed to stipulate the way in which the water furrows could operate, how the water was allocated, who held the rights, and when water had to be channeled back to the main rivers. Seepage resulted in a huge loss of water through the ground furrows. Legislation with regards to water taken from a public stream, came into being only after 1894.<sup>62</sup>

The canals belonged to individual owners or communities of owners who established Irrigation Boards. Under the Irrigation Act of 1912, and the relevant legislation, an Irrigation Board levied rates and received loans and subsidies on approved capital expenditure. An Irrigation Board is a statutory body with powers to construct irrigation works and to ensure an equitable distribution of the water under its control. The White River Conservation Board was established in the Lowveld, and given special powers by Act of Parliament (Act no. 21 of 1944). In some cases, River Boards have been established mainly for the purpose of allocating available stream flow to various canals or pumping plants in the same valley.<sup>63</sup>

The first title deed for Krokodilspruit was issued in 1877.<sup>64</sup> Krokodilspruit had a network of earth canals which were built by Webster. The earth canals were concreted during 1960 (by Beckenstrater). The water which fed into these canals, came from the Witklip Dam via the Sandspruit<sup>65</sup> and was allocated by the Sand River Irrigation Board.<sup>66</sup>

### **C. DESCRIPTION OF THE AREA TO BE AFFECTED BY THE PROPOSED DEVELOPMENT**

The applicant, DANROC (Pty) Ltd., in co-operation with RHENGU Environmental Services, is requesting the alteration of land for agricultural use to establish macadamia and avocado orchards, on historically disturbed agricultural lands for approximately 1300ha (See Map 6). The project will involve a road network, but existing roads will be used to access the orchards.<sup>67</sup>

<sup>68</sup> <sup>69</sup>

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<sup>62</sup> E-mail correspondence: Jaco Swart, 2018-07-31: Unpublished research: *Kontreistorie: Va'me lewese Waterregte*.

<sup>63</sup> WEBB, H. S., The Native Inhabitants of the Southern Lowveld, *in Lowveld Regional Development Association, The South-Eastern Transvaal Lowveld*. p. 80.

<sup>64</sup> Personal communication: Mr. P. Beckenstrater, 2018-10-08.

<sup>65</sup> Personal communication: Mr. P. Beckenstrater, 2018-10-08.

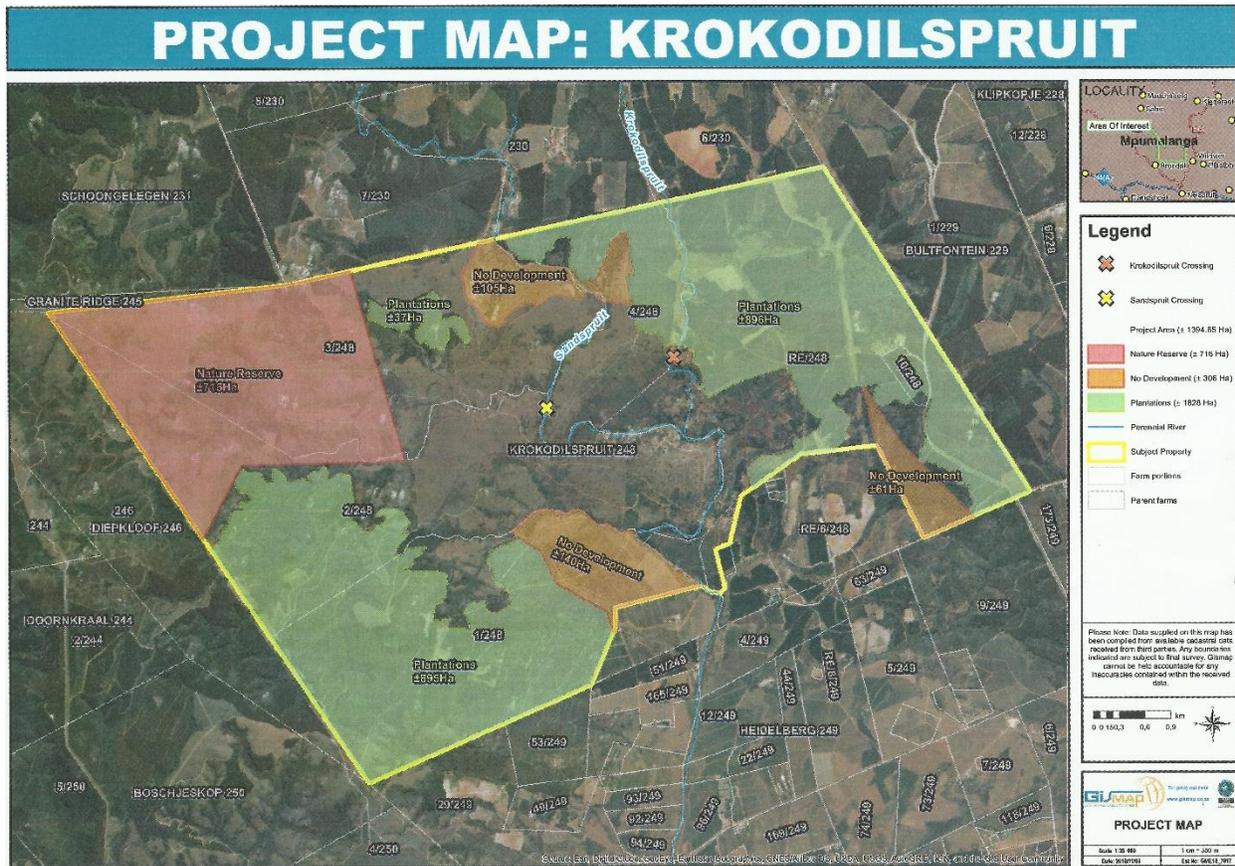
<sup>66</sup> Personal communication, Owner, Mr. W. Hearne, 2018-08-14.

<sup>67</sup> Notice of EIA: Rhengu Environmental Services, 22 November 2018.

<sup>68</sup> Personal communication, Env. Practitioner, Ralf Kalwa, e-mail access: 2018-09-20.

<sup>69</sup> Personal communication, Owner, Mr. W. Hearne, 2018-08-14.

Large sections on the property (a total of approximately 1828ha) were cultivated with bluegum plantations as well as with agricultural lands. The bluegum plantations were established in 1977. Some existing bluegum plantations are currently converted to Macadamia orchards (Map 3).



**MAP 3:** Green shaded areas are existing plantations (pink), a nature reserve and (yellow), where no development is to take place. The study area is not shaded (Map provided by Rhengu Environmental Services).

Rocky sections on the property are natural and undisturbed with indigenous vegetation cover, and consist of granite outcrops (to the east, west and sections in the north-east). Many drainage lines from these sections (east and west on the farm), feed into the Sand- and Krokodilspruit streams which flow through the farm. The rocky section in the north-western part of the farm (which is not suitable for agriculture), will be kept as a Nature Reserve (approximately 716ha). No development (approximately 306ha), will take place in certain sections on the farm, as indicated in Map 3.



**MAP 4:** 1936 Aerial maps indicate the cultivated areas.

Aerial maps from 1936 were studied and revealed that large sections on the farm were historically used for agricultural purposes (see Map 4 & 6 & Appendix 2).<sup>70 71</sup>

Technically the ecozone representing this area is referred to *Lowveld Sour Bushveld* (Acocks, 1952 and Low & Rebelo 1996). The distribution is from the lower eastern slopes and hills of the north-eastern escarpment from Mariepskop in the north through White River and Nelspruit, terminating in the south (Barberton area).<sup>72</sup>

Vegetation includes dense woodland, including many medium to large shrubs often dominated by *Parinari curatellifolia* and *Bauhinia galpinii* with *Hyperthelia dissoluta* and *Panicum maximum* in the undergrowth. Short thicket dominated by *Acacia ataxacantha* occurs on less rocky sites. Exposed granite outcrops have low vegetation cover. Dominant trees include *Acacia sieberiana*, *A. clavyi*, *Dicfirosfaciys cinerea* and *Rhus pyroides* with grasses *Hyperthelia dissoluta*,

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<sup>70</sup> Personal communication, Env. Practitioner, Ralf Kalwa, e-mail access: 2018-09-20.

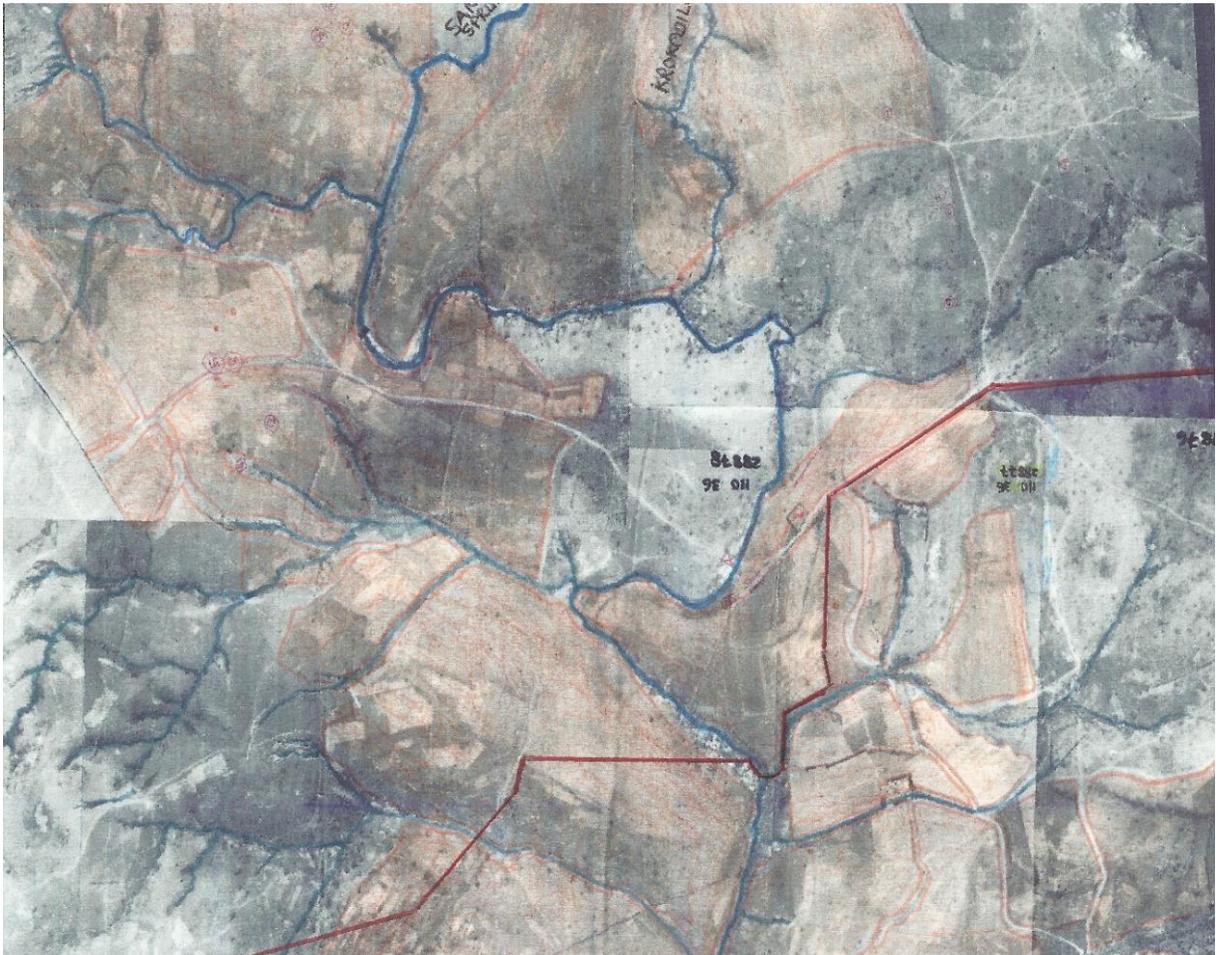
<sup>71</sup> Personal communication: Mr. P. Beckenstrater, 2018-10-08.

<sup>72</sup> Personal Communication: Dr. Andrew Deacon, 2018-11-22.

*Hyparrhenia* species, and shorter grass species such as *Themeda triandra* and *Loudetia simplex*.

<sup>73</sup> <sup>74</sup>

The typical granite and dolerite plains have sandy soils and clayey soils in the lower areas. Most of the area is underlain by gneiss and migmatite of the Nelspruit Suite. Soils are of Mispah, Glenrosa and Hutton forms, shallow to deep, sandy or gravelly and well drained. <sup>75</sup> <sup>76</sup> <sup>77</sup>



**MAP 5:** A combination of aerial maps from 1936, show the extent of the cultivated lands (orange) (see Appendix 2).

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<sup>73</sup> Personal Communication: Dr. Andrew Deacon, 2018-11-22.

<sup>74</sup> Van Wyk, B., & Van Wyk P., Field Guide to Trees of Southern Africa, 1997

<sup>75</sup> SANPARKS, Visitors Guide to the Kruger National Park, p. 2.

<sup>76</sup> Van Wyk, B., & Van Wyk P., Field Guide to Trees of Southern Africa, 1997, p. 500.

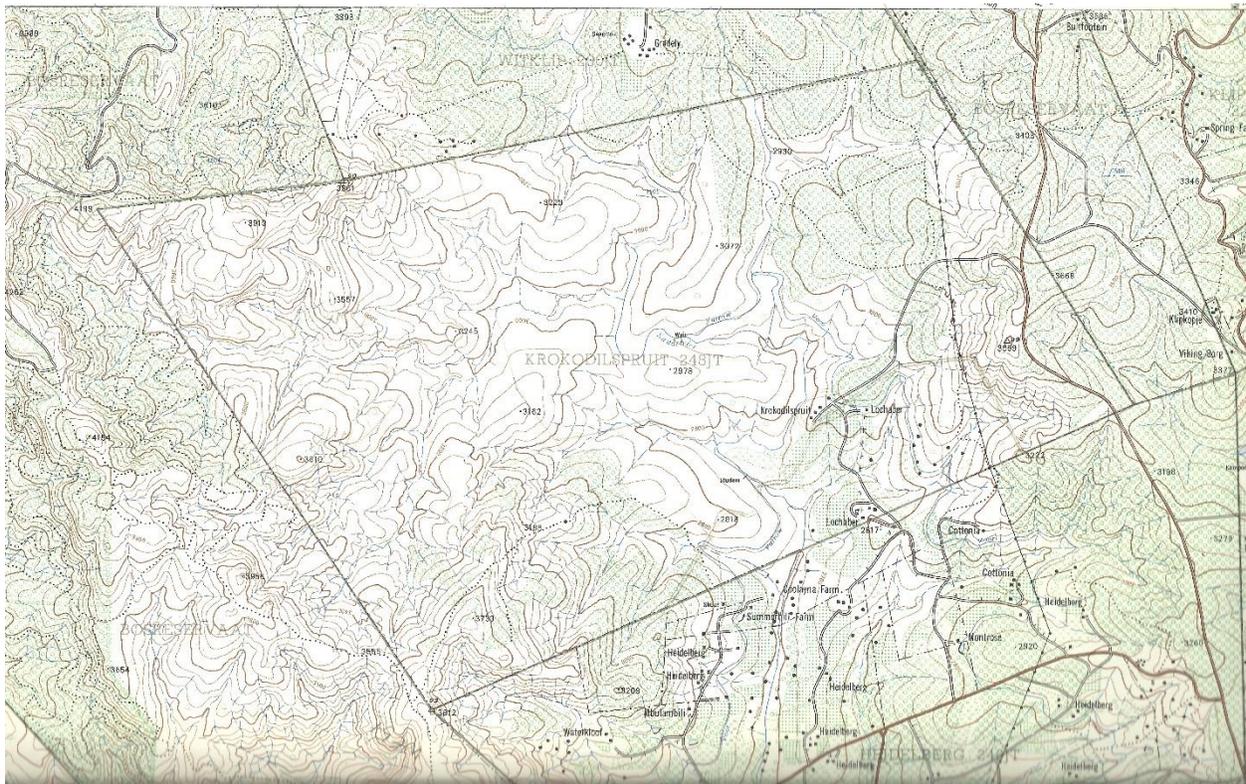
<sup>77</sup> Personal Communication: Dr. Andrew Deacon, 2018-11-22.

## D. LOCALITY

The proposed site for the development on the farm *KROKODILSPRUIT 248JT* is situated between Sabie and White River, with access from the R537 road. The study area is approximately 8 km north-west of White River. A section of the R537 road cuts through the eastern border of the farm.

The study area is indicated on the 1972 topographical map (2530BD NELSPRUIT), as well as a 1920 topographical map (Machadodorp, Degree Sheet 21), which were studied for possible historical features (see Maps 6 & 2).

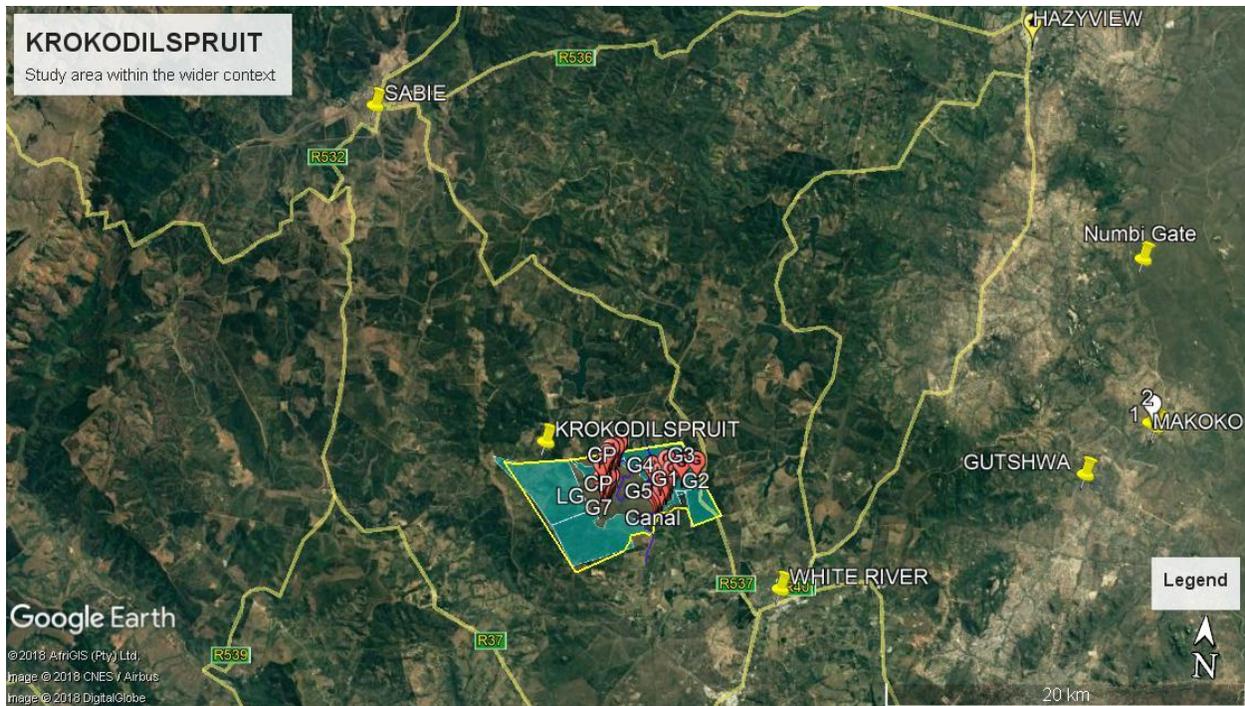
The site falls within the Ehlanzeni District Municipality, and the Mbombela Local Municipal in the Mpumalanga Province (Maps 2 - 7 & Appendix 4 Figs. 1 – 47 for the study area).



**MAP 6:** Topographical Map (1980) 2530BD NELSPRUIT.

### Description of methodology:

The 1972 topographical map, (2530BD NELSPRUIT, Map 6), a 1920 map (Degree Sheet 21, MACHADODORP), Google images as well as aerial maps dating from 1936, were intensively studied to assess the current and historically disturbed areas and infrastructure on the farm Krokodilspruit (Maps 2 - 10).



**MAP 7:** Google image of the study area, as seen in a wider context.

In order to reach a comprehensive conclusion regarding the cultural heritage resources in the study area, the following methods were used:

- The desktop study consisted mainly of archival sources studied on distribution patterns of early African groups who settled in the area since the 17<sup>th</sup> century, and which have been observed in past and present ethnographical research and studies.
- Literary sources, books and government publications, which were available on the subject, have been consulted, in order to establish relevant information.
- Specialists currently working in the field of anthropology and archaeology have also been consulted on the subject.

-Literary sources: A list of books and government publications about prehistory and history of the area were cited, and revealed some information;

-The archaeological database of SAHRA as well as the National Cultural History Museum were consulted. Heritage Impact Assessment reports of specialists who worked in the area were studied and are quoted in section B.

- The fieldwork and survey were conducted extensively by two people on foot and per vehicle. Existing tracks and paths were also used to access sections (see Appendix 1).
- Sections on the 1300ha terrain burnt recently, which made visibility excellent. In the

areas of grassland vegetation which did not burn, existing tracks and paths were used, but visibility in these areas was restricted (see Appendix 1 & 4).

- The relevant data was located with a GPS instrument (Garmin Oregon 750) datum WGS 84, and plotted. Co-ordinates were within 3 meters of identified sites.
- Evaluation of the resources which might be impacted upon by the footprint, was done within the framework provided by the National Heritage Resources Act, no. 25 (1999);
- Personal communication with environmental practitioner Ralf Kalwa,<sup>78</sup> as well as the owner Mr. Warren Hearne,<sup>79</sup> and previous owner Mr. Peter Beckenstrater,<sup>80</sup> were held.

GPS co-ordinates were used to locate the perimeters and any heritage features within the study area. Co-ordinates: see Project Map 3, provided by Rhengu Environmental Services:

GPS CO-ORDINATES		
Location	South	East
A	S 25° 16' 42.90"	E 30° 53' 56.46"
B	S 25° 16' 3.49"	E 30° 55' 31.59"
C	S 25° 17' 0.69"	E 30° 57' 4.97"
D	S 25° 18' 6.14"	E 30° 56' 23.71"
E	S 25° 17' 32.95"	E 30° 55' 17.75"
F	S 25° 17' 59.24"	E 30° 54' 52.74"

## E. DESCRIPTION OF IDENTIFIED SITES

The applicant, DANROC (Pty) Ltd., in co-operation with Rhengu Environmental Services, is requesting the development of agricultural land on a 1300ha area of mainly transformed land on the *farm Krokodilspruit 248JT* (Map 3). The terrain was even and accessible throughout the survey. Visibility ranged from excellent (in the recently burnt sections), to restricted in the grassland vegetation areas (see Appendix 3, figs. 1,2,25,31,35,36 & 40). Several features of interest were identified during the survey, and is discussed below.

All comments should be studied in conjunction with the maps, figures and appendices, which indicate the study area, and which correspond with the summary below. Photographs in Appendix 4 show the general view of the study area, as well as the heritage features which were identified (figs. 1, 2, 25, 31, 35, 36 & 40).

<sup>78</sup> Personal communication: Env. Practitioner, Mr. Ralf Kalwa, 2018-09-20.

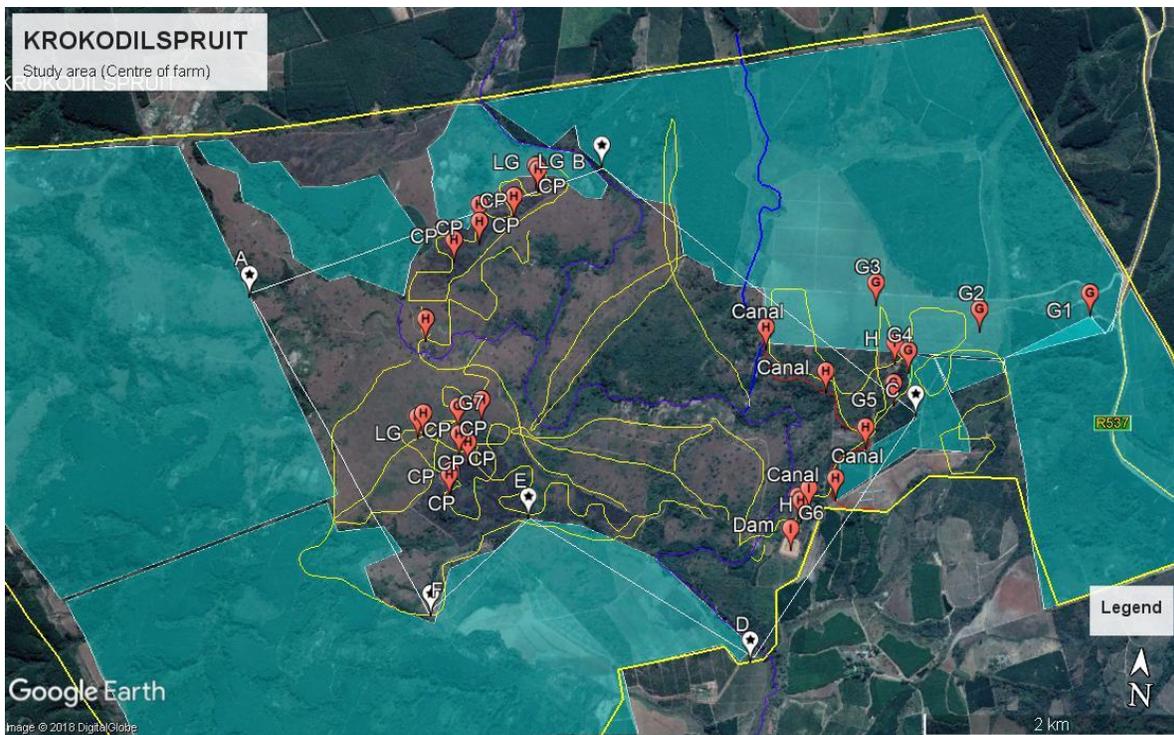
<sup>79</sup> Personal communication: Owner, Mr. W. Hearne, 2018-08-14.

<sup>80</sup> Personal communication: Previous Owner, Mr. P. Beckenstrater, 2018-10-08.

A 1920 topographical map (Map 2) does not indicate any historic or pre-historic settlements directly in, or close to the study area. The 1972 topographical map (Map 6), indicate a hut settlement with a distinct footpath in the south-western corner of the farm, as well as distinct footpaths in the eastern section of the farm (south to north). A Late Iron Age (LIA) stone wall was observed in this section, but is outside of the study area (fig. 24). Hut settlements were also indicated in the south-eastern section.

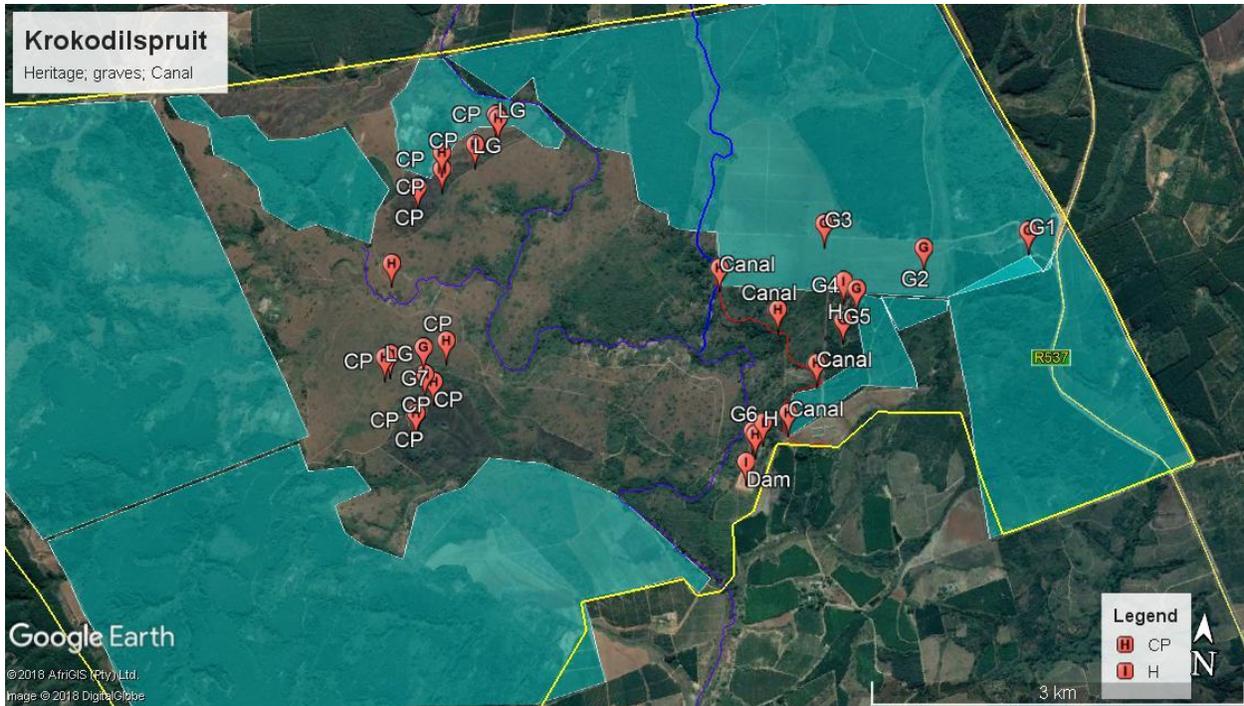
Eight aerial photographs of the farm, dating from 1936, were studied to establish the extent of previously cultivated lands. Vegetables and fruit were in great demand in the White River district between the First- and Second World Wars (see section B). Large sections on the farm Krokodilspuit were under cultivation (see orange sections on Map 5 & Appendix 2). Water furrows (earth canals), were established to supply water to cultivated lands during this time (early 20<sup>th</sup> century). These furrows were lined with concrete during 1960.<sup>81</sup> They currently fall under the jurisdiction of the Sand River Irrigation Board and will not be impacted upon by the agricultural development.

Large sections of the farm were burnt at the time of the survey, which made visibility excellent. Sections which were not burnt, were previous agricultural fields (figs. 1,2,25,31,35,36 & 40).

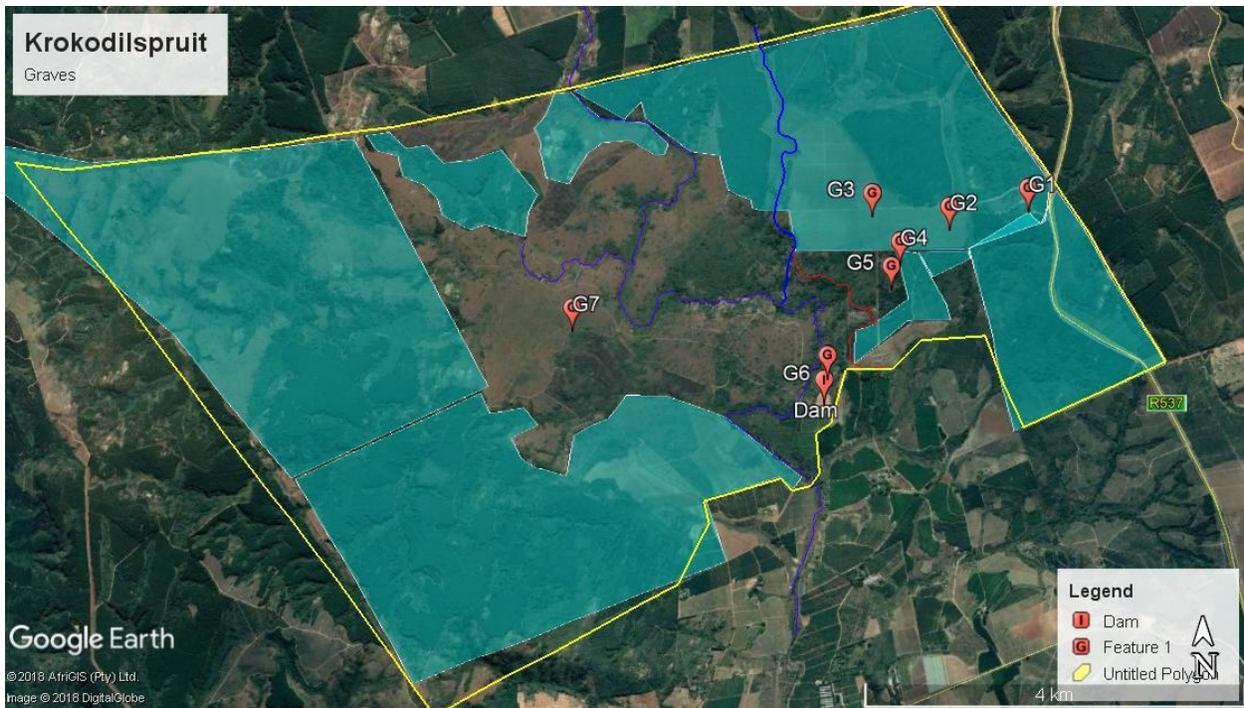


**MAP 8:** Distribution of heritage features and graves in the study area (white line).

<sup>81</sup> Personal communication: Previous Owner, Mr. P. Beckenstrater, 2018-10-08.



**MAP 9:** Google image of the position of all heritage features and graves. The shaded areas are not part of the application.



**MAP 10:** Google image of the position of graves. G4 – G7 will be affected by the proposed agricultural development.

**Features which were observed during the survey (see Maps 9 & 10):**

<b>Feature / Site</b>	<b>Description / Comments</b>	<b>Site Location</b>
<b>GRAVES</b>		
<b>Grave G1</b>	An extensive cemetery which consists of approximately 40 unmarked graves as well as the graves of the Beckenstrater family. Peter Bekenstrater's father applied for cemetery rights on the farm where deceased employees could also be buried. <sup>82</sup> (Outside study area) Cemetery is neglected and overgrown with bluegum. Figs. 3 - 6)	25°16'32.52"S 30°57'49.07"E 1102m
<b>Grave G2</b>	Approximately 5 graves which consist of heaps of stone, were observed in a de-bushed plantation, against the eastern slope. Discovered by a bulldozer operator. <sup>83</sup> (Outside study area). Fig. 7	25°16'38.24"S 30°57'20.13"E 998m
<b>Grave G3</b>	A single grave, which consists of a heap of stones, was observed in a de-bushed plantation area. Discovered by a bulldozer operator. <sup>84</sup> (Outside study area). Fig. 8	25°16'33.05"S 30°56'51.41"E 949m
<b>Grave G4</b>	Very indistinct possible graves next to a road, and in the vicinity of a recent house, pointed out by community members. <sup>85</sup> (In study area). Fig. 9	25°16'49.91"S 30°57'1.81"E 928m
<b>Grave G5</b>	A possible grave which was pointed out by community members. The grave is not distinct (in study area). <sup>86</sup> Fig. 10	25°16'58.11"S 30°56'58.71"E 908m
<b>Grave G6</b>	A possible grave near the Beckenstrater homestead and workshop was observed by a TLB driver. The grave is not distinct (in study area). <sup>87</sup> Fig. 11	25°17'28.70"S 30°56'34.21"E 861m
<b>Grave G7</b>	A distinct grave with a clear headstone is situated next to one of the roads on the farm (in the study area). Fig. 12	25°17'11.58"S 30°54'56.80"E 925m

<sup>82</sup> Personal communication: Previous Owner, Mr. P. Beckenstrater, 2018-10-08.

<sup>83</sup> Personal communication: Owner, Mr. W. Hearne, 2018-11-26.

<sup>84</sup> Personal communication: Owner, Mr. W. Hearne, 2018-11-26.

<sup>85</sup> Personal communication: Owner, Mr. W. Hearne, 2018-11-26.

<sup>86</sup> Personal communication: Owner, Mr. W. Hearne, 2018-08-14.

<sup>87</sup> Personal communication: Owner, Mr. W. Hearne, 2018-08-14.

Feature / Site	Description / Comments	Site Location
<b>LIA HERITAGE FEATURES</b>		
<b>LIA Stone wall</b>	Small circular Late Iron Age (LIA) stone wall in thick vegetation next to the eastern access road, pointed out by Mr. Hearne. <sup>88</sup> (Outside of study area). Fig. 24	25°16'23.73"S 30°57'46.44"E Elev. 1076m
<b>Clay Potsherds Iron slag</b>	Fragments of clay potsherds scattered over a wide area, in various sizes. Some have a distinct rim. Iron slag was also observed. (In study area). Figs. 25, 27 - 30	25°17'18.39"S 30°54'57.49"E Between Elev. 920 - 916m
<b>Lower grinder Clay potsherds</b>	Lower grinder and fragments of clay potsherds. (Inside study area). Figs. 31 - 36	25°17'14.50"S 30°54'45.90"E Between Elev. 945 & 918m 25°17'09.24"S 30°55'03.40"E
<b>Lower grinders Clay potsherds</b>	Fragments of clay potsherds scattered over a wide area, in various sizes. Some have a distinct rim and only one had an incised decoration. (Inside study area). Figs. 37 - 47	25°16'29.34"S 30°54'52.66"E Between Elev. 957 & 937m 25°16'09.10"S 30°55'14.62"E

Feature / Site	Description / Comments	Site Location
<b>HISTORIC FEATURES</b>		
<b>Prospecting trench</b>	A small prospecting trench was observed within the study area (Inside study area). Fig. 26	25°17'20.80"S 30°54'57.78"E Elev. 917m

<sup>88</sup> Personal communication: Owner, Mr. W. Hearne, 2018-08-14.

Feature / Site	Description / Comments	Site Location
<b>HISTORIC FEATURES</b>		
<b>Historic square foundations</b>	Square foundations & a ruin was pointed out by Mr. Hearne. <sup>89</sup> The history of these foundations is not known. The topographical map 6 indicates footpaths in this area which usually lead to old settlements. (Outside study area). Fig. 21 - 22	25°16'27.99"S 30°57'28.64"E Elev. 1024m 25°16'26.91"S 30°57'30.57"E Elev. 1027m
<b>Water canals</b>	The 1920's earth canals were lined with concrete during the 1960's, and supplied water to the agricultural lands (inside study area). <sup>90</sup> Fig. 19 - 20	25°16'43.71"S 30°56'20.55"E Between Elev. 887 – exits farm at 884m 25°17'23.24"S 30°56'43.81"E
<b>Beckenstrater residence</b>	The 1910 house which was used by Webster as a house and an office in early years, was completely altered in the late 1960's (1967 / 68), by Mr. Beckenstrater (Sr). <sup>91</sup> (Inside study area). Fig. 14	25°17'26.43"S 30°56'37.01"E Elev. 866m
<b>Workshop / "prison"</b>	The workshop was known as the "Prison," as Mr. Beckenstrater (Sr.) hired prisoners from the Barberton prison to work on the farm. They stayed in this building. The building was compromised over the years, but baked bricks are still visible in sections. <sup>92</sup> (Inside study area). Fig. 15 - 16	25°17'28.38"S 30°56'36.13"E Elev. 865m
<b>Hydro electric power station / Mill</b>	"The Mill" was driven by water for electricity (hydro-electric power station). <sup>93</sup> There is almost nothing left of the building as it is currently a ruin. Concrete supports and metal pipes are visible in places. (Inside study area). Fig. 17 - 18	25°17'38.79"S 30°56'23.73"E Elev. 841m
<b>Managers' house</b>	A recent house is used to accommodate contractors on the farm. <sup>94</sup> (Inside study area). Fig. 13	25°16'47.84"S 30°56'59.93"E Elev. 926m

<sup>89</sup> Personal communication: Owner, Mr. W. Hearne, 2018-08-14.

<sup>90</sup> Personal communication: Previous Owner, Mr. P. Beckenstrater, 2018-10-08.

<sup>91</sup> Personal communication: Previous Owner, Mr. P. Beckenstrater, 2018-10-08.

<sup>92</sup> Personal communication: Previous Owner, Mr. P. Beckenstrater, 2018-10-08.

<sup>93</sup> Personal communication: Previous Owner, Mr. P. Beckenstrater, 2018-10-08.

<sup>94</sup> Personal communication: Owner, Mr. W. Hearne, 2018-08-14.

**F. DISCUSSION ON THE FOOTPRINT OF THE PROPOSED DEVELOPMENT**

<i>ACT</i>	<i>COMPO- NENT</i>	<i>IMPLICATION</i>	<i>RELEVANCE</i>	<i>COMPLIANCE</i>
NHRA	S 34	Impact on buildings and structures older than 60 years	Compromised	None
NHRA	S35	Impacts on archaeological and palaeontological heritage resources	Clay potsherds & Lower grinders out of archaeological context	None
NHRA	S36	Impact on graves	Graves present	Mitigation measures proposed
NHRA	S37	Impact on public monuments	None present	None
NHRA	S38	Developments requiring an HIA	Development is a listed activity	HIA done
NEMA	EIA regulation	Activities requiring an EIA	Development is subject to an EIA	HIA is part of EIA

- **Summarised identification and cultural significance assessment of affected heritage resources: General issues of site and context:**

<i>Context</i>		
Urban environmental context	No	NA
Rural environmental context	No	NA
Natural environmental context	No	NA
<i>Formal protection (NHRA)</i>		
(S. 28) Is the property part of a protected area?	No	NA
(S. 31) Is the property part of a heritage area?	No	NA

<b>Context</b>		
<b>Other</b>		
Is the property near to or visible from any protected heritage sites	No	NA
Is the property part of a conservation area of special areas in terms of the Zoning scheme?	No	NA
Does the site form part of a historical settlement or townscape?	No	NA
Does the site form part of a rural cultural landscape?	No	NA
Does the site form part of a natural landscape of cultural significance?	No	NA
Is the site adjacent to a scenic route?	No	NA
Is the property within or adjacent to any other area which has special environmental or heritage protection?	No	NA
Does the general context or any adjoining properties have cultural significance?	No	NA

<b>Property features and characteristics</b>		
Have there been any previous development impacts on the property?	Yes	Agriculture & Plantations

<b><i>Property features and characteristics</i></b>		
Are there any significant landscape features on the property?	No	NA
Are there any sites or features of geological significance on the property?	No	NA
Does the property have any rocky outcrops on it?	Yes	Small rocky outcrops occur
Does the property have any fresh water sources (springs, streams, rivers) on or alongside it?	Yes	Drainage lines & Sand- & Krokodilspruit streams

<b><i>Heritage resources on the property</i></b>		
<b><i>Formal protection (NHRA)</i></b>		
National heritage sites (S. 27)	No	NA
Provincial heritage sites (S. 27)	No	NA
Provincial protection (S. 29)	No	NA
Place listed in heritage register (S. 30)	No	NA
<b><i>General protection (NHRA)</i></b>		
Structures older than 60 years (S. 34)	Yes	See evaluation
Archaeological site or material (S. 35)	Yes	See evaluation
Palaeontological site or material (S. 35)	No	NA
Graves or burial grounds (S. 36)	Yes	See evaluation

<b>Heritage resources on the property</b>		
Public monuments or memorials (S. 37)	No	NA
<b>Other</b>		
Any heritage resource identified in a heritage survey (author / date / grading)	No	NA
Any other heritage resources (describe)	No	NA

<b>NHRA S (3)2 Heritage resource category</b>	<b>ELEMENTS</b>	<b>INDICATORS OF HERITAGE SIGNIFICANCE</b>										<b>RISK</b>	
		Historical	Rare	Scientific	Typical	Technological	Aesthetic	Person / community	Landmark	Material condition	Sustainability		
Buildings / structures of cultural significance	Yes	No	No	No	No	No	No	No	No	No	No	No	No risk – see evaluation
Areas attached to oral traditions / intangible heritage	No	No	No	No	No	No	No	No	No	No	No	No	-
Historical settlement / townscapes	No	-	-	-	-	-	-	-	-	-	-	-	-

<b>NHRA S (3)2 Heritage resource category</b>	<b>ELE- MENT S</b>	<b>INDICATORS OF HERITAGE SIGNIFICANCE</b>										<b>RISK</b>	
		Historical	Rare	Scientific	Typical	Technological	Aesthetic	Person / community	Landmark	Material condition	Sustainability		
Landscape of cultural significance	No	-	-	-	-	-	-	-	-	-	-	-	-
Geological site of scientific/cultural importance	No	-	-	-	-	-	-	-	-	-	-	-	-
Archaeological / palaeontological sites	Yes	-	-	-	-	-	-	-	-	-	-	-	No risk as material is out of context – see evaluation
Grave / burial grounds	Yes	-	-	-	-	-	-	-	-	-	-	-	Mitigation proposed – see evaluation
Areas of significance related to labour history	No	-	-	-	-	-	-	-	-	-	-	-	-
Movable objects	No	-	-	-	-	-	-	-	-	-	-	-	-

- Summarised recommended impact management interventions

<b>NHRA S (3)2 Heritage resource category</b>	<b>SITE</b>	<b>IMPACT SIGNIFICANCE Cultural significance rating</b>		<b>Impact managemen t</b>	<b>Motivation</b>
		<b>Cultural significan ce</b>	<b>Impact significan ce</b>		
Buildings / structures of cultural significance	Yes	No	None	None	Mitigation proposed See evaluation
Areas attached to oral traditions / intangible heritage	No	None	None	-	-
Historical settlement/ townscape	No	None	None	-	-
Landscape of cultural significance	No	None	None	-	-
Geological site of scientific/ cultural importance	No	None	None	-	-
Archaeological / palaeontological sites	Yes	None	None	No impact	No risk as the material is out of context and therefore of no significance

<b>NHRA S (3)2 Heritage resource category</b>	<b>SITE</b>	<b>IMPACT SIGNIFICANCE Cultural significance rating</b>		<b>Impact managemen t</b>	<b>Motivation</b>
		<b>Cultural significan ce</b>	<b>Impact significan ce</b>		
Grave / burial grounds	Yes	No	None	-	Mitigation proposed see evaluation
Areas of significance related to labour history	No	None	None	-	-
Movable objects	No	None	None	-	-

<b>ACT</b>	<b>COMPO- NENT</b>	<b>IMPLICATION</b>	<b>RELEVANCE</b>	<b>COMPLIANCE</b>
NHRA	S 34	Impact on buildings and structures older than 60 years	Compromised	None
NHRA	S35	Impacts on archaeological and palaeontological heritage resources	Clay potsherds & lower grinders - out of historical / archaeological context	None needed
NHRA	S36	Impact on graves	Graves present	Mitigation proposed – see evaluation
NHRA	S37	Impact on public monuments	None present	None

<b>ACT</b>	<b>COMPONENT</b>	<b>IMPLICATION</b>	<b>RELEVANCE</b>	<b>COMPLIANCE</b>
NHRA	S38	Developments requiring an HIA	Development is a listed activity	Full HIA
NEMA	EIA regulation	Activities requiring an EIA	Development is subject to an EIA	HIA is part of EIA

## **G. STATEMENT OF SIGNIFICANCE & EVALUATION OF HERITAGE RESOURCES**

Section 38 of the NHRA, rates all heritage resources into National, Provincial or Local significance, and proposals in terms of the above is made for all identified heritage features.

### **• Evaluation methods**

Site significance is important to establish the measure of mitigation and / or management of the resources. Sites are evaluated as *HIGH (National importance)*, *MEDIUM (Provincial importance)* or *LOW, (local importance)*, as specified in the NHRA. It is explained as follows:

### **• National Heritage Resources Act**

The National Heritage Resources Act no. 25, 1999 (NHRA) aims to promote good management of the national estate, and to enable and encourage communities to conserve their legacy so that it may be bequeathed to future generations. Heritage is unique and it cannot be renewed, and contributes to redressing past inequities.<sup>95</sup> It promotes previously neglected research areas.

All archaeological and other cultural heritage resources are evaluated according to the NHRA, section 3(3). A place or object is considered to be part of the national estate if it has cultural significance or other special value in terms of:

- (a) its importance in the community, or pattern of South Africa's history;
- (c) its potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage;
- (g) its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons;
- (h) its strong or special association with the life or work of a person, group or organisation of

<sup>95</sup>National Heritage Resources Act, no. 25 of 1999. p. 2.

importance in the history of South Africa.<sup>96</sup>

- **Graves**

**SAHRA Policy on burial grounds**

NHRA Sections 27 & 36: The policy is that graves and cemeteries should be left undisturbed, no matter how inaccessible and difficult they are to maintain. It is our obligation to empower civil society to nurture and conserve our heritage. It is only when essential developments threaten a place of burial, that human remains should be disinterred to another cemetery or burial ground.

From a historical point of view and for research purposes, it is vital that burial sites are not disturbed. The location and marking of an individual's grave tell a life story, possibly where he / she died defending (or attacking) a particular place or situation and makes it easier to understand the circumstances of his / her death.<sup>97</sup>

- **The significance and evaluation of the archaeological and cultural heritage features as well as graves on the farm *Krokodilspruit 248JT*:**

SAHRA regards all graves and burial sites (inside or outside of the study areas), as of high significance, and therefore mitigation measures are recommended for all graves / burial sites on the farm.

**BURIAL SITES:**

<b>Site no</b>	<b>Cultural Heritage features</b>	<b>Significance</b>	<b>Measures of mitigation</b>
<b>G1</b>	<b>OUTSIDE STUDY AREA</b> An extensive cemetery which consists of approximately 40 unmarked graves as well as the graves of the Beckenstrater family. The unmarked graves are within a bluegum plantation and some of the trees are growing on top of graves.	<b>HIGH</b>	Area must be demarcated clearly and all the trees which impact negatively on the graves must be removed and treated (poisoned) (outside of the study area).

<sup>96</sup>National Heritage Resources Act, no. 25 of 1999. pp. 12-14

<sup>97</sup>SAHRA, Burial sites, <http://www.sahra.org.za/burial.htm>, Access, 2008-10-16.

<b>G2</b>	<b>OUTSIDE STUDY AREA</b> Approximately 5 graves, which consist of heaps of stone, are located in a de-bushed bluegum plantation - will be within a future macadamia orchard.	<b>HIGH</b>	The graves must be fenced off and a perimeter of 15m must be kept clear of the burial site. Access must be allowed for visitation; <b>Alternatively</b> , the graves may be relocated.
<b>G3</b>	<b>OUTSIDE STUDY AREA</b> A single grave, which consists of a heap of stones, located in a de-bushed bluegum plantation - will be within a future macadamia orchard.	<b>HIGH</b>	The single grave must be fenced off and a perimeter of 15m must be kept clear of the site. Access must be allowed for visitation; <b>Alternatively</b> , the grave may be relocated.
<b>G4</b>	<b>INSIDE STUDY AREA</b> Very indistinct possible graves next to a road, and in the vicinity of a recent house – pointed out by community members	<b>HIGH</b>	These indistinct graves must be fenced off and a perimeter of 15m must be kept clear of the site. Access must be allowed for visitation; <b>Alternatively</b> , the graves may be relocated.
<b>G5</b>	<b>INSIDE STUDY AREA</b> A possible grave which was pointed out by community members. No distinct remains of a grave are visible	<b>HIGH</b>	The possible single grave must be fenced off and a perimeter of 15m must be kept clear of the site. Access must be allowed for visitation; <b>Alternatively</b> , the grave may be relocated.
<b>G6</b>	<b>INSIDE STUDY AREA</b> A possible grave near the Beckenstrater homestead and workshop was observed by a TLB driver. No distinct remains of a grave are visible	<b>HIGH</b>	The possible single grave must be fenced off and a perimeter of 15m must be kept clear of the site. Access must be allowed for visitation; <b>Alternatively</b> , the grave may be relocated.
<b>G7</b>	<b>INSIDE STUDY AREA</b> A distinct grave with a clear headstone is situated next to one of the roads on the farm	<b>HIGH</b>	The single grave must be fenced off and a perimeter of 15m must be kept clear of the site. Access must be allowed for visitation; <b>Alternatively</b> , the grave may be relocated.

Please note that the evaluation and discussion below is only applicable to heritage resources which will be impacted upon by the proposed agricultural development (inside the study area), unless otherwise worthy of mentioning. The significance and evaluation of the archaeological and cultural heritage features can be summarized as follows:

**LIA HERITAGE FEATURES:**

<b>Site</b>	<b>Cultural Heritage Features</b>	<b>Significance</b>	<b>Measures of Mitigation</b>
<b>LIA Stone wall</b>	<b>OUTSIDE STUDY AREA</b> Small Late Iron Age (LIA) circular stone wall in thick vegetation next to the eastern access road	<b>LOW</b>	Stone wall is outside of study area, but next to access road (entrance). Care must be taken not to impact negatively on this feature
<b>Clay potsherds, lower grinders, iron slag</b>	<b>INSIDE STUDY AREA</b> None of these features are within an archaeological context. They have already been impacted upon by previous agricultural development. It is also argued that they may have been in recent times as these items are still widely used in rural areas today	<b>LOW</b>	No mitigation measures are recommended (as they are not in any archaeological context).

**HISTORICAL FEATURES:**

<b>SITE</b>	<b>CULTURAL HERITAGE FEATURES</b>	<b>SIGNIFICANCE</b>	<b>MEASURES OF MITIGATION</b>
<b>Prospecting trench</b>	<b>INSIDE STUDY AREA</b> Small square excavated trench	<b>NO SIGNIFICANCE</b>	No mitigation measures needed
<b>Beckenstrater homestead</b>	<b>INSIDE STUDY AREA</b> The original house was built in 1910, but was altered during 1967 / 8 by Mr. Beckenstrater (Sr). The 'new' house is not 60 years old and has been compromised to such an extent that it had lost any scientific, aesthetic or cultural value	<b>LOW</b>	No mitigation measures needed

<b>Workshop</b>	<b>INSIDE STUDY AREA</b> The workshop was altered over the years to such an extent that it has lost any scientific, aesthetic or cultural value	<b>LOW</b>	No mitigation measures needed
<b>Mill (Hydro power station)</b>	<b>INSIDE STUDY AREA</b> <b>Only foundations are left of the old mill.</b>	<b>LOW</b>	No mitigation measures needed as it is within the riparian zone of the stream
<b>Managers' House</b>	<b>INSIDE STUDY AREA</b> A recent structure with no cultural value	<b>NO SIGNIFICANCE</b>	No mitigation measures needed

- Please note that the water canals (furrows) fall under the jurisdiction of the Sand River Irrigation Board, and they will not be impacted upon by the agricultural development.

**Recommendation & discussion:**

**Burial Sites / graves:**

A number of graves and burial sites were observed on the farm. Not all of the graves are within the study area, but mitigation measures will be applicable to all grave sites as SAHRA regards graves / burial sites as of high significance (NHRA, no. 25 of 1999, section 36) (figs. 3 -12).

One of the current workers on the farm, Lindiwe Mkhonto Sibuyi's child, was buried in burial site G1 (Grave number K152).<sup>98</sup>

- G1: Area to be demarcated clearly and all the trees within the perimeters of this site and which impact negatively on the graves must be removed and treated (poisoned). A perimeter of 15m must be kept clear around the site. Access must be allowed for visitation.
- G2 – G7: The grave sites must be fenced off and a perimeter of 15m be kept clear of the site. Access must be allowed for visitation; **Alternatively**, the graves may be relocated (see implications of a relocation process in Appendix 3).

<sup>98</sup> Personal communication: Owner, Mr. W. Hearne, 2018-11-26.

**LIA Heritage features:**

Many fragments of clay potsherds and lower grinding stones which may be associated with the Late Iron Age, were observed in the study area. The clay potsherds in particular are all small fragments as they were found in historically disturbed agricultural lands. One piece of iron slag was observed during the survey (figs. 23 – 47). None of these features are within an archaeological context and they have already been impacted upon by previous agricultural development. The possibility exists that the cultural material, potsherds and lower grinders, are of a more recent nature, as the 1972 topographical map (Map 6), also indicate footpaths and huts on the farm. Clay potsherds and grinding stones are still widely used in rural areas, today. There is no cultural value to these objects which could link them as of outstanding importance to a certain community (NHRA 3.3a); or its potential to yield social, cultural or spiritual information or to link it to a particular community which may contribute to an understanding of South Africa's cultural heritage (NHRA 3.3c & g).<sup>99</sup> No mitigation is recommended.

The LIA stone wall is situated next to the main access road (at the entrance). It is outside of the study area. It is recommended that care should be taken not to impact negatively on this feature, as it was the only LIA stone wall which were identified during the survey, on the farm.

**Historical features:**

The remains of historic square structures were observed in the north-eastern section and several recent clay potsherds were observed in the vicinity of these foundations (figs. 21-23). These remains fall outside of the study area and no mitigation is needed.

Historic features within the study area were observed during the site survey, and consisted of foundations and ruins, houses, a workshop, water canals and a Mill which generated electricity.

The Beckenstrater homestead and workshop were compromised over the years to such an extent that they cannot be regarded as of any historic, aesthetic or scientific significance (figs. 13-18). The homestead was altered in 1967 or 1968. The managers' house is recent and no mitigation measures are needed. The Mill falls within the riparian zone of the Sandspruit stream, and will not be affected by the proposed development. The water canals belong to the Sand River Irrigation Board and will not be affected by the proposed development. There is no

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<sup>99</sup> National Heritage Resources Act, no. 25 of 1999.

cultural value to these structures which could link them as of outstanding importance to a certain community (NHRA 3.3a); or its potential to yield social, cultural or spiritual information or to link it to a particular community which may contribute to an understanding of South Africa's cultural heritage (NHRA 3.3c & g).<sup>100</sup>

## **H. CONCLUSION**

It is not believed that the archaeological or historical features which were identified during the survey have any significance in terms of historic or cultural value which might prevent the proposed development to continue.

Mitigation measures are required for the burial sites to prevent future development activities to impact negatively on them. The client has two options (with implications as set out in Appendix 3) in the way forward:

1. To preserve the graves in situ with a fence around them; or
2. To relocate some of the graves within the study area;

Archaeological material or graves are not always visible during a field survey and therefore some significant material may only be revealed during the agricultural development. Mitigation measures with regards to current burial sites and graves are set out above. Based on the survey and the findings in this report, Adansonia Heritage Consultants state that there are no compelling reasons which may prevent the proposed development to continue in the study area. It is recommended that an assessment and recommendation be done by a qualified archaeologist, should any other archaeological material be found during development activities.

**Adansonia Heritage Consultants cannot be held responsible for any archaeological material or graves which were not located during the survey.**

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<sup>100</sup> National Heritage Resources Act, no. 25 of 1999.

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[http://www.mpumalanga.gov.za/municipality\\_ehlanzeni.htm#bush](http://www.mpumalanga.gov.za/municipality_ehlanzeni.htm#bush) Access: 2013-01-13.
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## **PERSONAL INFORMATION**

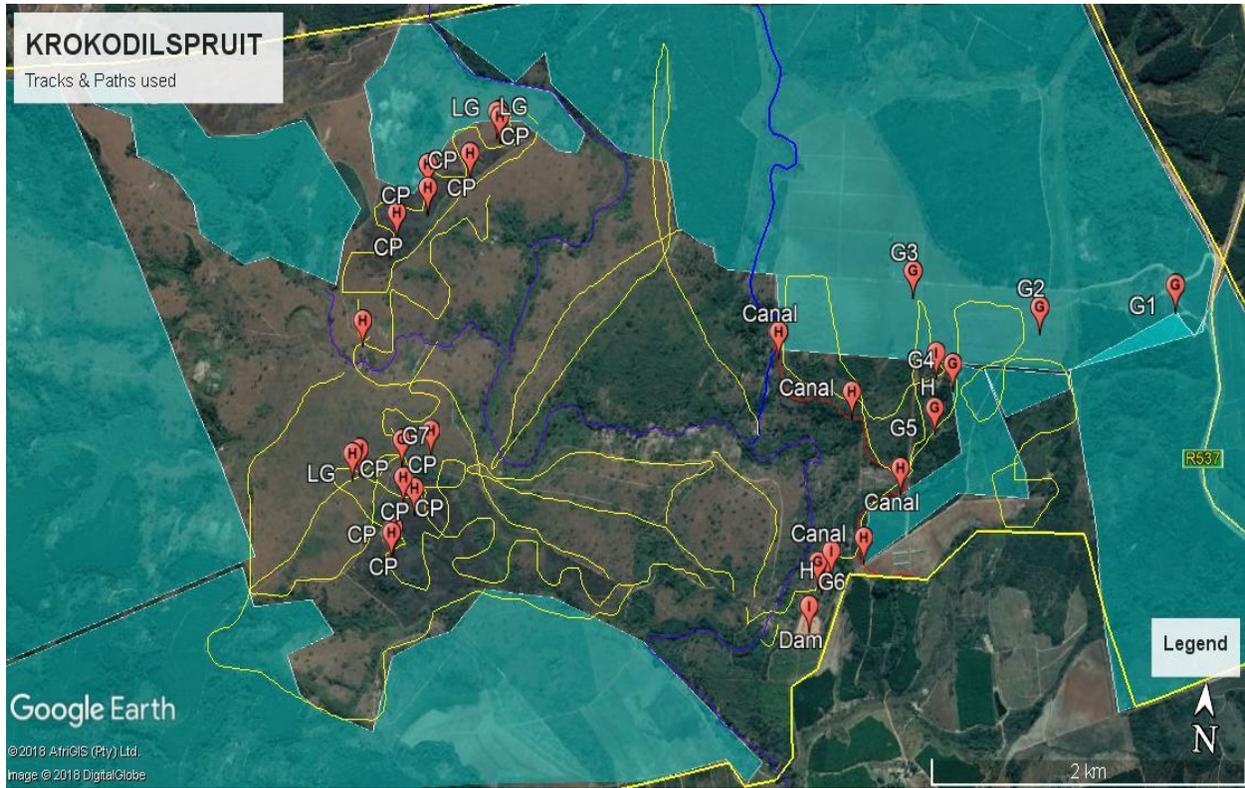
- Personal communication: Dr. Andrew Deacon, 2018-11-22.
- Personal communication: Rhengu Environmental Services, Ralf Kalwa, e-mail access: 2018-09-20.
- Personal communication: Owner, Krokodilspruit, Mr. Warren Hearne, 2018-08-14 / 2018-11-26.
- Personal communication: Previous owner: Mr. P. Beckenstrater, 2018-10-08.

## **MISCELLANEOUS**

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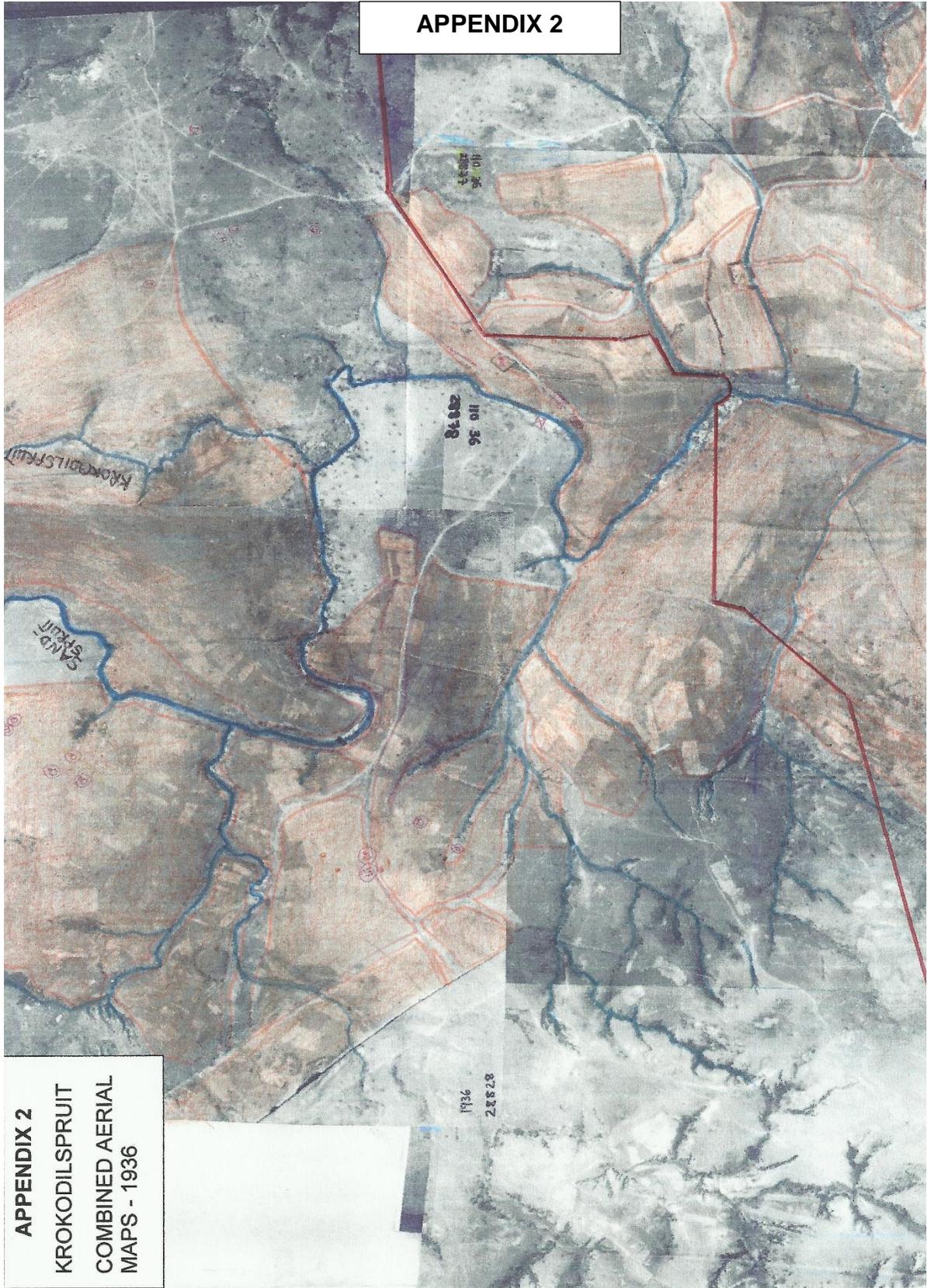
# APPENDIX 1

## Track and Paths used to access the study area



Tracks and paths which were used during the survey.

APPENDIX 2



APPENDIX 2  
KROKODILSPRUIT  
COMBINED AERIAL  
MAPS - 1936

### **APPENDIX 3**

#### **GRAVE RELOCATION PROCESS**

Mitigation measures are required for the burial sites to prevent development activities to impact negatively on them. The client has two options (with implications) in the way forward (An institution dealing with heritage related grave issues must mitigate the graves, i.e facilitated by an archaeologist and a registered undertaker):

1. To preserve the graves in situ with a fence around them; or
2. To relocate the graves;

#### **Option 1:**

The site must be demarcated and excluded from the development;

Regulations specify that the client / specialist must-

- establish management guidelines for the burial site;
- make a concerted effort to contact communities or individuals who by tradition have an interest in such remains;
- reach agreements with such communities or individuals regarding the future of such remains, for eg. visiting rights. All agreements must be set out in the management guidelines. The stipulations in the guidelines must be respected by both parties.

#### **Option 2:**

##### **To relocate the graves:**

Arbitrary exhumation and re-internment of human remains, apart from being illegal, does not constitute a socially responsible mitigation action and borders on the destruction of culturally sensitive property. The minimum requirements for a process of relocation of graves involve the following:

Regulations specify that the client / specialist must-

- make a concerted effort to contact communities or individuals who by tradition have an interest in such remains;
- reach agreements with such communities or individuals regarding the future of such remains;
- the area be fenced off, until the human remains are relocated;
- a possible site to be considered for the relocation for eg., a cemetery on the property, close by.

An institution dealing with heritage related grave issues must mitigate the graves.

- Report intention of relocation of graves to the SAPS and SAHRA in compliance with Act no. 25 of 1999;
- Place notices required by Act no. 25 of 1999 and the Transvaal Ord. 7 of 1925 (Refer Proc. 109 of 17 June 1994);
- Ensure social consultation process, according to the requirements of Act no. 25 of 1999 and the Transvaal Ord. 7 of 1925;
- Obtain SAHRA authorization and comply to the conditions;
- Obtain National Department of Health authorization and comply to conditions;
- Obtain Office of the Provincial Premier authorization and comply to conditions;
- Obtain Local Authority authorization and comply to conditions;
- Comply to stipulations of Act 65 of 1983 during handling of human remains;
- Generate Third Schedule Notice of Internment in compliance with applicable Local Authority Bylaw;
- Generate a Burial Order in compliance of Act 51 of 1992.

Physical exhumation to follow.