

SPECIALIST REPORT
**PHASE 1 ARCHAEOLOGICAL / HERITAGE IMPACT ASSESSMENT FOR A PROPOSED
BULK WATER INFRASTRUCTURE (DAMS & WEIRS) ON *THE FARM NOSILLA 27JU*,
WHITE RIVER / HAZYVIEW, MPUMALANGA PROVINCE**

**REPORT COMPILED FOR
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MAY 2021

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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 NOSILLA 27JU*, between White River and Hazyview. The study area is situated on topographical map 1:50 000, 2531AA, 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, Mr. Pieter Du Preez, in co-operation with *RHENGU ENVIRONMENTAL SERVICES*, is proposing to establish a bulk water supply infrastructure (dams, weirs and a pipeline), as well as connecting to an existing ESKOM line, to provide an adequate water supply for their agricultural activities. NOSILLA farm is currently a commercial Timber property which is being converted to farm macadamias, blueberries and ginger. The entire property is highly disturbed with existing timber plantations, except for small sections of natural vegetation within drainage lines.

The three proposed dams will be situated within existing disturbed plantation areas and the two weirs within the natural drainage line, from where the water will be pumped to the dams. Existing roads was used to access the proposed areas.

No archaeological or heritage features were observed during the site survey which took place over two days, and no graves were observed. The owner, Mr. Du Preez, as well as the farm manager, Mr. Ferreira were also not aware of any graves on the property. No land claim has been lodged against the property.

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



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C. Rowe

MAY 2021

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A. BACKGROUND INFORMATION TO THE PROJECT

Mr. Pieter du Preez, in co-operation with *RHENGU Environmental Services*, is requesting the establishment of a bulk water supply infrastructure in the form of weirs and off-channel storage facilities (dams & pipeline), as well as a powerline connecting to the existing ESKOM lines, on the farm NOSILLA 27JU, in the White River district of Mpumalanga. ¹

The entire farm NOSILLA is currently a commercial Timber property. The owner is planning to remove 218.3ha of forestry to establish macadamia, blueberries and ginger to expand the current existing enterprise of the neighboring property (St Cloud farm). ² The removal of the timber will increase the water runoff which can either be abstracted directly or stored in off-channel storage dams. The aim is to reduce the risk of water supply which is key to the production of quality produce in a sustainable manner. The availability of irrigation water is seen to be the most important factor for successful and sustainable production on this enterprise. ³ Two small weirs will be constructed from which water will be pumped to the three storage dams. This will ensure that the additional water can be harnessed and utilized for irrigation purposes. ⁴ The pipelines which will connect the dams and weirs, and a connection to the existing power lines will follow existing roads or disturbed (plantation) areas on the farm.

The proposed site for the development is situated between White River and Hazyview in the Lowveld region. The site is accessed off the R40 provincial road, approximately 12km north of the town of White River. The entire property is highly disturbed with existing timber plantations, except for small pockets of natural vegetation within the drainage lines.

The owner, Mr. Du Preez, as well as the farm Manager, Mr. Ferreira, were interviewed during the two site visits. None of them were aware of any graves or any heritage features on the

¹ Needs & Desirability Report: Mr. Ralf Kalwa, e-mail access: 2021-04-25.

² Provisional development Plan Table, 2021-01-18, p.1.

³ MBB Consulting Services: Nosilla 27JU Engineering Planning Report, p. 1.

⁴ IWR Water Resources, Water Resources Analysis of a Forestry to irrigation conversion on the property Nosilla 27JU, Mpumalanga, p. 1.

NOSILLA property.^{5 6} Rock art sites occur within the wider area as well as on the Legogot hill directly to the east,⁷ but none was observed on the NOSILLA farm.

Google images and topographical maps were studied which indicated that the farm was mainly used for timber since at least 1971 (see map 8 - 10). Several drainage lines are sloping towards the Dagama dam in the north. The farm NOSILLA 27JU is located in the X31H-2 quinary catchment on a tributary of the White Waters River, which is a tributary of the Sabie River.⁸ A few granite outcrops occur on the farm in the form low hills (fig. 11). These are natural and undisturbed with indigenous vegetation cover and are not developed with timber or agriculture, and will be left undisturbed.

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 8: topographical map 1:50 000, 2531AA KIEPERSOL).

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 3 & 8 - 10, & Appendices 1 & 2.

- 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.za⁹
- Type of development: Establishment of bulk water supply infrastructure on *the farm NOSILLA 27JU*, White River, Mpumalanga Province.
- The study area consists entirely of disturbed land (commercial timber plantations),¹⁰

⁵ Personal communication: Mr. P. Du Preez (Owner), 2021-04-15.

⁶ Personal communication: Mr. H. Ferreira (Farm Manager), 2021-04-27.

⁷ Personal communication: Mr. Solomon, (PEEBLES Farm), 2019-10-19.

⁸ IWR Water Resources, Water Resources Analysis of a Forestry to irrigation conversion on the property Nosilla 27JU, Mpumalanga, p. 4.

⁹ Needs & Desirability Report: Mr. Ralf Kalwa, e-mail access: 2021-04-25.

¹⁰ Needs & Desirability Report: Mr. Ralf Kalwa, e-mail access: 2021-04-25.

with small pockets of indigenous vegetation cover within the natural drainage lines.

- 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 the City of Mbombela Local Municipality.
- Land owner & applicant: Mr. Pieter du Preez, St Cloud Farm, White River, 1240, Cell: 0844511601. ¹¹

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.

¹¹ Personal communication: Mr. P. du Preez (Owner), 2020-04-15.

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 5000m² in extent;
- the rezoning of a site exceeding 10 000m² 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*, the applicant, as well as 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. No archaeological material was 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. No graves were observed on the study area.

- **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. No historical structures / buildings were observed 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), provides for an assessment of development impacts on the cultural (heritage) and social environment and for specialist studies in this regard. In terms of the Environmental Impact Assessment (EIA) regulations (under the NEMA Act, as amended), the proposed development constitutes listed activities which requires environmental authorisations prior to commencement with the proposed activities.

B BACKGROUND TO ARCHAEOLOGY AND HISTORY OF THE STUDY AREA

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

The study area on *the farm NOSILLA 27JU*, is located approximately 12km north of White River, with access from the R40 provincial road, towards Hazyview.

The wider area is 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.¹²

Bushman (or San) presence is evident in the area as research by rock art enthusiasts revealed 109 sites in the Kruger National Park,¹³ and over 100 rock art sites at Bongani Mountain Lodge and its immediate surrounds¹⁴ (south-east of the study area), as well as many sites in the Nelspruit, Rocky's Drift and White River areas. A rock art site on Legogot hill, directly east of the study area, was visited by the author in the 1980's. Another rock art site was mentioned by Mr. Solomon (security guard who was interviewed during a previous survey on the Peebles farm to the east). This rock art site is also situated towards the east of the NOSILLA property, and was vandalized by people who excavate the site for possible treasure.¹⁵ Thirty- one rock art sites were recorded by the author on the Mpumalanga Drakensberg Escarpment. Rock art sites were also recorded in Swaziland.^{16 17} The Bushman painters most probably obtained the ochre which was used as a pigment in the paintings, from the Dumaneni ochre mine.^{18 19}

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

¹² Bornman, H., *The Pioneers of the Lowveld*, p. 1.

¹³ English, M. Die Rotskuns van die Boesmans in die NKW, in *De Vos Pienaar, U., Neem uit die Verlede*, p. 18-24.

¹⁴ Hampson, et al., The rock art of Bongani Mountain Lodge, SA Archaeological Bullitin 57: p. 15.

¹⁵ Personal communication: Mr. Solomon (Peebles farm), 2019-10-09.

¹⁶ Rowe, C. 2009. Heritage Management of Archaeological, Historical and Industrial resources on the Blyde River Canyon Nature Reserve, MA dissertation. Pretoria: UP.

¹⁷ Masson, J. 2008. Views from a Swaziland Cave. *The Digging Stick*, Vol. 25 no 1: 1-3.

¹⁸ Bornman, H. *The Pioneers of the Lowveld*, p. 1.

¹⁹ Masson, J. 2008. Views from a Swaziland Cave. *The Digging Stick*, Vol. 25 no 1: 1-3.

terraces as well as graves have been recorded in the vicinities of Hazyview²⁰, Bushbuckridge, Graskop and Sabie. Clay potsherds and upper as well as lower grinders, are scattered at most of the sites.²¹ Many of these occur in caves as a result of the Swazi attacks during the 1900's on smaller groups. The 1911 topographical map (Degree Sheet 22) of *Komatipoort* revealed no historic black settlements in the immediate area the farm (see map 2).²²

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);
- *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*,

²⁰ PRMA: Information file 9/2.

²¹ D. Ziervogel, *The Eastern Sotho, A Tribal, Historical and Linguistic Survey*, p. 3.

²² Map: 1911 Topographical Map: KOMATIPOORT Degree Sheet no. 22.

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).*
- Phase 1 AIA / HIA for a *proposed agricultural development on the farm Krokodilspruit 248JT, White River, Mpumalanga Province (2019) – some archaeological features as well as graves were observed.*
- Phase 1 AIA / HIA for a *proposed establishment of macadamia plantations on portion 1 of the farm Peebles 31JU, White River, Mpumalanga Province – some archaeological features were observed.*
- Phase 1 AIA / HIA for a *proposed clearing of 30ha of indigenous vegetation for cultivation of indigenous vegetation on portions 6, 21 & R/14 of the farm Nooitgedacht 62JU, White River, Mpumalanga Province (2020); A historic house foundation was documented and proposed to be demolished.*

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, Mpumalanga 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.²³ The only professionally excavated Early Iron Age site near the area, besides those in the Kruger National Park, was the Plaston site east of White River, dating ca 900 AD.²⁴ 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.^{25 26} Several stone walled settlements with terracing were recorded in the area close to Hazyview,²⁷ as well as several which were documented in the southern parts of the Kruger National Park.²⁸ The southern Kruger Park and Nelspruit / Bongani Nature Reserve areas have an abundance of San rock art sites,²⁹ as mentioned above, but none was identified, or known on *the farm NOSILLA 27JU*.

Several early ethnographical and linguistic studies by early researchers such as D. Zivovogel and N.J. Van Warmelo, revealed that the study area was mainly inhabited by the Sotho groups (Pulana & Pai) and Swazi from before the 18th century.^{30 31} (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.³²

²³ J.S. Bergh (red.), *Geskiedenis Atlas van Suid Afrika: Die vier Noordelike Provinsies*, p. 95.

²⁴ M.M. Van der Ryst., *Die Ystertydperk*, in J.S. Bergh (red.), *Geskiedenis Atlas van Suid Afrika: Die vier Noordelike Provinsies*. p. 97.

²⁵ Personal information: Dr. J. Pistorius, Pretoria, 2008-04-17.

²⁶ Personal information: Dr. MS. Schoeman, University of Pretoria, 2008-03-27.

²⁷ C. Van Wyk, *Inspection of Umbhaha Stone-walled settlement, Hazyview*, pp. 1-2.

²⁸ Eloff J.F., *Verslag oor Argeologiese Navorsing in die Krugerwildtuin*, June / July, 1982.

²⁹ Hampson, J., et al., *The rock art of Bongani Mountain Lodge and its environs*, *South African Archaeological Bulletin* 57: pp. 17-28.

³⁰ N.J. Van Warmelo, *A Preliminary Survey of the Bantu Tribes of South Africa*. pp. 90-92 & 111.

³¹ H. S. Webb, *The Native Inhabitants of the Southern Lowveld*, in *Lowveld Regional Development Association, The South-Eastern Transvaal Lowveld*. p.16.

³² N.J. van Warmelo, *A Preliminary Survey of the Bantu Tribes of South Africa*, p.9.

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.³³ Languages such as Zulu, Xhosa, Swazi, Nhlangu, Nkuna, sePedi, hiPau and seRôka, are commonly spoken throughout this area.³⁴

During the middle of the 18th 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 also buried there.³⁵

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.³⁶ During their northern expansion they forced the local inhabitants out of Swaziland, or absorbed them.³⁷ There is evidence of resistance, but the Eastern Sotho groups who lived in the northern parts of Swaziland, moved mainly northwards.³⁸ This appears to have taken place towards the end of the 18th century,³⁹ when these groups fled from Swaziland to areas such as Nelspruit, White River, Bushbuckridge, Klaserie, Blyde River and Komatipoort.⁴⁰

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.⁴¹ 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

³³ N.J. van Warmelo, *A Preliminary Survey of the Bantu Tribes of South Africa*, p. 51.

³⁴ M. De Jongh (ed.), *Swatini*, p. 21.

³⁵ Bornman H., *The Pioneers of the Lowveld* pp. 10-11.

³⁶ Bornman H., *The Pioneers of the Lowveld* p 11.

³⁷ A.C. Myburgh, *The Tribes of Barberton District*, p. 10.

³⁸ N.J. Van Warmelo, *A Preliminary Survey of the Bantu Tribes of South Africa*. p. 111.

³⁹ H. S. Webb, *The Native Inhabitants of the Southern Lowveld, in Lowveld Regional Development Association, The South-Eastern Transvaal Lowveld*. p. 14

⁴⁰ *Ibid.*, p. 16.

⁴¹ Bornman H., *The Pioneers of the Lowveld* p. 12.

current Maputo, up the east coast as far as the Zambezi river. ⁴²

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 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 ⁴³ (see also: Map 1: 1935 Van Warmelo).

Swazi

The Swazi people descended from the southern Bantu (Nguni) who migrated from central Africa in the 15th and 16th centuries. ⁴⁴ 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. ⁴⁵

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. ⁴⁶

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

⁴² Bornman, H., *The Pioneers of the Lowveld*, p.17.

⁴³ Bornman, H., *The Pioneers of the Lowveld*, p.19.

⁴⁴ Swaziland: <http://en.wikipedia.org/wiki/Swaziland> p.1.

⁴⁵ N.J. Van Warmelo, *A Preliminary Survey of the Bantu Tribes of South Africa*, p. 83.

⁴⁶ D. Ziervogel, *The Eastern Sotho, A Tribal, Historical and Linguistic Survey*, pp. 3-5.

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 1873.⁴⁷

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,⁴⁸ 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".⁴⁹ The majority of Pulana lived to the north of this line, 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.^{50 51}

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.⁵² The Kutswe settled north-east of the present Nelspruit at a river called Kutswe (Gutshwa)⁵³ 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,

⁴⁷ D. Ziervogel, *The Eastern Sotho, A Tribal, Historical and Linguistic Survey*, p. 11.

⁴⁸ *Ibid.*, p. 108.

⁴⁹ M. De Jongh, (ed)., *Swatini*, p. 21.

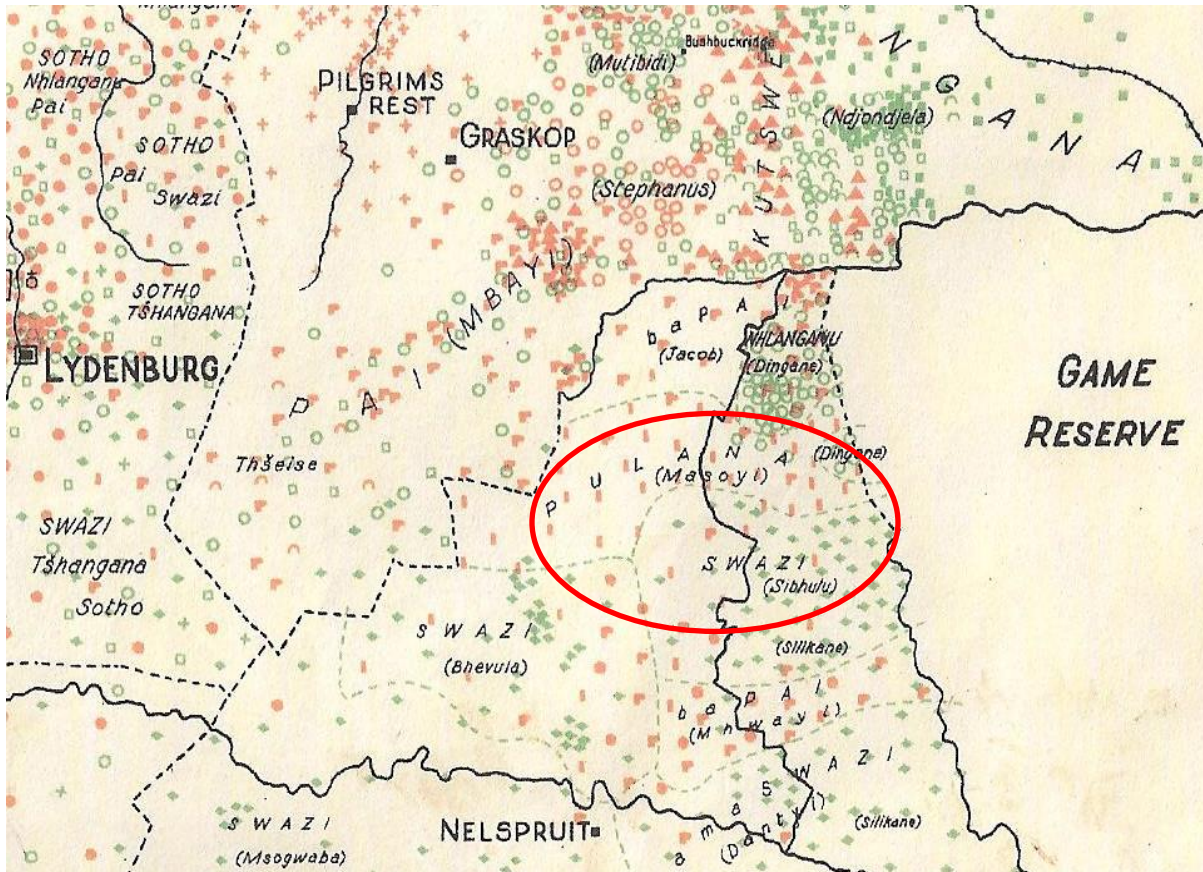
⁵⁰ D. Ziervogel, *The Eastern Sotho, A Tribal, Historical and Linguistic Survey*, p. 107.

⁵¹ N.J. Van Warmelo, *A Preliminary Survey of the Bantu Tribes of South Africa*. p. 111.

⁵² *Ibid.*, p. 110.

⁵³ T. Makhura, Early Inhabitants, in *Delius, P. (ed)., Mpumalanga: History and heritage*. p.105.

Sandford 46, Culcutta 51 and Oakley 262.⁵⁴ They occupied additional areas between **White River and Sabie**, and had sufficient influence amongst the Pai during the early 20th 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**.⁵⁵



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

KEY	
■	FULANA (various)
□	do. (Mutibidi)
+	do. (Kabiše)
o	do. (Tselindiyadya)
○	do. (Stephanus)
◊	do. (Nariše)
◊	do. (Matiuse)
◊	do. (Thšeiše)
◊	do. (Stephan)
◊	do. (Sehlare)
◊	do. (Makuke)
▲	KUTSWE
▲	bapAI
▲	BAROKA
●	SOTHO (various)
●	do. (Marole)
●	do. (Moraba)
●	do. (Mahuše)
■	TŠHANGANA (various)
■	do. (Thullamahasha)
■	NHLANGANU (various)
■	do. (Šobyana)
■	do. (Najondjela)
■	do. (Matches)
■	SWAZI
■	NDZUNDA (amaNdebele)

⁵⁴ D. Ziervogel, *The Eastern Sotho, A Tribal, Historical and Linguistic Survey*, p. 110.

⁵⁵ *Ibid.*, pp. 4-10.

The historical background of the study area confirmed that it was occupied since the 17th century by mainly Swazi and to a lesser extent, Sotho groups (Pulana). These groups have intermarried extensively or were absorbed by other groups in time. ⁵⁶



MAP 2: 1911 Topographical map (Degree Sheet: Komatiport No 22). NOSILLA is situated directly west of LEGOGOT. 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 near White River to Bushbuckridge (south-east of the study area). ⁵⁷

⁵⁶ M. De Jongh (ed)., *Swatini*, p. 40.

⁵⁷ 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).⁵⁸ Many ex-servicemen settled in the area but conditions were harsh and by 1911 only a Scot named Macdonald successfully farmed with citrus.⁵⁹

Today, citrus from this area is one of the main forms of agriculture in the Province.⁶⁰ 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.⁶¹



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.

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

The applicant, Mr. Pieter du Preez, in co-operation with *RHENGU Environmental Services*, is requesting a bulk water supply infrastructure for agricultural use to harvest water for irrigation purposes (see maps 4 – 7). The entire study area consists of commercial Timber plantations which is in the process of being converted to macadamia, blueberry and ginger crops (see maps 3 & 8). Only small sections of natural vegetation are situated within the drainage lines and on the granite rocky outcrops, but these will be left undisturbed. No archaeological or historical

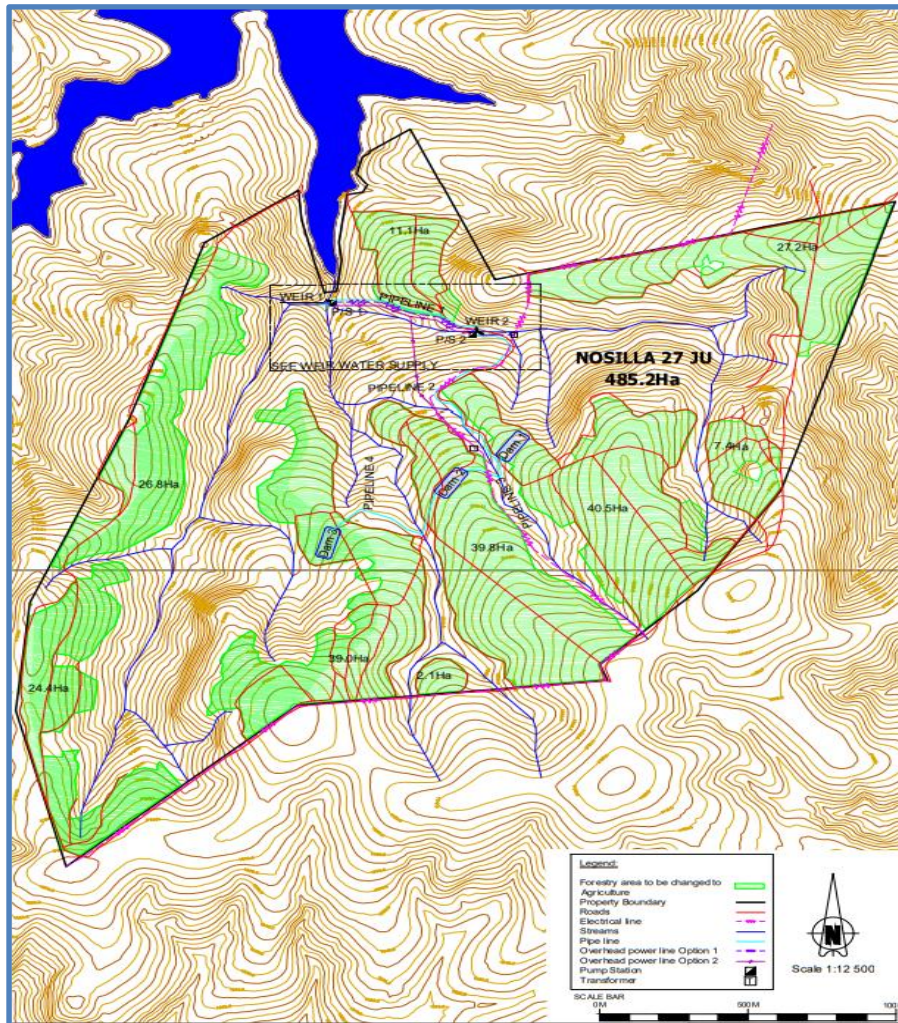
⁵⁸ Bornman, H., *Baanbrekers van die Laeveld*, p. 39.

⁵⁹ Nevill, C., *White River Remembered*, p. 3.

⁶⁰ Delius, P. & Hay, M., *Mpumalanga, an illustrated history*, p. 156.

⁶¹ *Ibid.* p. 162.

features were observed on the property and the owner and farm manager confirmed that they have never encountered any graves or burial sites on the farm.^{62 63} The 1971 topographical map show that the entire farm was used for afforestation since at least this date (map 8), and the 1911 topographical does not indicate any settlement on the farm during that time (map 2). The proposed bulk water supply infrastructure will be situated on previously disturbed land and pipelines will follow the existing road network (see maps 4 & 8). The power line will connect with the existing ESKOM line and will also be established on disturbed plantation areas or road network. The two weirs (and pump stations) will be situated within the natural drainage lines where no archaeological or historical remains were observed.⁶⁴ (see maps 3 – 7 & figs. 1 - 11).

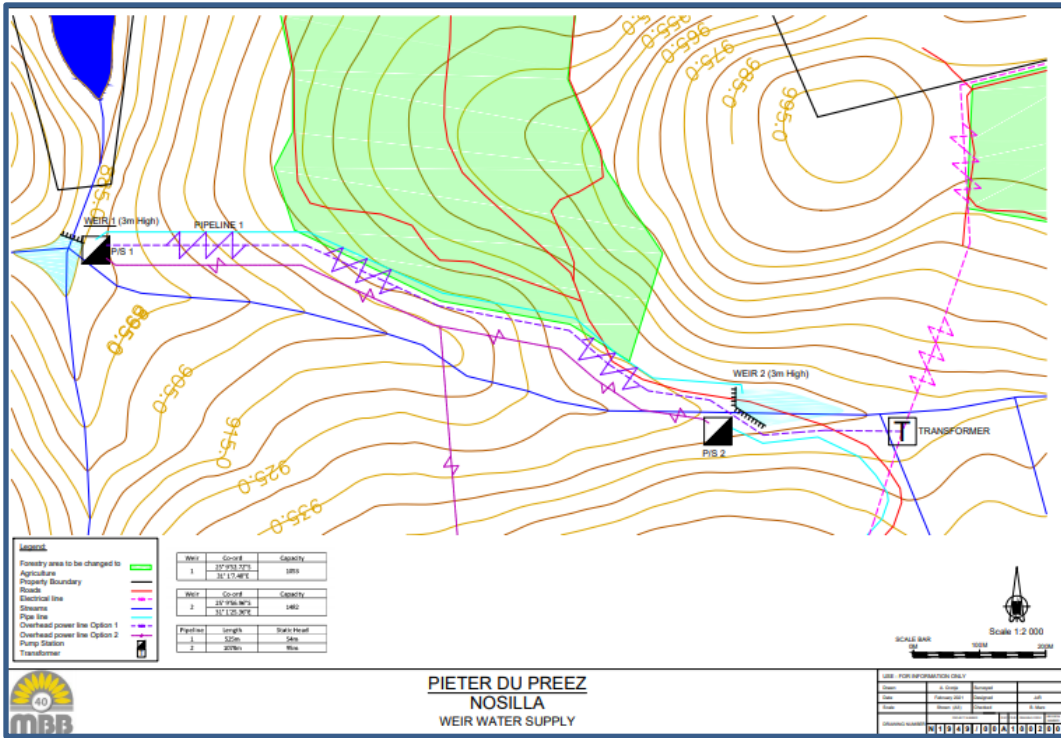


MAP 3: Study area (NOSILLA farm). The proposed bulk water supply infrastructure and other features are indicated in the map. (Map from MBB Consulting Engineers).

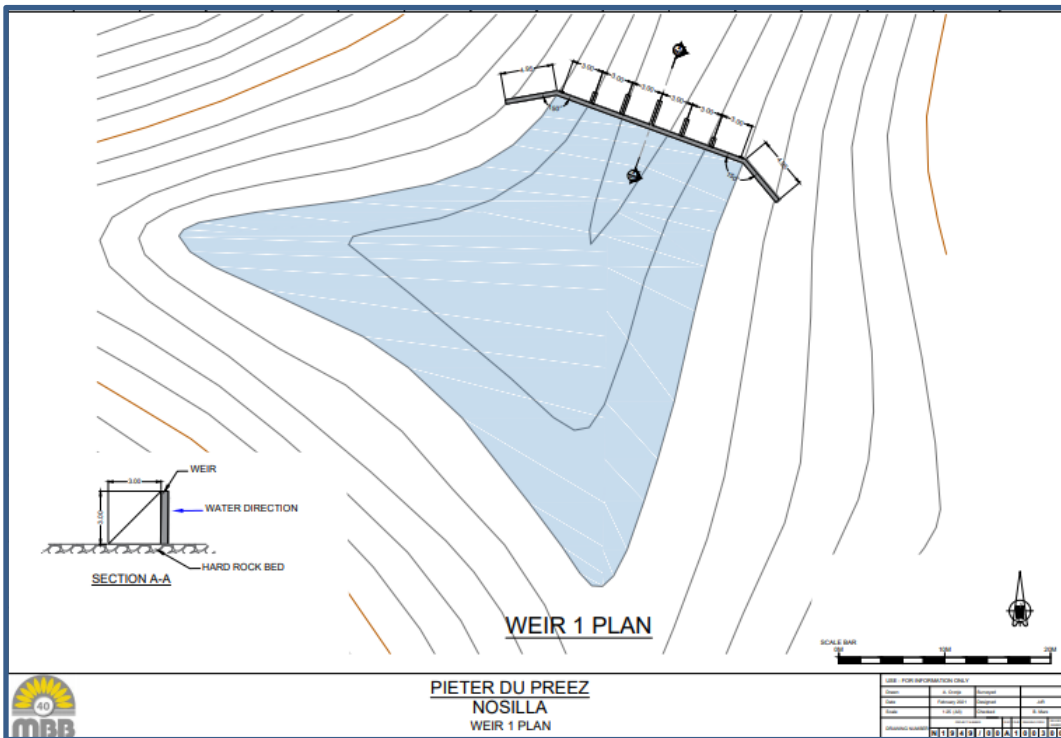
⁶² Personal communication: Mr. P. du Preez (Owner), 2020-04-15.

⁶³ Personal communication: Mr. H. Ferreira (Farm Manager), 2021-04-27.

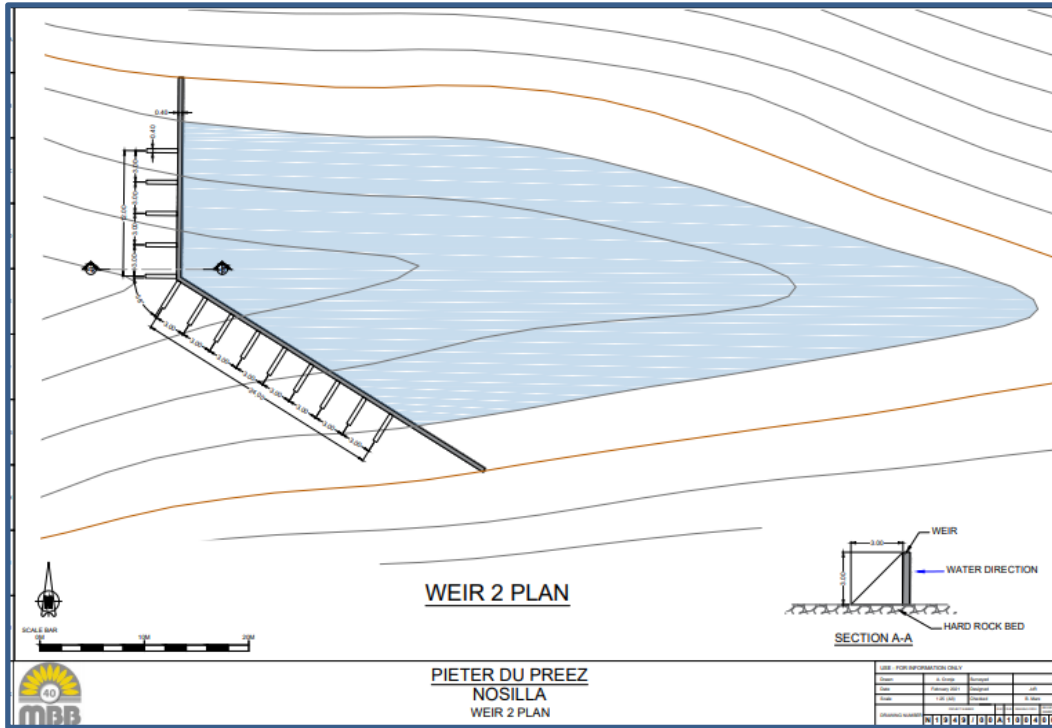
⁶⁴ Needs & Desirability Report: Mr. Ralf Kalwa, e-mail access: 2021-04-25.



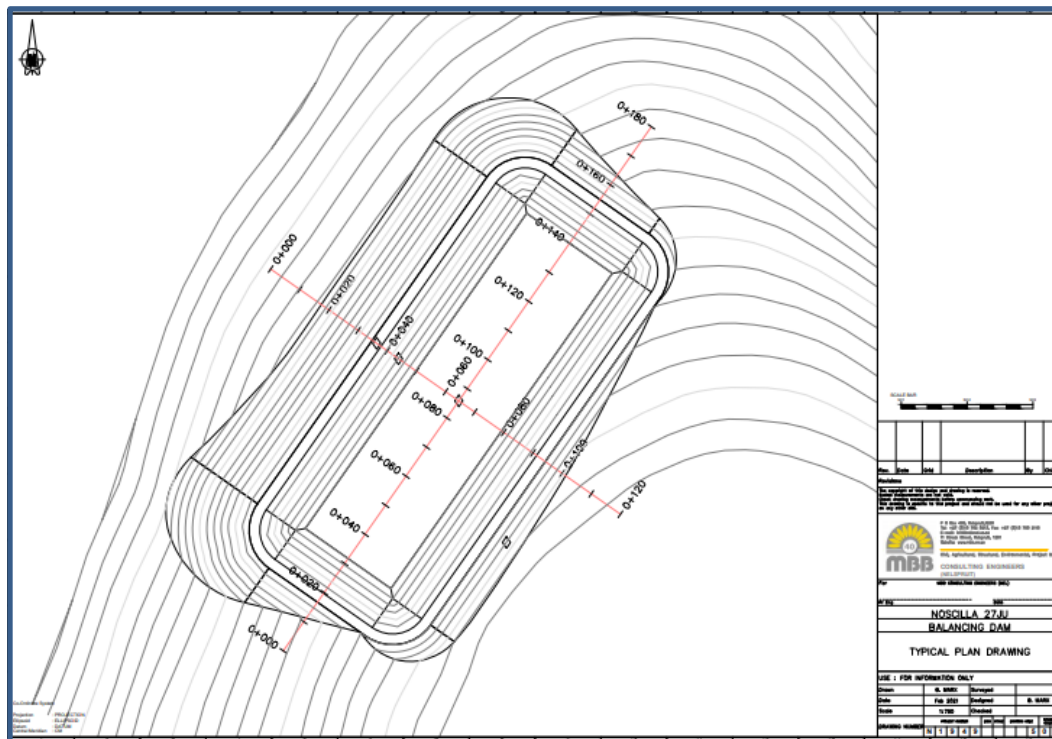
MAP 4: Detail of weir water supply indicating the pump stations, options for overhead powerlines and pipelines. (Map from MBB Consulting Engineers).



MAP 5: Plan of Weir 1. (Map from MBB Consulting Engineers).



MAP 6: Plan of Weir 2. (Map from MBB Consulting Engineers).



MAP 7: Typical plan drawing of the balancing dams. (Map from MBB Consulting Engineers).

The farm has a few natural and undisturbed granite outcrops with indigenous vegetation (fig. 11). Several drainage lines feed through the valley and into the Dagama dam to the north (8 & 9). 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.^{65 66 67}

The site is situated north of White River in the Lowveld region of Mpumalanga. The Lowveld is subtropical, due to its proximity to the warm Indian Ocean and latitude. The proposed development falls within the lower eastern slopes and hills of the north-eastern escarpment. Technically the ecozone representing this area is referred to *Lowveld Sour Bushveld* veld type according to Acocks (1988), or *Sour Lowveld Bushveld* according to Low & Rebelo 1998), and Schmidt et al (2002).⁶⁸

D. LOCALITY

The proposed site for the development is situated between White River and Hazyview in the Lowveld region. The site is accessed off the R40 provincial road, approximately 12km north of the town of White River. The entire property is highly disturbed with existing timber plantations, except for small pockets of natural vegetation within the drainage lines. The farm is west of the Legogot Hill, a prominent landmark in the area, where a rock art site is also known.⁶⁹ The farm NOSILLA 27JU is located within the X31H-2 quinary catchment on a tributary of the White Waters River, which is a tributary of the Sabie River.⁷⁰ The site falls within the Ehlanzeni District Municipality, and the City of Mbombela Local Municipal in the Mpumalanga Province (maps 1 - 10 & Appendix 2 figs. 1 – 11 for the study area).

Description of methodology:

The 1971 topographical map, (2531AA KIEPERSOL, map 8), a 1911 map (Degree Sheet 22, KOMATIPOORT), as well as Google images were intensively studied to assess the current and historically disturbed areas and infrastructure on the farm NOSILLA 27JU (maps 2 & 3, 9 - 10). In order to reach a comprehensive conclusion regarding the cultural heritage resources in the

⁶⁵ SANPARKS, Visitors Guide to the Kruger National Park, p. 2.

⁶⁶ Van Wyk, B., & Van Wyk P., Field Guide to Trees of Southern Africa, 1997, p. 500.

⁶⁷ Personal Communication: Dr. Andrew Deacon (for White River area), 2018-11-22.

⁶⁸ Personal Communication: Dr. Andrew Deacon (for White River area), 2018-11-22.

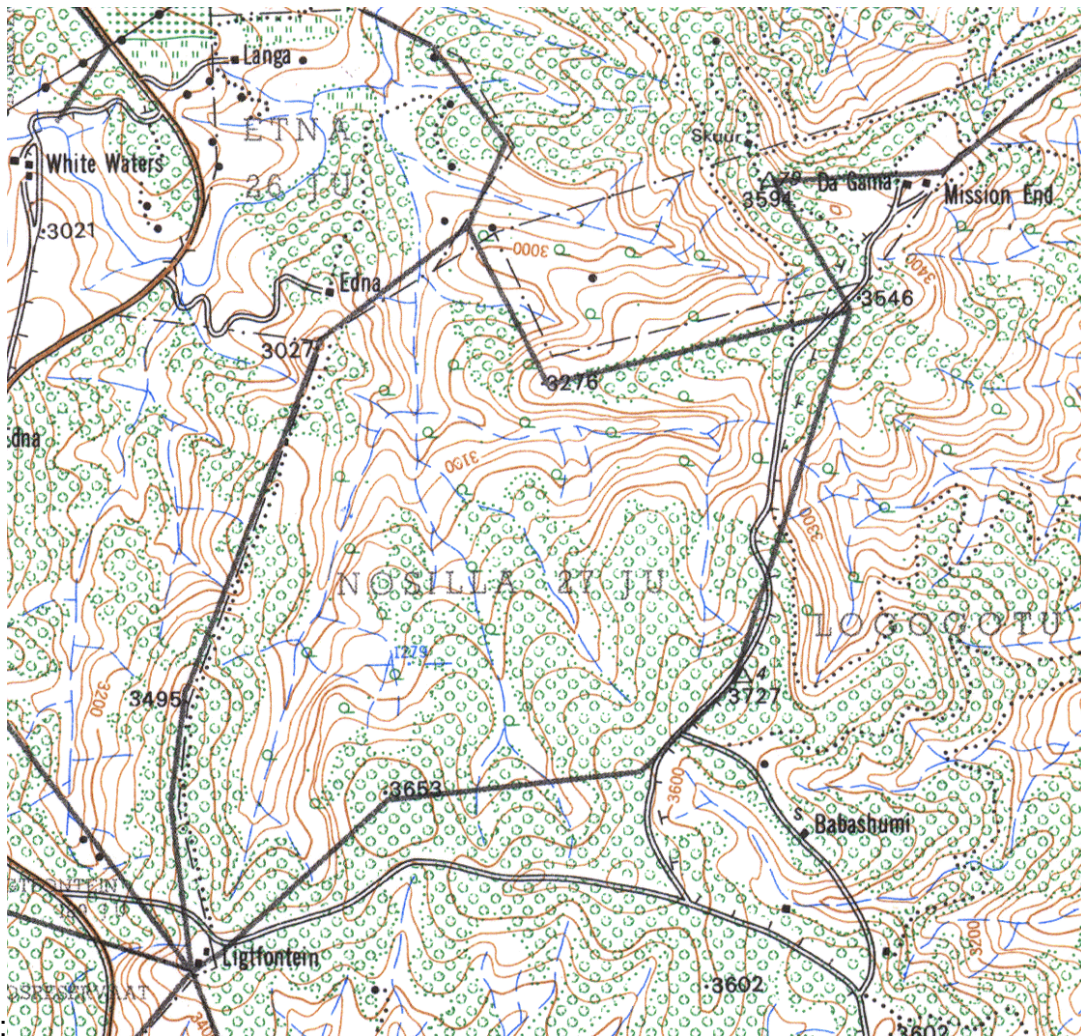
⁶⁹ Bornman, H., *Baanbrekers van die Laeveld*, p. 1.

⁷⁰ IWR Water Resources, Water Resources Analysis of a Forestry to irrigation conversion on the property Nosilla 27JU, Mpumalanga, p. 4.

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 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.
- 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;



MAP 8: Topographical Map 1:50 000 (1971), 2531AA KIEPERSOL. Nosilla 27JU was already an established timber farm since at least 1971.

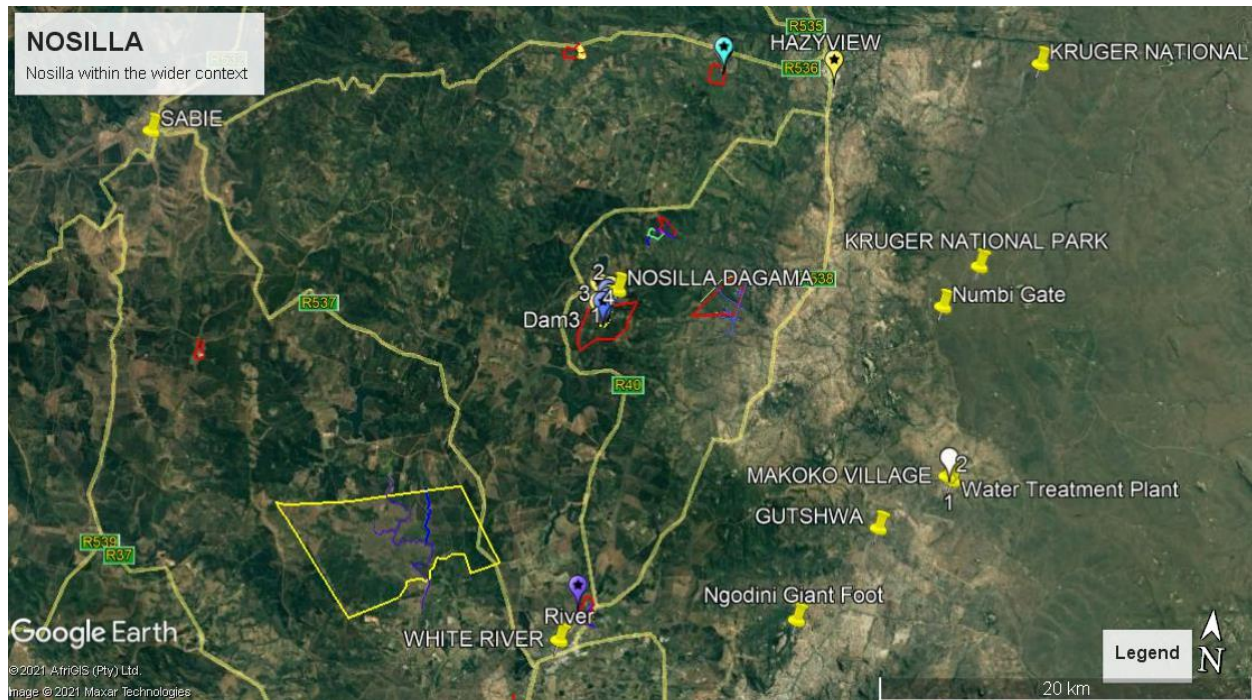
-The archaeological database of SAHRA as well as the National Cultural History Museum were consulted. Heritage Impact Assessment reports of specialists who worked in the area were studied and are quoted in section B.

- The fieldwork and survey were conducted extensively by three people on foot and per vehicle. Existing tracks and paths were also used to access sections (see Appendix 1).
- Large sections of previous timber plantations are being converted into agricultural land, which made visibility excellent. The sections which are still covered with commercial plantations, were already disturbed since at least 1971. An existing road network was used to access the sites (Appendix 1). Weir 1 was situated in the valley where three drainage lines meet (figs. 6 - 9). Weir 2 was situated next to an existing access road, near a natural stream (figs. 10 & 11). The proposed dams are all within existing plantations or recently cleared plantation areas (figs. 2 – 5). The pipeline and powerlines will be constructed within existing roads or within disturbed plantation areas.
- 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 Mr. Ralf Kalwa, the owner Mr. Du Preez,⁷¹ as well as the farm manager, Mr. Ferreira,⁷² were held.
- GPS co-ordinates were used to locate the perimeters and any heritage features within the study area. Co-ordinates: see project maps 3 & 4.

GPS CO-ORDINATES			
Location	South	East	Elevation
WEIR 1	S 25° 09' 51.56"	E 31° 01' 06.01"	906m
WEIR 2	S 25° 09' 55.60"	E 31° 01' 27.60"	957m
DAM 1	S 25° 10' 10.80"	E 31° 01' 27.90"	1019m
DAM 2	S 25° 10' 18.05"	E 31° 01' 22.21"	1041m
DAM 3	S 25° 10' 25.00"	E 31° 01' 06.58"	1042m

⁷¹ Personal communication: Mr. P. du Preez (Owner), 2020-04-15.

⁷² Personal communication: Mr. H. Ferreira (Farm Manager), 2021-04-27.



MAP 9: Google image of the study area, as seen in a wider context.

E. DESCRIPTION OF IDENTIFIED SITES

Mr. Pieter du Preez, in co-operation with *RHENGU Environmental Services*, is requesting the establishment of a bulk water supply infrastructure in the form of weirs and off-channel storage facilities (dams, pipeline and pumpstations), as well as a powerline connecting to the existing ESKOM lines, on the farm NOSILLA 27JU, in the White River district of Mpumalanga.⁷³

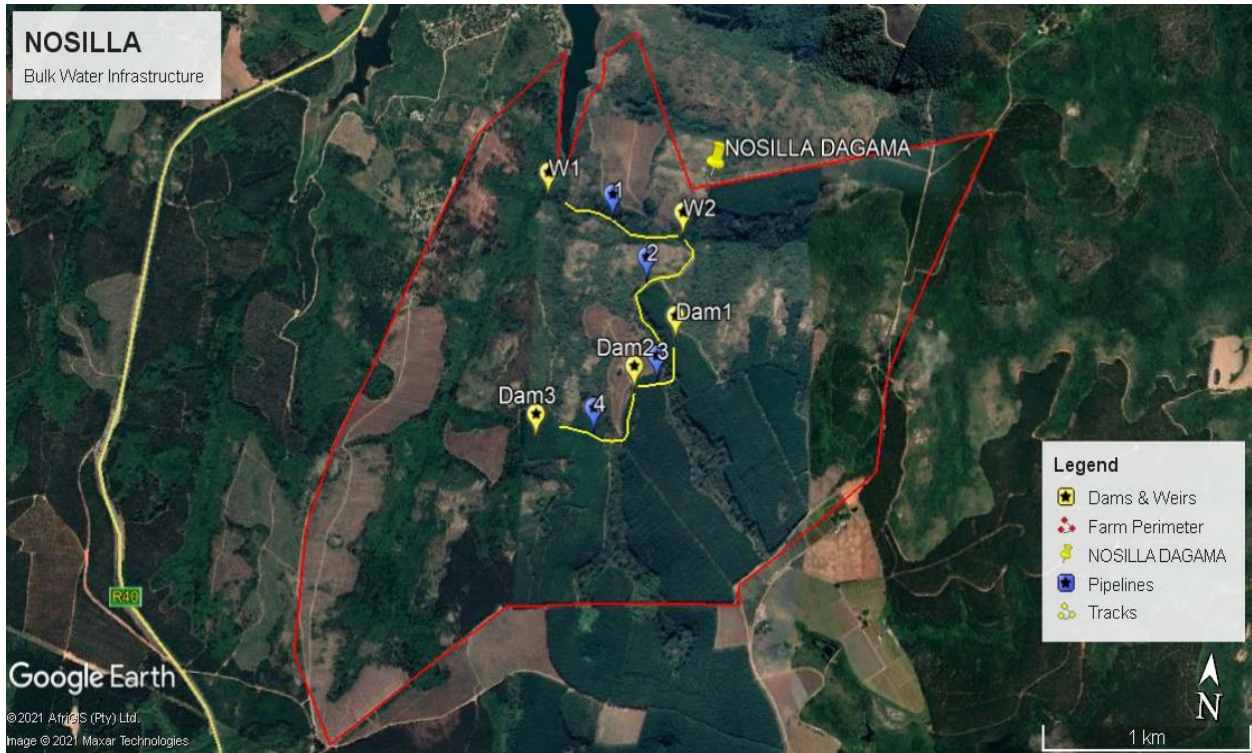
The entire farm NOSILLA is currently a commercial Timber property (highly disturbed area) (maps 8 & 9). The owner is planning to remove 218.3ha forestry to establish macadamia, blueberries and ginger to expand the current existing enterprise of the neighboring property (St Cloud farm).⁷⁴ The terrain was accessible throughout the survey (see Appendix 2).

The historical and topographical maps do not indicate any historical or pre-historical settlements directly in, or close to the study area (maps 2 & 8). The 1971 topographical map (map 8) indicates that the entire farm was already an established commercial timber farm from at least this date. No archaeological or historical structures / features, or any burial sites or graves were observed during the survey.

⁷³ Needs & Desirability Report: Mr. Ralf Kalwa, e-mail access: 2021-04-25.

⁷⁴ Provisional development Plan Table, 2021-01-18, p.1.

Photographs in Appendix 2 show the general view of the study area, as well as the locations for the weirs and dams (figs. 1 - 11).



MAP 10: The map is indicating the footprint of the proposed bulk water infrastructure on the farm Nosilla.

F. DISCUSSION ON THE FOOTPRINT OF THE PROPOSED DEVELOPMENT

ACT	COMPONENT	IMPLICATION	RELEVANCE	COMPLIANCE
NHRA	S 34	Impact on buildings and structures older than 60 years	None	None
NHRA	S35	Impacts on archaeological heritage resources	None	None
NHRA	S36	Impact on graves	No graves within the study area	None

ACT	COMPO- NENT	IMPLICATION	RELEVANCE	COMPLIANCE
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:**

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

Context		
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

Property features and characteristics		
Have there been any previous development impacts on the property?	Yes	Commercial Timber property
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	Rocky outcrops occur
Does the property have any fresh water sources (springs, streams, rivers) on or alongside it?	Yes	Drainage lines.

<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
Palaeontological site or material (S. 35)	No	NA
Graves or burial grounds (S. 36)	No	NA
Public monuments or memorials (S. 37)	No	NA
<i>Other</i>		
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	ELE- MENT S	INDICATORS OF HERITAGE SIGNIFICANCE										RISK	
		Histo rical	Rar e	Sci ent ific	Typi cal	Tech - nolo gical	Aes theti c	Pers on / com muni ty	Land mark	Mate rial con ditio n	Sust aina bility		
Buildings / structures of cultural significan ce	No	No	No	No	No	No	No	No	No	No	No	No	-
Areas attached to oral traditions / intangible heritage	No	No	No	No	No	No	No	No	No	No	No	No	-
Historical settlement / townscap es	No	-	-	-	-	-	-	-	-	-	-	-	-
Landscap e of cultural significan ce	No	-	-	-	-	-	-	-	-	-	-	-	-
Geologica l site of scientific/ cultural importanc e	No	-	-	-	-	-	-	-	-	-	-	-	-

NHRA S (3)2 Heritage resource category	ELE- MENT S	INDICATORS OF HERITAGE SIGNIFICANCE										RISK
		Histo rical	Rar e	Sci ent ific	Typi cal	Tech - nolo gical	Aes theti c	Pers on / com muni ty	Land mark	Mate rial con ditio n	Sust aina bility	
Archaeolo gical / palaeontol ogical sites	No	-	-	-	-	-	-	-	-	-	-	-
Grave / burial grounds	No	-	-	-	-	-	-	-	-	-	-	-
Areas of significan ce related to labour history	No	-	-	-	-	-	-	-	-	-	-	-
Movable objects	No	-	-	-	-	-	-	-	-	-	-	-

- Summarised recommended impact management interventions

NHRA S (3)2 Heritage resource category	SITE	IMPACT SIGNIFICANCE		Impact management	Motivation
		Cultural significance rating			
		Cultural significan ce	Impact significan ce		
Buildings / structures of cultural significance	No	No	None	None	-

NHRA S (3)2 Heritage resource category	SITE	IMPACT SIGNIFICANCE		Impact management	Motivation
		Cultural significance rating			
		Cultural significan ce	Impact significan ce		
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	-	-
Archaeologic al / palaeontologi cal sites	No	None	None	No impact	-
Grave / burial grounds	No	No	None	-	-
Areas of significance related to labour history	No	None	None	-	-
Movable objects	No	None	None	-	-

ACT	COMPO- NENT	IMPLICATION	RELEVANCE	COMPLIANCE
NHRA	S 34	Impact on buildings and structures older than 60 years	NA	None
NHRA	S35	Impacts on archaeological and palaeontological heritage resources	NA	None
NHRA	S36	Impact on graves	NA	None
NHRA	S37	Impact on public monuments	None present	None
NHRA	S38	Development 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 are 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.⁷⁵ 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.⁷⁶

Please note that no archaeological or cultural heritage features or graves were observed during the field investigation.

H. CONCLUSION

Archaeological material or graves are not always visible during a field survey and therefore some significant material may only be revealed during the construction of the bulk water supply infrastructure development. 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.

⁷⁵ National Heritage Resources Act, no. 25 of 1999. p. 2.

⁷⁶ National Heritage Resources Act, no. 25 of 1999. pp. 12-14

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APPENDIX 1

Tracks and Paths used to access the study area



Tracks and paths which were used during the survey.