

SPECIALIST REPORT

**PHASE 1 ARCHAEOLOGICAL / HERITAGE IMPACT ASSESSMENT FOR THE PROPOSED
LOUWS CREEK DAM PROJECT: CONSTRUCTION OF AN IRRIGATION DAM ON
PORTIONS OF THE REMAINING EXTENT OF THE FARM ESPERADO 253JU AND
PORTIONS 1 & 2 OF ESPERADO ANNEX 222JU, LOUW'S CREEK-KAAPMUIDEN AREA,
MPUMALANGA PROVINCE**

**REPORT COMPILED FOR
RHENGU ENVIRONMENTAL SERVICES**

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JULY 2020

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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 for the Louw's Creek Dam Project development of a proposed storage dam for irrigation purposes *on portions of the remaining extent of the farm ESPERADO 253JU & portions 1 & 2 of the farm ESPERADO ANNEX 222JU*, Louw's Creek in the Kaapmuiden area.

The study area is situated on topographical map 1:50 000, 2531CB, which is in the Mpumalanga Province. This area falls under the jurisdiction of the Ehlanzeni District Municipality, and Nkomazi 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 applicants, Mr. Walter Giuricich and Mr. Riaan Kotze in co-operation with Rhengu Environmental Services, is requesting the development of a storage dam for irrigation purposes on the ESPERADO farms, to provide for adequate water in the agricultural activities. The proposed dam area will cover an area of approximately 6.5ha. The farms on both sides of the Louw's Creek, were historically disturbed by commercial farming activities such as banana, paw paw and macadamia orchards, and both farms are adjacent to other large commercial farms in the north, south, east and west.

The proposed development is situated approximately 6km south of the N4 national road. Swaziland is situated approximately 30 km to the south. Louw's Creek is situated in natural riverine (riparian) vegetation consisting of large trees and areas of dense scrub. Alien species were also observed in the study area. The farm is zoned as agricultural.

The survey revealed no archaeological or historical features or graves, and it is unlikely to find such features in the riparian zone of a river where flooding may occur. Both owners of the farms were interviewed and confirmed that they, or their farm workers, have never encountered graves or archaeological features in the study area.

It is recommended that the owners be made aware that distinct archaeological material or human remains may only be revealed during the construction operation. Due to the dense grass cover along the Louw's Creek during the survey, it is recommended that when construction of the dam commences, earthmoving activities be monitored by a qualified archaeologist which will assess any finds should it be necessary. 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.

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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- 1) The results of the project;*
- 2) The technology described in any report;*
- 3) Recommendations delivered to the Client.*



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CHRISTINE ROWE
JULY 2020

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PORTIONS 1 & 2 OF ESPERADO ANNEX 222JU, LOUW'S CREEK-KAAPMUIDEN AREA,
MPUMALANGA PROVINCE**

A. BACKGROUND INFORMATION TO THE PROJECT

The applicants, Mr. Walter Giuricich and Mr. Riaan Kotze in co-operation with Rhengu Environmental Services, is requesting the development of a storage dam for irrigation purposes on the *ESPERADO* farms, to provide for adequate water in the extensive agricultural activities on both farms. There were three options for possible dam sites, but only one proved to be feasible, and will be discussed in this report. The area for the dam site will approximately be 6.5ha in size. The study area is situated on *portions of the remaining extent of the farm ESPERADO 253JU & portions 1 & 2 of ESPERADO ANNEX 222JU*, in the Louw's Creek area.¹ The farms on both sides of the Louw's Creek, were historically disturbed by commercial farming activities such as banana, paw paw and macadamia orchards, and both farms are adjacent to other large commercial farms in the north, south, east and west (see map 6: Google image).

Adansonia Heritage Consultants were appointed by *RHENGU ENVIRONMENTAL SERVICES*, to conduct a Phase 1 heritage impact assessment (HIA) on archaeological and other heritage resources on the study area. 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 (see map 4: Topographical Map: 2531CB (1984)).

The aims of this report are to source all relevant information on archaeological and heritage 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 - 6, and Appendix 1 & 2.

- This study forms part of an EIA, Consultant: *RHENGU ENVIRONMENTAL SERVICES*, P.O. Box 1046, Malelane, 1320, Cell: 0824147088 / Fax: 0866858003 / e-mail: rhengu@mweb.co.za

¹ BID, Rhengu Environmental Services, p.4.

- Type of development: Construction of the Louw's Creek Dam for irrigation purposes.
The dam will be in the extent of 6.5ha and located *on portions of the remaining extent of the farm ESPERADO 253JU & portions 1 & 2 of the farm ESPERADO ANNEX 222JU*, in the Louw's Creek / Kaapmuiden area, Mpumalanga Province.
- The study areas are partly natural and disturbed land and zoned as agricultural – 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 Nkomazi Local Municipality.
- Land owners (two farms): Mr. Walter Giuricich (Cell: 0829676757 / e-mail: walter@ivorymacs.co.za) and Mr. Riaan Kotze (Cell: 0829482257 / e-mail: hak.riiaan@gmail.com).

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 in the National Heritage Resources Act no. 25, 1999, as well as the National Environmental Management Act (1998) (NEMA) (as amended):

- In terms of Government Notice R546, a basic Environmental Impact Assessment is required in terms of listed activities.

• **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 a 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:

- Any development or other activity which will change the character of a site:
 - exceeding 5000m² in extent;
 - the rezoning of a site exceeding 10 000m² in extent;

In addition, the new EIA regulation promulgated in terms of NEMA (as amended), 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 clients, 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 resource require formal protection such as a 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. No archaeological material was found 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 the road infrastructure or agricultural activities. No graves were identified during the survey and both owners who were interviewed, confirmed this.

- **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. This section does not apply since no structure older than 60 years was identified in the study area during the survey.

- **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 / as amended), 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**

Very little contemporary research has been done on prehistoric African settlements in the study area. No Early or Later Stone or Iron Age sites were recorded by Bergh.² The SAHRA database was consulted and a few Specialists AIA reports revealed no significant archaeological (Stone Age or Iron Age) sites.

² J.S. Bergh, *Geskiedenis Atlas van Suid-Afrika Die Vier Noordelike Provinsies*, pp. 4-7.

STONE AGE

- The Stone Age is the period in human history when people produced stone tools. The Stone Age in South Africa can be divided in three periods:
- Early Stone Age (ESA): +- 2 million – 150 000 years ago;
- Middle Stone Age (MSA): +- 150 000 – 30 000 years ago;
- Later Stone Age (LSA): +- 40 000 – 1850AD.

IRON AGE

- The Iron Age is the period in time when humans manufactured metal artifacts. According to Van der Ryst & Meyer,³ it can be divided in two separate phases, namely:
- Early Iron Age (EIA) +- 200 – 1000 AD;
- Late Iron Age (LIA) +- 1000 – 1850 AD.

Archaeological surveys by heritage practitioners in the immediate and wider area revealed mainly burial sites and historic features (see below).

In order to place the areas in and around Kaapmuiden / Louw's Creek to Nelspruit and north towards Bushbuckridge in an archaeological context, primary and secondary sources were consulted. 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 Küsel, 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. The author was involved in a *Desktop Study for Proposed Eskom Powerlines, Hazyview – Dwarsloop* in 2008, *Inspection of Umbhaba Stone-walled settlement, Hazyview*, in 2001, as well as a *Phase 1 Archaeological and Heritage Impact Assessment for 132Kv Powerlines from Kiepersol substation (Hazyview), to the Nwarele substation (Dwarsloop (2002)*, as well as a *Phase 1 Archaeological and Heritage Impact Assessment for a proposed traffic training academy, Calcutta, Mkhuhlu, Bushbuckridge (2013)*. The SAHRA database for archaeological and historical impact assessments was consulted and revealed a few reports for the Komatipoort region, which are listed below. One report for Bushbuckridge (F. Roodt), and one for Acornhoek (JP Celliers) revealed no archaeological sites of significance. Two reports by Dr. J. Van Schalkwyk (NCHM) revealed only historical sites

³ Van der Ryst, M.M, & Meyer, A, Die Ystertydperk in *Geskiedenis Atlas van Suid-Afrika Die Vier Noordelike Provinsies*, pp. 96 – 98.

close to the Komatipoort – Mozambique border.⁴ Reports by Birkholz and Van Vollenhoven for the Nelspruit area revealed historical / recent structures and graves but no archaeological features.

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.⁵ The only professionally excavated Early Iron Age site in the immediate area, besides those in the Kruger National Park, is the Plaston site towards the west, dating ca 900 AD.⁶ 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.^{7 8} A stone walled settlement with terracing was recorded by C. van Wyk (Rowe) close to Hazyview,⁹ as well as several others further west and north-west,¹⁰ outside of the study area. Research has been done by the Pilgrim's Rest Museum on San rock art as well as rock art made by Bantu speakers in the Escarpment area, but none have been recorded to date in the Louw's Creek area.¹¹

Several early ethnographical and linguistic studies by early researchers such as D. Ziervogel and N.J. Van Warmelo, revealed that the study area was inhabited by mainly Swazi groups from before the 18th century.^{12 13} However, when concentrating on ethnographical history, it is important to include a slightly wider geographical area in order for it to make sense.

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

⁴ National Cultural History Museum, 2002., Archaeological Survey of a section of the Secunda-Mozambique Gas Pipeline, Barberton District, Mpumalanga & J. Van Schalkwyk, 2008., HIA Report: Proposed new Lebombo Port of Entry and Upgrade of Komatipoort Railway Station, Mpumalanga (SA) & Mozambique.

⁵ J.S. Bergh (red)., *Geskiedenis Atlas van Suid Afrika: Die vier Noordelike Provinsies*, p. 95.

⁶ M.M. Van der Ryst., Die Ystertydperk, in J.S. Bergh (red)., *Geskiedenis Atlas van Suid Afrika: Die vier Noordelike Provinsies*. p. 97.

⁷ Personal information: Dr. J. Pistorius, Pretoria, 2008-04-17.

⁸ Personal information: Dr. MS. Schoeman, University of Pretoria, 2008-03-27.

⁹ C. Van Wyk, *Inspection of Umbhaha Stone-walled settlement, Hazyview*, pp. 1-2.

¹⁰ PRMA: Information file 9/2.

¹¹ PRMA: Information file 9/2.

¹² N.J. Van Warmelo, *A Preliminary Survey of the Bantu Tribes of South Africa*. pp. 90-92 & 111.

¹³ H. S. Webb, The Native Inhabitants of the Southern Lowveld, in *Lowveld Regional Development Association, The South-Eastern Transvaal Lowveld*. p. 16.

boundaries of groups are intersected and overlapping.¹⁴ Languages such as Zulu, Xhosa, Swazi, Nhlangu, Nkuna, sePedi, hiPau and seRôka, are commonly spoken throughout this area.¹⁵

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.¹⁶ During their northern expansion they forced the local inhabitants out of Swaziland, or absorbed them.¹⁷ There is evidence of resistance, but the Eastern Sotho groups who lived in the northern parts of Swaziland, moved mainly northwards.¹⁸ This appears to have taken place towards the end of the 18th century,¹⁹ when these groups fled from Swaziland to areas such as Nelspruit, Bushbuckridge, Klaserie, Blyde River and Komatipoort.²⁰

Mswati II built a line of military outposts from west to east of the upper Komati River and the Mlambongwane (KaaP River). At each outpost he stationed regiments to watch and stop the BaPedi returning to their old haunts.²¹ Shaka in the course of his military actions, came into conflict with Zwide Mkhathshwa (1819). Nonwithstanding 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.²² 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 Shangane 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

¹⁴ N.J. van Warmelo, *A Preliminary Survey of the Bantu Tribes of South Africa*, p. 51.

¹⁵ M. De Jongh (ed.), *Swatini*, p. 21.

¹⁶ Bornman H., *The Pioneers of the Lowveld* p 11.

¹⁷ A.C. Myburgh, *The Tribes of Barberton District*, p. 10.

¹⁸ N.J. Van Warmelo, *A Preliminary Survey of the Bantu Tribes of South Africa*. p. 111.

¹⁹ H. S. Webb, *The Native Inhabitants of the Southern Lowveld, in Lowveld Regional Development Association, The South-Eastern Transvaal Lowveld*. p. 14

²⁰ *Ibid.*, p. 16.

²¹ Bornman H., *The Pioneers of the Lowveld* p. 12.

²² Bornman, H., *The Pioneers of the Lowveld*, p.17.

westward into Klaserie and Bushbuckridge areas, or south of the Crocodile River and established themselves in the Tenbosch and Coal Mine (Strijdom Block) areas (east of the current study area), west and south of Komatipoort. The Swazi of Khandzalive moved to Mjejane or Emjejane, the current name for Hectorspruit.²³ (See also: Map 1: 1935 Map of Van Warmelo).

Several circular stone-walled complexes and terraces as well as graves have been recorded in the vicinities of Hazyview²⁴, Bushbuckridge, Graskop and Sabie. Clay potsherds and upper as well as lower grinding stones, are scattered at most of the sites.²⁵ Many of these occur in caves as a result of the Swazi attacks on the smaller groups.

The only early trade route mentioned, which crossed this section, was a footpath used by the African groups from Delagoa Bay towards Bushbuckridge (Magashulaskraal as it was previously named), along the Sabie river, up the Escarpment, and further north to the Soutpansberg.²⁶ There is however, no physical evidence left of this early route.

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 indicate how many people were actually living in one area.²⁷

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

- *Study for the Proposed Eskom Powerlines, Hazyview – Dwarsloop* (2008);
- *Inspection of Umbhaba Stone-walled settlement, Hazyview*, (2001);
- *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); no features of significance were identified;

²³ Bornman, H., *The Pioneers of the Lowveld*, p.19.

²⁴ PRMA: Information file 9/2.

²⁵ D. Ziervogel, *The Eastern Sotho, A Tribal, Historical and Linguistic Survey*, p. 3.

²⁶ L. Changuion & J.S. Bergh, Swart gemeenskappe voor die koms van die blankes, in J.S. Bergh (red), *Geskiedenis Atlas van Suid Afrika: Die vier Noordelike Provinsies*. p. 104.

²⁷ N.J. van Warmelo, *A Preliminary Survey of the Bantu Tribes of South Africa*, p.9.

- *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 proposed debushing of natural as well as disturbed land for agricultural use: Portion 2 of the farm Herculina 155JU, Hectorspruit area, Mpumalanga Province;* no significant archaeological or historical features were identified.
- 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);*
- Recommendation: Archaeological Material discovered on a building site at stand no 134 (Lugedlane Development), Mjejane Game Reserve, Lodwicks Lust 163JU, Hectorspruit (2016);
- Report on Grave site found at the Lugedlane Development site, Mjejane Game Reserve, Lodwicks Lust 163JU, Hectorspruit (2016).
- Phase 1 AIA / HIA for a *proposed agricultural development on the farm Krokodilspruit 248JT, White River, Mpumalanga Province* – some archaeological features as well as graves were observed.
- *Phase 1 AIA / HIA for proposed establishment of macadamia plantation on portion 1 of the farm PEEBLES 31JU, White River, Mpumalanga Province;*

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

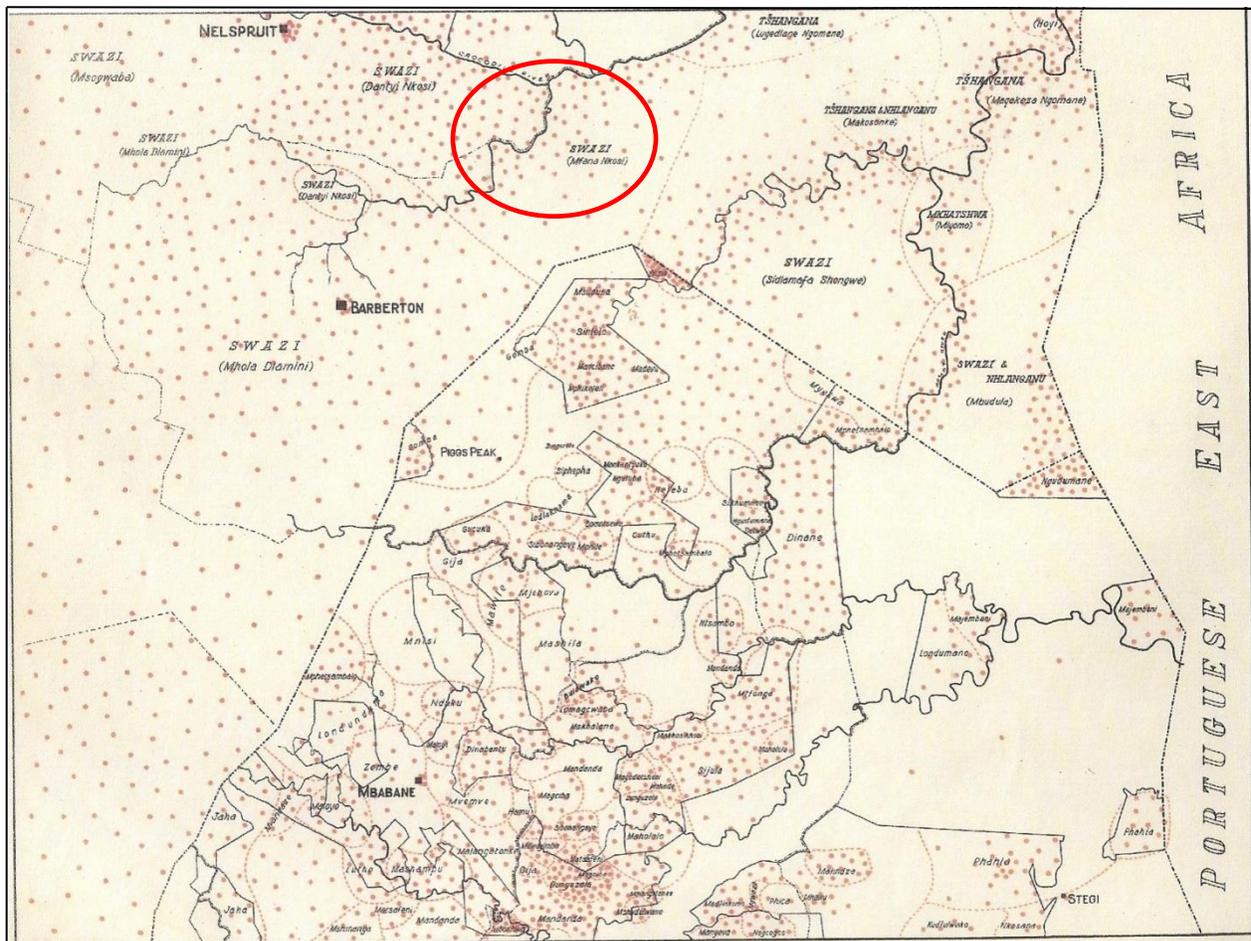
- *Phase 1 AIA / HIA for proposed Residential Township, Tekwane Extension 2, Portion 7 of Tekwane 537JU, Kanyamazane, Mpumalanga Province (2014);* the entire area was transformed agricultural lands which revealed a few upper grinders;
- *Phase 1 AIA / HIA for proposed Reservoir, Bulk sewer and bulk water pipelines, Portion 7 of Tekwane 537JU, Kanyamazane, Mpumalanga Province (2014);* mostly disturbed residential areas which revealed no features of significance;
- 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,
- Letter of recommendation for the exemption from a phase 1 AIA & HIA investigation: Proposed construction of a bridge on the D233 road in Louieville, Nkomazi local Municipality, Mpumalanga, (April 2018). – no archaeological sites were observed.
- 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).
- DESKTOP Heritage Impact Assessment for the proposed Tekwane Hub residential development on Portion 9 of the farm Tekwane 573JU, Mbombela, City of Mbombela, Mpumalanga (2019).
- DESKTOP HIA for the proposed construction of a gravity outfall sewer line through a wetland, UMP Township & Portion 74 of the farm Friedenheim 282JU, Mbombela, City of Mbombela, Mpumalanga (2020).

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

- National Cultural History Museum, J. Van Schalkwyk: Archaeological survey of a section of the Secunda- Mozambique Gas pipeline, Barberton District, Mpumalanga (2002), revealed one historic structure.
- 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;
- 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.
- P. Birkholz: *HIA for the proposed development of the Karino Interchange located east of Mbombela, Mpumalanga Province (2017)* – Historical buildings and structures were revealed but no archaeological sites or features were identified.
- A. Van Vollenhoven: HIA for Aurecon, 15 June 2012, *Basic Assessment for the Environmental Impact Assessment for the Friedenheim Office Complex, Nelspruit, Mpumalanga.* – revealed no graves or archaeological sites. Recent buildings were observed.



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

Tsonga groups: The Nhlanganu and Tšhangana

The Nhlanganu and Tšhangana (also generally known as the Shangaan-Tsonga)²⁸ form part of the larger Tsonga group of which the original group 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).²⁹ 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 19th 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.³⁰ They were originally of Nguni origin.³¹ The term “Shangaan” is commonly employed to refer to all members of the Tsonga division.³²

The **Nhlanganu** occupied the Low Veld area in their efforts to escape the Zulu raids during 1835-1840. They lived side by side with the Tšhangana, and the differences between the two are inconsiderable. They have mixed extensively with other tribes.³³

The **Tšhangana** are also of Nguni origin who fled in the same way as the Nhlanganu, and settled in the “Transvaal” a little later than the former. Most of the Tsonga were subjects to *Soshangane*, who came from Zululand.³⁴ The downfall of *Ngungunyana* (son of *Soshangane*) saw his son seeking sanctuary in the “Transvaal”, and the latter became known as *Thulamahashi*,³⁵ the name that is still used for the area east of Busbuckridge.

The historical background of the study area confirmed that it was occupied since the 17th century by the Tsonga groups (Nhlanganu and Tšhangana). These groups have intermarried extensively or were absorbed by other groups in time.³⁶

²⁸ M. De Jongh (ed)., *Swatini*, p. 24.

²⁹ N.J. Van Warmelo, Grouping and Ethnic History, in *Schapera I., The Bantu-Speaking Tribes of South Africa. An Ethnographical survey*, p. 55.

³⁰ N.J. Van Warmelo, *A Preliminary Survey of the Bantu Tribes of South Africa*, pp. 90-91.

³¹ N.J. Van Warmelo, Grouping and Ethnic History, in *Schapera I., The Bantu-Speaking Tribes of South Africa. An Ethnographical survey*, p. 55.

³² N.J. Van Warmelo, *A Preliminary Survey of the Bantu Tribes of South Africa*, p. 92

³³ *Ibid.*, pp. 91-92.

³⁴ N.J. Van Warmelo, Grouping and Ethnic History, in *Schapera I., The Bantu-Speaking Tribes of South Africa. An Ethnographical survey*, p. 57.

³⁵ N.J. Van Warmelo, *A Preliminary Survey of the Bantu Tribes of South Africa*, p. 92.

³⁶ M. De Jongh (ed)., *Swatini*, p. 40.

Swazi

The Swazi people descend from the southern Bantu (Nguni) who migrated from central Africa in the 15th and 16th centuries.³⁷ 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* period, they became independent and their claim to be grouped apart as a culture is now well founded.³⁸

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

The proposed project will involve the following:

The applicants wish to develop an irrigation storage dam in the Louw's Creek near the confluence with the Kaap River (figs. 5 – 6). It is proposed to construct the dam *on portions of the remaining extent of the farm ESPERADO 253JU and portions 1 & 2 of the farm ESPERADO ANNEX 222 JU*. The dimensions of the proposed dam are as follows:

- Wall Height 11.4m;
- Wall Length 245m;
- Cover an area of 6.5 ha;
- Storage capacity of 193 000 cubic meters;
- Maximum full supply water depth will be 8m;
- Additional infrastructure: pump house & pipelines.³⁹

The development of this storage facility will allow the applicants / farmers to manage the water supply to the orchards in a sustainable manner reducing the risk of poor supply versus demand especially during the dry seasons.⁴⁰ The proposed dam development will cover the current riparian zone which consists of natural as well as alien vegetation in a section of the Louw's Creek (see map 2), as well as some of the existing road infrastructure and historically disturbed agricultural lands (see google map 6 of the study area).

Large areas surrounding the *ESPERADO* farms have been historically disturbed by commercial sugar cane, banana, paw paw and other fruit farms (see map 6 & 4 topo map & study area).

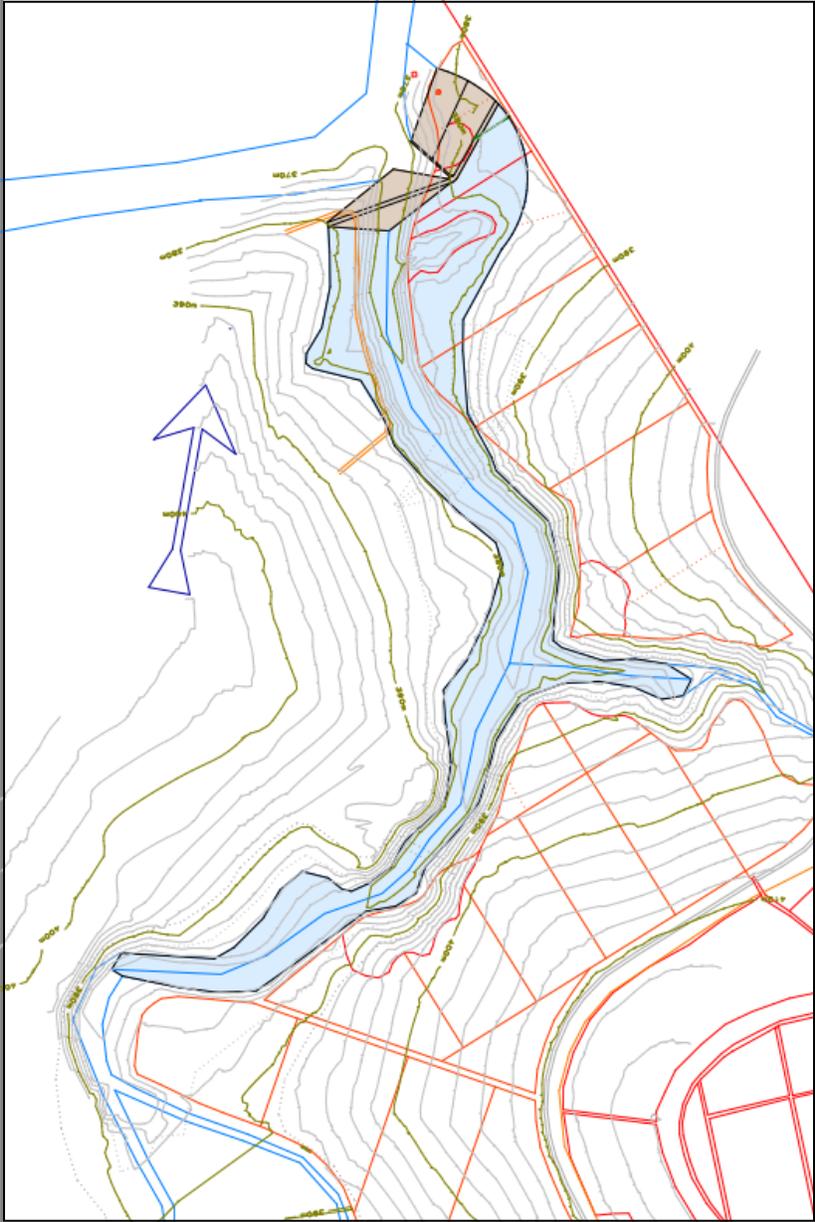
³⁷ Internet access: <http://en.wikipedia.org/wiki/Swaziland> p.1.

³⁸ N.J. Van Warmelo, *A Preliminary Survey of the Bantu Tribes of South Africa*, p. 83.

³⁹ BID, Rhengu Environmental Services, p.4.

⁴⁰ BID, Rhengu Environmental Services, p.4.

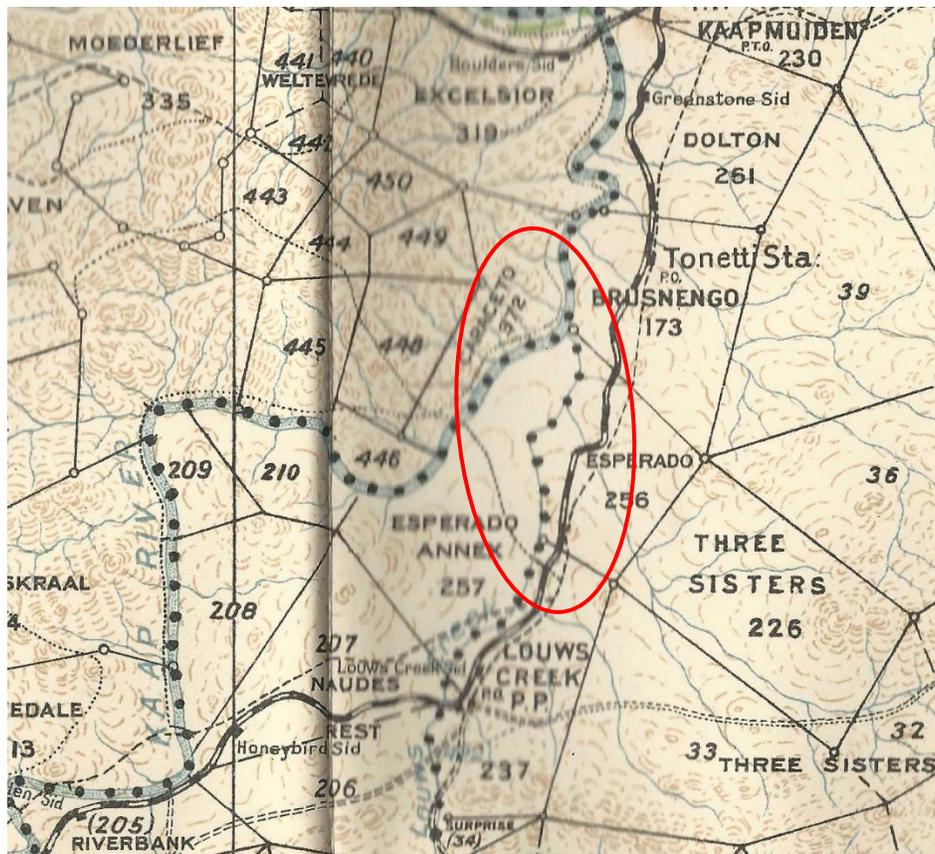
Most of the land surrounding the riparian zone of the Louw's Creek and Kaap Rivers, has historically been disturbed with agricultural fields (see Appendix 2).



MAP 2: Proposed layout of the Louw's Creek Dam construction (Map provided by Rhengu Environmental Services).

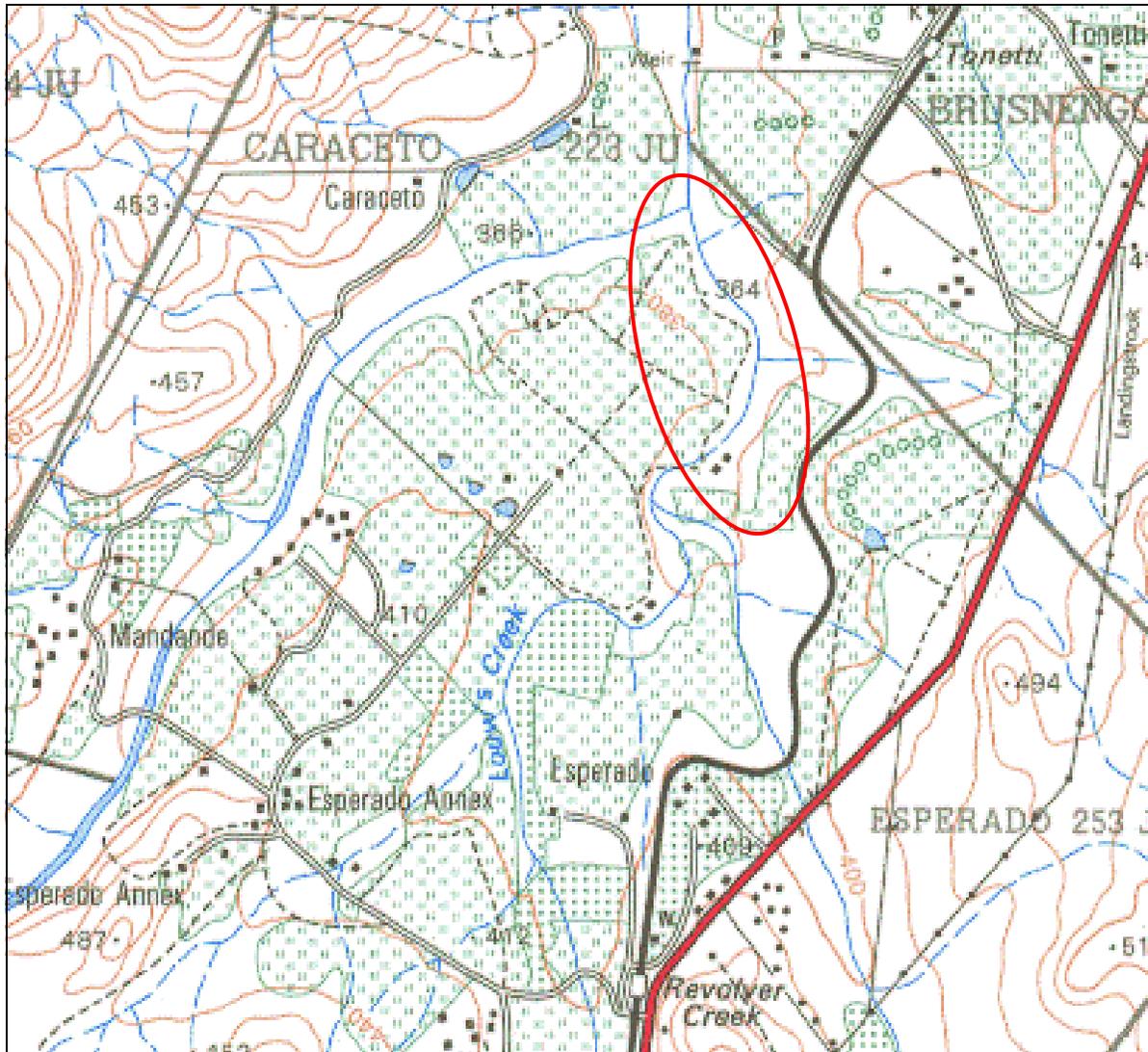
Sections along the Louw's Creek are partly natural and partly covered with invasive vegetation. Disturbances such as a quarry site (fig. 19), a donga (fig. 18) and a cleared area (fig. 16), also occur. These were all investigated for any remains of archaeological or historical nature, but nothing was observed.

The general study area consists of the mountainous bushveld of eastern Mpumalanga. The landscape is characterized by wooded hills and slopes, intersected by large perennial rivers and smaller streams. The general geology of the area consists of granite and gneiss, mostly of the Nelspruit suite, forming hills with large boulders. Soils are shallow, comprised of Glenrosa or Mispah soil types.⁴¹



MAP 3: The 1926 topographical map does not indicate any black settlements within or near the study area.

⁴¹ Nelspruit area: Friedenheim Housing project, AEB, p. 2. Access: 2020-02-25.



MAP 4: 1984 Topographical map: The study area is within red oval. No black settlements were recorded in the immediate area. Extensive cultivated lands are visible.

The *ESPERADO* farms are indicated on the 1984 (1: 50000) topographical map 2531CB (map 4). This map shows the extent of farming operations in the area, and on the property in the past.

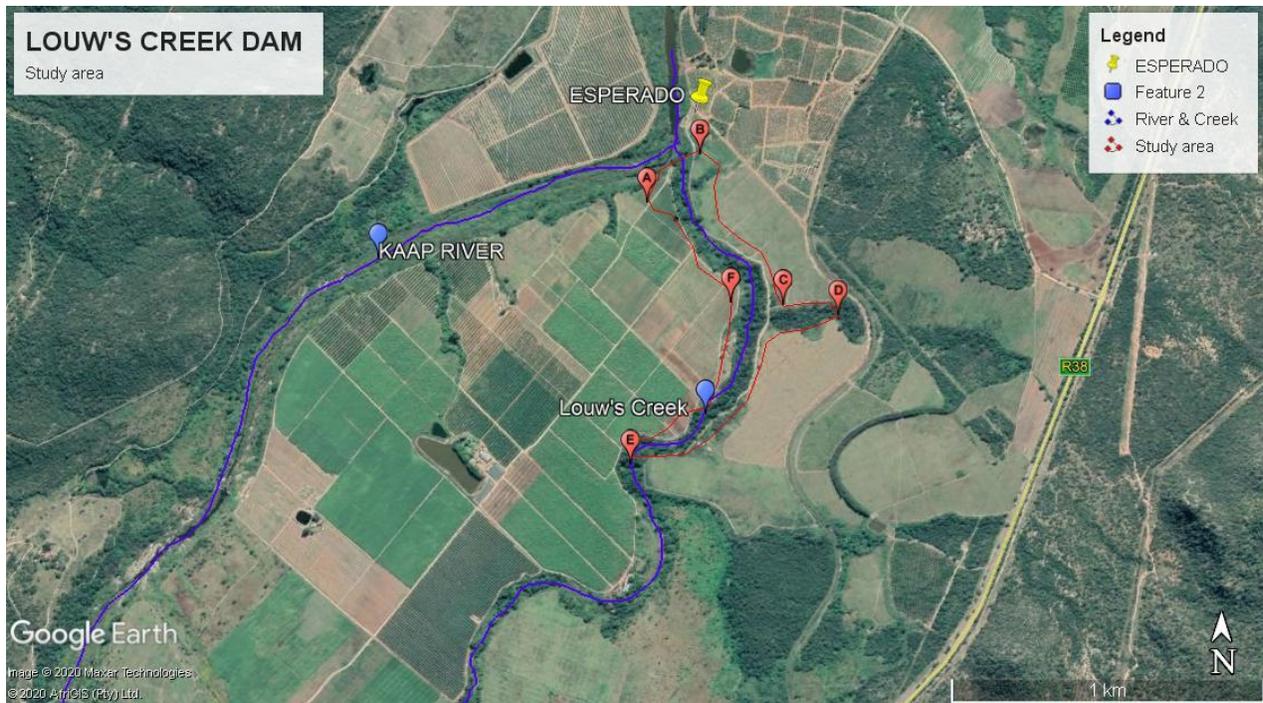
D. LOCALITY

The proposed project site is located on portions of the remaining extent of the *farm ESPERADO 253JU* and portions 1 & 2 of the *farm ESPERADO ANNEX 222 JU* (see map 5). The study area is approximately 6 km south of the N4 near Kaapmuiden, turning towards Barberton on the R38 road. It is approximately 30km north of Swaziland. The site falls under the Nkomazi Local

Municipal jurisdiction, which in turn falls within Ehlanzeni District Municipality, in the Mpumalanga Province (see maps 3 - 6). Large areas surrounding the *ESPERADO* farms have historically been disturbed by commercial agricultural farms.



MAP 5: The wider area surrounding *ESPERADO*.



MAP 6: The study area is indicated by the red line. Please note the historically disturbed farm lands in the surrounding area (see figs. 3 & 4).

- **Description of methodology:**

The 1984 topographical map, (2531CB, map 4), as well as the 1926 topographical map (map 3), and Google images of the site (maps 5 & 6), indicate the study area of the proposed development. These were intensively studied to assess the current and historically disturbed areas and infrastructure. The historic Google Images show extensive agricultural disturbances on portions of the remaining extent of the *farm ESPERADO 253JU and portions 1 & 2 of the farm ESPERADO ANNEX 222 JU*, in the past. In order to reach a comprehensive conclusion regarding the cultural heritage resources in the study area, the following methods were used:

- The desktop study consists mainly of archival sources studied on distribution patterns of early African groups who settled in the area since the 17th 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.
- Several 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 *portions of the remaining extent of the farm ESPERADO 253JU and portions 1 & 2 of the farm ESPERADO ANNEX 222 JU*, are primarily commercial farming concerns with small sections of natural vegetation along the Louw's Creek, Kaap River and drainage lines.
- A site visit with interested and affected parties was held on 17 July 2020.
- The fieldwork and survey were conducted extensively on foot and with a vehicle. Existing roads and small paths were mainly used to access areas (See Appendix 1: Tracks & Paths).
- The terrain next to the Louw's Creek was typical of riparian vegetation. Visibility directly next to the river was restricted due to a dense vegetation cover. However, the visibility in the open cultivated areas on the banks of the Creek & River was excellent (see Appendix 2).
- The relevant data was located with a GPS instrument (Garmin Etrex) datum WGS 84, and plotted. Co-ordinates were within 4-6 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 relevant stakeholders on the specific study areas were held during the site visit with the owners.^{42 43} The owners are familiar with the properties and confirmed that they have never encountered any graves or archaeological features on the properties. Ecologist Dr. A. Deacon⁴⁴ and environmental practitioner Mr. R. Kalwa⁴⁵ were also consulted during the research.
- GPS co-ordinates were used to locate the site and for possible heritage features within the study area (Co-ordinates provided by RHENGU Environmental Services): (See Map 6 for perimeters of the sites).

GPS CO-ORDINATES			
Location	South	East	Elevation
A	S 25° 35' 27.85"	E 31° 18' 27.18"	372m
B	S 25° 35' 22.44"	E 31° 18' 33.71"	372m
C	S 25° 35' 39.18"	E 31° 18' 43.95"	372m
D	S 25° 35' 40.34"	E 31° 18' 50.65"	383m
E	S 25° 35' 56.96"	E 31° 18' 25.24"	376m
F	S 25° 35' 38.96"	E 31° 18' 37.53"	376m

E. DESCRIPTION OF IDENTIFIED SITES

The applicant is requesting to establish a dam *on portions of the remaining extent of the farm ESPERADO 253JU and portions 1 & 2 of the farm ESPERADO ANNEX 222 JU*. The footprint of the study area will include the construction of a dam wall near the confluence of the Kaap River and the Louw's Creek. The footprint of the dam will cover an area of approximately 6.5ha in the Louw's Creek, and will cover partly natural riparian vegetation as well as historically disturbed agricultural lands and access roads (see map 6).

The dimensions of the proposed dam are as follows:

- Wall Height 11.4m;
- Wall Length 245m;

⁴² Personal information: Mr. Walter Giuricich, Owner of ESPERADO, 2020-07-17.

⁴³ Personal information: Mr. Riaan Kotze, Owner of ESPERADO ANNEX, 2020-07-17.

⁴⁴ Personal information: Dr. A Deacon, 2020-07-21.

⁴⁵ Personal information: Mr. R. Kalwa, e-mail access: 2020-07-17.

- Cover an area of 6.5 ha;
- Storage capacity of 193 000 cubic meters;
- Maximum full supply water depth will be 8m;
- Additional infrastructure: pump house & pipelines.⁴⁶

The study area falls within Kaapmuiden / Louw's Creek area which has historically been known for commercial agricultural farming. Large sections on the adjacent properties are already cultivated with bananas, paw paw, sugarcane and macadamias (see map 6). The area consists of the riparian zone within the Louw's Creek, and mainly flat agricultural sections. One small rocky outcrop is located towards the south of the proposed study area. Modern topographical maps also clearly show extensive historical farming activities in the surrounding areas (map 4 - 1984). The 1926 topographical map (map 3) does not indicate any historic settlements directly in the study area. The 1935 map by Van Warmelo indicated the groups living in the area as mainly of Swazi decent (map 1).

The study area is indicated in maps 2 - 6. The terrain was fairly even although the natural sections along the Louw's Creek, was dense and visibility was restricted (see figs. 5 - 26). Sections were however accessible by existing paths and roads, and was surveyed on foot and per vehicle. All disturbed sections on the farm (quarry, donga and excavated cleared areas, as well as cleared agricultural lands) were investigated for possible signs of an archaeological or historical nature. No archaeological material or deposits, graves, historical features or structures were observed, and the disturbed areas were all sterile (fig. 16 – 19 & map 6).

The farm owners were interviewed to find out if they were aware of any archaeological, historical features or graves. The confirmed that they, or their farm workers had no knowledge of any burial sites or other heritage related features on the property.^{47 48}

The terrain was mostly even but the vegetation cover was dense in sections. Paths and roads made some sections more accessible for the survey. The area next to the riparian zone was mostly disturbed with access roads and agricultural lands. The visibility in these sections were excellent (Appendix 1 & 2).

⁴⁶ BID, Rhengu Environmental Services, p. 4.

⁴⁷ Personal information: Mr. W. Giuricich, Owner ESPERADO, 2020-07-17.

⁴⁸ Personal information: Ms. R. Kotze, Owner ESPERADO ANNEX: 2020-07-17.

No archaeological sites of significance, stone walls or historic structures or graves were identified, and was confirmed by the applicants.

F. DISCUSSION ON THE FOOTPRINT OF THE PROPOSED DEVELOPMENT

ACT	COMPO- NENT	IMPLICATION	RELEVANCE	COMPLIANCE
NHRA	S 34	Impact on buildings and structures older than 60 years	None present	None
NHRA	S35	Impacts on archaeological heritage resources	None present	None
NHRA	S36	Impact on graves	None present	None
NHRA	S37	Impact on public monuments	None present	None
NHRA	S38	Developments requiring an HIA	Development is a listed activity	HIA done
NEMA	EIA regulations	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:**

Context		
Urban environmental context	No	NA
Rural environmental context	No	NA
Natural environmental context	No	NA
Formal protection (NHRA)		

Context		
(S. 28) Is the property part of a protected area?	No	NA
(S. 31) Is the property part of a heritage area?	No	NA
Other		
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

<i>Property features and characteristics</i>		
Have there been any previous development impacts on the property?	Yes	Historically disturbed agricultural land
Are there any significant landscape features on the property?	No	NA
Does the property have any rocky outcrops on it?	Yes	Very small outcrop
Does the property have any fresh water sources (springs, streams, rivers) on or alongside it?	Yes	Louw's Creek, drainage lines & Kaap River

<i>Heritage resources on the property</i>		
<i>Formal protection (NHRA)</i>		
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
<i>General protection (NHRA)</i>		
Structures older than 60 years (S. 34)	No	NA
Archaeological site or material (S. 35)	No	NA
Graves or burial grounds (S. 36)	No	NA

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

NHRA S (3)2 Heritage resource category	ELEMENTS	INDICATORS OF HERITAGE SIGNIFICANCE											RISK
		Historical	Rare	Scientific	Typical	Technological	Aesthetic	Person / community	Landmark	Material condition	Sustainability		
Buildings / structures of cultural significance	No	No	No	No	No	No	No	No	No	No	No	No	NA
Areas attached to oral traditions / intangible heritage	No	No	No	No	No	No	No	No	No	No	No	No	NA

NHRA	ELE-	INDICATORS OF HERITAGE SIGNIFICANCE										RISK	
Historical settlement / townscapes	No	-	-	-	-	-	-	-	-	-	-	-	NA
Landscape of cultural significance	No	-	-	-	-	-	-	-	-	-	-	-	NA
Archaeological sites	No	-	-	-	-	-	-	-	-	-	-	-	NA
Grave / burial grounds	No	-	-	-	-	-	-	-	-	-	-	-	NA
Areas of significance related to labour history	No	-	-	-	-	-	-	-	-	-	-	-	NA
Movable objects	No	-	-	-	-	-	-	-	-	-	-	-	NA

- Summarised recommended impact management interventions

NHRA S (3)2 Heritage resource category	SITE	IMPACT SIGNIFICANCE		Impact management	Motivation
		Cultural significance	Impact		
		Cultural	Impact		

NHRA S (3)2 Heritage	SITE	IMPACT SIGNIFICANCE Cultural significance		Impact management	Motivation
Buildings / structures of cultural significance	No	No	None	-	NA
Areas attached to oral traditions / intangible heritage	No	None	None	-	NA
Historical settlement/ townscape	No	None	None	-	NA
Landscape of cultural significance	No	None	None	-	NA
Archaeological sites	No	None	None	-	NA
Grave / burial grounds	No	No	None	-	NA
Areas of significance related to labour history	No	None	None	-	NA

NHRA S (3)2 Heritage	SITE	IMPACT SIGNIFICANCE Cultural significance		Impact management	Motivation
Movable objects	No	None	None	-	NA

ACT	COMPO- NENT	IMPLICATION	RELEVANCE	COMPLIANCE
NHRA	S 34	Impact on buildings and structures older than 60 years	None present	None
NHRA	S35	Impacts on archaeological heritage resources	None present	None
NHRA	S36	Impact on graves	None present	None
NHRA	S37	Impact on public monuments	None present	None
NHRA	S38	Developments requiring an HIA	Development is a listed activity	Full HIA
NEMA	EIA regulations	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.⁴⁹ 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 importance in the history of South Africa.⁵⁰

- **The significance and evaluation of the archaeological and cultural heritage features in the study area**

The farms in the study area (*portions of the remaining extent of the farm ESPERADO 253JU and portions 1 & 2 of the farm ESPERADO ANNEX 222 JU*), are operated as commercial concerns with the cultivation of, banana, paw paw, and macadamias. The only areas which are currently not under development, are areas directly along the Louw's Creek and Kaap River. No archaeological sites of significance, stone walls or historic structures or graves were identified during the survey, and the applicants, who were interviewed, had no knowledge of any such features on the farm.^{51 52}

It is not believed that any archaeological or historical features will be impacted upon by the proposed footprint of the dam development.

⁴⁹ National Heritage Resources Act, no. 25 of 1999. p. 2.

⁵⁰ National Heritage Resources Act, no. 25 of 1999. pp. 12-14

⁵¹ Personal information: Mr. W. Giuricich, Owner of ESPERADO, 2020-07-17.

⁵² Personal information: Mr. R. Kotze, Owner of ESPERADO ANNEX, 2020-07-17.

H. RECOMMENDATIONS & CONCLUSION

Archaeological material or graves are not always visible during a field survey and therefore some significant material may only be revealed during construction activities of the proposed dam development.

It is recommended that the owner be made aware that distinct archaeological material or human remains may only be revealed during further de-bushing or construction activities. 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 dam development to continue, but it is recommended that earthmoving activities be monitored by a qualified archaeologist and that an assessment be done should any archaeological material be found.

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

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**APPENDIX 1:
TRACKS & PATHS USED DURING THE SURVEY**

