

**Cultural Heritage Impact Assessment:
Phase 1 Investigation for the Development of Tourist Lodges and Other Infrastructure
within Qwabi Private Game Reserve, Thabazimbi Local Municipality, Waterberg
District, Limpopo Province**



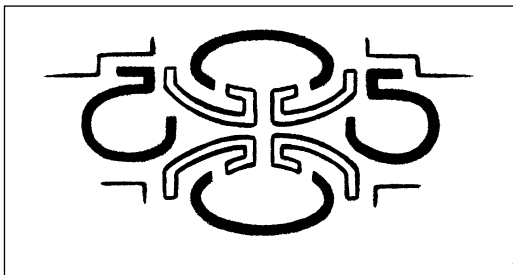
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Executive Summary

This report contains a comprehensive heritage impact assessment investigation in accordance with the provisions of Sections 38(1) and 38(3) of the *National Heritage Resources Act* (Act No. 25 of 1999) (NHRA) and focuses on the survey results from a cultural heritage survey as requested by NuLeaf Planning and Environmental Pty (Ltd). The survey forms part of a 24G application as stipulated by the National Environmental Management Act (NEMA) (Act No. 107 of 1998) and NEMA Regulations. The Applicant purchased the Reserve in 2010 with existing infrastructure already present inclusive of two lodges. After the purchase of the Qwabi Reserve, SARPHC Properties looked to upgrade and construct additions to the existing Babohi and Letamo Lodges inclusive of new staff accommodation. In 2017 the Thabazimbi Local Municipality granted planning approval for the proposed additions and upgrades on the back of a Record of Decision (RoD) that was issued by LEDET in 2009. Based on these approvals, SARPHC Properties was in good faith under the impression that the improvements were compliant in terms of NEMA and fell within the bounds of the RoD issued in 2009. The upgrades were affected and completed in 2019 as per the approved SDP's. However, after the completion of an internal compliance audit, it was discovered that the RoD on which Thabazimbi Municipality approved the development may not have been valid and may have expired by the time the developments were undertaken in 2018/2019.

Therefore, based on the fact that these developments were constructed without certain environmental authorizations, the Applicant is now applying for ex post facto approval. In terms of the 2014 Environmental Impact Assessment (EIA) Regulations published in terms of Section 24(5) of the National Environmental Management Act 107 of 1998 (NEMA), as well as, Section 24(G) of the National Environmental Management Act 107 of 1998 (NEMA) as amended, the Project Applicant, SARPHC Properties PTY Ltd, hereby gives notice of its intention to apply for Environmental Authorisation from the Limpopo Department of Economic Development, Environment and Tourism (LEDET) as the Competent Authority, for the development of the Tourist Lodges and Infrastructure in Qwabi Private Game Reserve, Limpopo Province.

During the retrospective assessment of the potential impact of the existing developments consisting of lodges, roads, dams, fences, river crossing, support staff accommodation, workshops and manager houses, no indication was that cultural heritage remains were damaged or destroyed. A number of houses and structures were upgraded (modernised) to accommodate management staff and families. Case in point is the Post Office building that probably dated to the early 20th century, but which has been altered to serve as a dedicated space for modern living. Various dams were investigated with the emphasis on the dam wall and associated roads to access possible impact on heritage remains. As such, in all instances no indications were found of damaged or destroyed heritage structures or features.

A total of 7 cultural sites were recorded during the survey, of which four of the sites are graveyards and an individual grave (Sites 1, 3, 4 and 7) and two are historical structures (Sites 2 and 5) and one Iron Age livestock enclosure (Site 6). The historical sites are probably associated with a late 19th and early 20th phase of occupation as we know the Deed of Transfer of the farms was already awarded in the 1860 and 1870s. Site 5 seems to be an earlier farm house. Subsequent farm houses were possible added later as the occupation footprint of the owner expanded.

Site No	Coordinates	Site Type	Field Rating of Significance	Impact	Proposed Mitigation
1	24.630403°S 27.898201°E	Beukes Family Graveyard	Generally Protected A High significance	None	• Maintain 50 m buffer zone
2	24.631428°S 27.893351°E	Family farmhouse	Generally Protected C Low significance	None	• Maintain 50 m buffer zone
3	24.642262°S 27.858596°E	Graveyard	Generally Protected A High significance	None	• Maintain 50 m buffer zone
4	24.640307°S 27.864131°E	Grave	Generally Protected A High significance	None	• Maintain 50 m buffer zone
5	24.639728°S 27.859884°E	Foundation of historical farm house	Generally Protected C Low significance	None	• Maintain 50 m buffer zone
6	24.633550°S 27.853573°E	Late Iron Age Livestock enclosures	Generally Protected C Low significance	None	• Maintain 50 m buffer zone
7	24.598957°S 27.797366°E	Graveyard	Generally Protected A High significance	None	• Maintain 50 m buffer zone

No historical or archaeological (both Stone Age and Iron Age) artefacts, assemblages, features, structures or settlements were recorded during the survey at the locations of the various existing developments.

Based on the assessment, from a heritage perspective, no archaeological or historical remains were impacted on during the developmental phase of the existing infrastructure, however, care should be taken not to cause any future impact on cultural heritage remains that might still exist in the region. As such, no re-active mitigation measures are required.

Also, please note:

Archaeological deposits usually occur below ground level. Should archaeological artefacts or skeletal material be revealed in the area during development activities, such activities should be halted, and a university or museum notified in order for an investigation and evaluation of the find(s) to take place (*cf.* NHRA (Act No. 25 of 1999), Section 36 (6)).

Definitions and abbreviations

Midden:	Refuse that accumulates in a concentrated heap.
Stone Age:	An archaeological term used to define a period of stone tool use and manufacture
Iron Age:	An archaeological term used to define a period associated with domesticated livestock and grains, metal working and ceramic manufacture
LIA:	Late Iron Age sites are usually demarcated by stone-walled enclosures
NHRA:	National Heritage Resources Act (Act No. 25 of 1999)
SAHRA:	South African Heritage Resources Agency
SAHRIS:	South African Heritage Resources Information System
PHRA-G:	Provincial Heritage Resources Authority - Gauteng
GDARD:	Gauteng Department of Agriculture and Rural Development
HIA:	Heritage Impact Assessment
DMR:	Department of Mineral Resources
DENC:	Department of Environment and Nature Conservation: Northern Cape
I&APs:	Interested and Affected Parties

I, Francois Coetzee, hereby confirm my independence as a cultural heritage specialist and declare that I do not have any interest, be it business, financial, personal or other, in any proposed activity, application or appeal in respect of the listed environmental processes, other than fair remuneration for work performed on this project.



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1. Introduction and Terms of Reference

NuLeaf Planning and Environmental (Pty) Ltd has been appointed by Qwabi Private Game Reserve to conduct a survey that forms part of a 24G application as stipulated by the National Environmental Management Act (NEMA) (Act No. 107 of 1998) and NEMA Regulations. The Applicant purchased the Reserve in 2010 with existing infrastructure already present inclusive of two lodges. After the purchase of the Qwabi Reserve, SARPHC Properties (Pty) Ltd looked to upgrade and construct additions to the existing Babohi and Letamo Lodges inclusive of new staff accommodation. In 2017 the Thabazimbi Local Municipality granted planning approval for the proposed additions and upgrades on the back of a Record of Decision (RoD) that was issued by LEDET in 2009. Based on these approvals, SARPHC Properties was in good faith under the impression that the improvements were compliant in terms of NEMA and fell within the bounds of the RoD issued in 2009. The upgrades were affected and completed in 2019 as per the approved SDP's. However, after the completion of an internal compliance audit, it was discovered that the RoD on which Thabazimbi Municipality approved the development may not have been valid and may have expired by the time the developments were undertaken in 2018/2019.

Therefore, based on the fact that these developments were constructed without certain environmental authorizations, the Applicant is now applying for ex post facto approval. In terms of the 2014 Environmental Impact Assessment (EIA) Regulations published in terms of Section 24(5) of the National Environmental Management Act 107 of 1998 (NEMA), as well as, Section 24(G) of the National Environmental Management Act 107 of 1998 (NEMA) as amended, the Project Applicant, SARPHC Properties PTY Ltd, hereby gives notice of its intention to apply for Environmental Authorisation from the Limpopo Department of Economic Development, Environment and Tourism (LEDET) as the Competent Authority, for the development of the Tourist Lodges and Infrastructure in Qwabi Private Game Reserve, Limpopo Province. Qwabi Private Game Reserve is located approximately 67 Km east of Thabazimbi. A Cultural Heritage Impact Assessment (HIA) was requested by NuLeaf Planning and Environmental (Pty) Ltd on behalf of the client to evaluate the possible impact of the various existing structures on heritage remains.

2. Objectives

The current survey is therefore a retro-active investigation of the area affected by the development and aims to investigate, evaluate and assess the possible impact on the cultural heritage remains in the various development footprints. More specifically the objective of the cultural heritage survey is to record and document cultural heritage remains consisting of both tangible and intangible archaeological and historical artefacts, structures (including graves), settlements and oral traditions of cultural significance.

As such the terms of reference of this survey are as follows:

- Identify and provide a detailed description of all artefacts, assemblages, settlements and structures of an archaeological or historical nature (cultural heritage sites) located on the study area,
- Estimate the level of significance/importance of these remains in terms of their archaeological, historical, scientific, social, religious, aesthetic and tourism value,
- Assess any impact on the archaeological and historical remains within the area emanating from the development activities, and

- Propose recommendations to mitigate heritage resources where complete or partial conservation may not be possible and thereby limit or prevent any further impact.

3. Description of Physical Environment of Study Area

Qwabi Private Game Reserve is located within the Thabazimbi Local Municipality, approximately 67 Km east of Thabazimbi, Limpopo Province.

Farm Name(s) and Portions	<ul style="list-style-type: none"> • Meletse 706 KQ (surveyed 2009: consisted of Groothoek 461 KQ, Zandfontein 476 KQ and Nooitgedacht 463 KQ) • Rookpoort 450 KQ • Rhenosterhoekspruit 466 KQ • Weltevreden 478 KQ.
Size of Survey Area	Approximately 15000 ha Note that only selected areas affected by developments were investigated.
Magisterial District	Thabazimbi Local Municipality Waterberg District
1:50 000 Map Sheet	2427DA 2427DB
1:250 000 Map Sheet	2426
Central Coordinates of the Development	27.806880°E 24.619000°S

Table 1: Physical Environment

The western parts of the survey area fall within the Savanna Biome particularly the Central Bushveld Bioregion and more specifically the Western Sandy Bushveld (SVcb 16). This vegetation type occurs in Limpopo and North West Provinces, this type also occurs on flats and undulating plains from Assen northwards past Thabazimbi and remaining west of the Waterberg Mountains towards Steenbokpan in the north. Some patches occur between the Crocodile and Marico Rivers to the west.

The central parts of the survey area fall within the Savanna Biome particularly the Central Bushveld Bioregion and more specifically the Waterberg Mountain Bushveld (SVcb 17). This vegetation type occurs in Limpopo Province as well as the Waterberg Mountains, including the foothills, escarpment and tablelands south of the line between Lephalale and Marken and north of Bela-Bela and west of Mokopane and with outliers in the southwest such as the Boshofsberge and Vlieëpoortberge near Thabazimbi.

The eastern parts of the survey area fall within the Savanna Biome particularly the Central Bushveld Bioregion and more specifically the Central Sandy Bushveld (SVcb 12). This vegetation type occurs in Limpopo, Mpumalanga, Gauteng and North West Provinces including undulating terrain that occurs mainly in a broad arc south of the Springbokvlakte from the Pilaanesberg in the west through Hammanskraal and Groblersdal to GaMasemola in the east. A generally narrow irregular band along the northwestern edge of the Springbokvlakte (including Modimolle) extending into a series of valleys and lower-altitude areas within the Waterberg including the upper Mokolo River Valley near Vaalwater, the corridor between Rankins Pass and the Doorndraai Dam, and the lowlands from the Mabula area to south of the Hoekberge. Some isolated sandy rises are found on the Springbokvlakte (Mucina & Rutherford 2006).

The survey footprint is situated on the southern periphery of the Waterberg Mountain Range. In general the area is characterised by undulating open and flat plains and mountainous regions. The following rivers traverse the survey footprint, namely: Rookpoort Spruit, Klip Spruit, Sand River, Muddy Waters River and various other smaller non-perennial streams. Infrastructure includes buildings, dirt roads, fences and infrastructure associated with lodges and support staff and maintenance at Qwabi Reserve.

The climate is typified by hot wet summers (September to April) and cool dry winters (May to August). Temperatures average around 25°C but can get very hot during heat waves in mid-summer and extremely cold at night in mid-winter. The region is classed as a semi-arid region, rainfall amounts to about 500 mm per year (however, rainfall varies from 485 mm on the plains, to 719 mm in the highest parts of the Waterberg mountain range), with most of this falling in short, sharp thunderstorms in the late afternoons or at night, between November and March. Mean average temperatures – Summer: 25°C to 40°C; Winter: 3°C to 23°C.

Current Zoning	Tourism Game farming
Economic activities	Tourism and game farming
Soil and basic geology	The strongly undulating plateau of the Waterberg mountain range rises above the surrounding countryside and is built up of sandstone of the Kransberg Subgroup of the Waterberg Group. Dominant soils are dystrophic (markedly leached, generally nutrient poor) to mesotrophic (moderately leached) yellow-brown apedal coarse sands and medium to coarse sandy loams and apedal grey loamy coarse sands. To the south-west of the Waterberg mountain range lies a broad, gently undulating plain with geology consisting of Swazian granite and gneiss that has largely been covered by colluvium, calcrete and Kalahari sand mixed with locally transported sandy material. Eutrophic (minimally leached, nutrient rich) apedal red medium to coarse sandy loam and sandy clay loam soils occur on the granite and gneiss. On the colluvium and calcrete red and black sandy clay and clay soils occur. Soils occurring on the transported sandy material are eutrophic apedal red and yellow-brown loamy medium to coarse sands and medium to coarse sandy loams.
Prior activities	Livestock farming and agriculture
Socio Economic Environment	The regional economy is focused primarily on mining, agriculture and growing ecotourism opportunities and this is reflected in the regional Integrated Development Plans (IDP's) of local municipalities that are focussed on tourism, agriculture and mining. The levels of unemployment within the urbanised communities in the Thabazimbi municipal area are high. Since 2007 the population has increased by 10%. There seems to be an influx of work seekers to the area. This will undoubtedly put pressure on the local municipality regarding service provision. Particularly high unemployment and low income levels are found in Regorogile, with many of the youths not attending school. There are also a number of farm-based workers with varying levels of employment and literacy residing within the municipal boundary. This poor, previously disadvantaged community contrasts sharply with other Stakeholders. The biosphere reserve concept (the Waterberg Biosphere Reserve is registered with UNESCO) and recent developments and upswings in nature-based tourism opportunities (including ecotourism and hunting) could be an alternative long-term socio-economic driver

	within the region.
Evaluation of Impact	An evaluation of the impact of the development on heritage resources relative to the sustainable social and economic benefits NHRA (Act No. 25 of 1999, Section 38(3d)): Positive

Table 2: Socio-economic environment

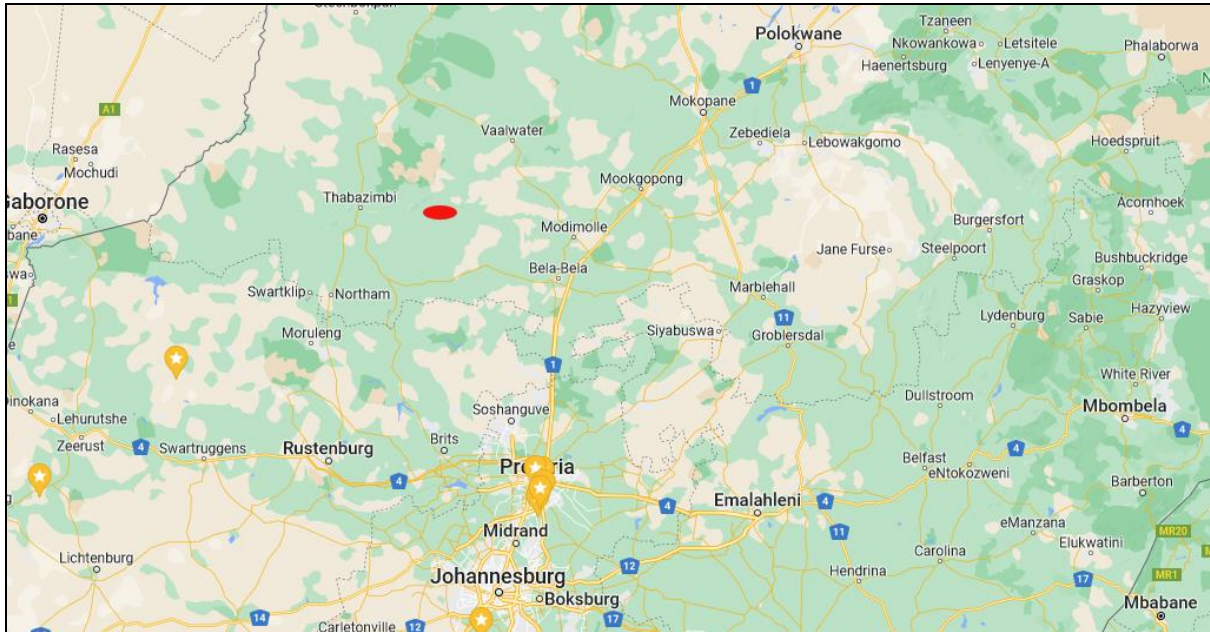


Figure 1: Regional context of the survey area east of Thabazimbi (indicated by the red area)

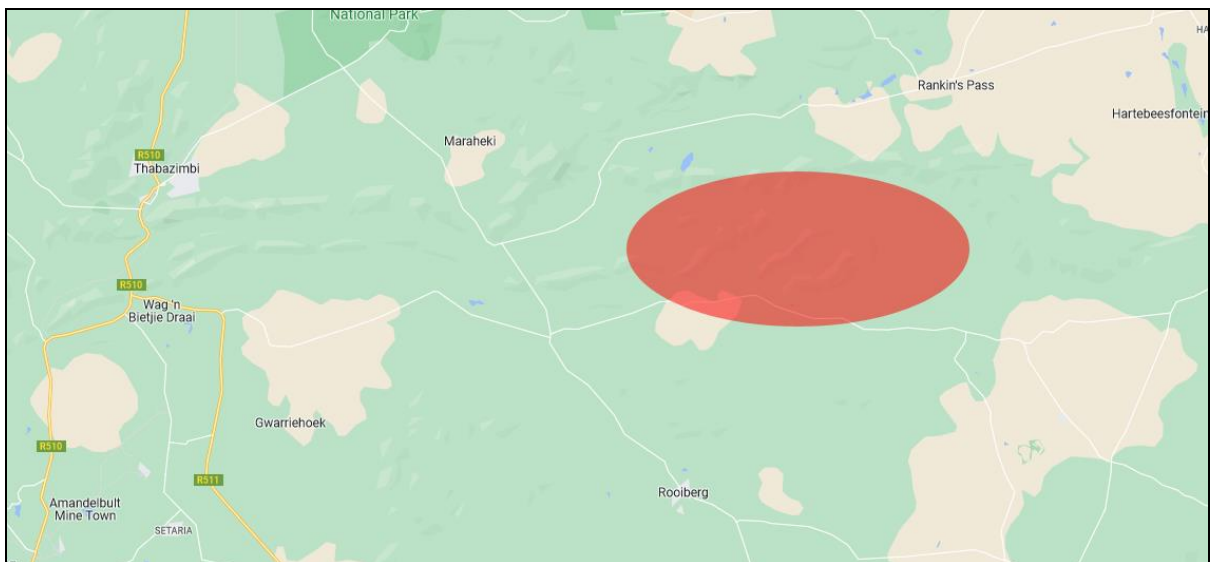


Figure 2: Local context of the survey footprint located within Kapama Game Reserve (indicated by the red area)

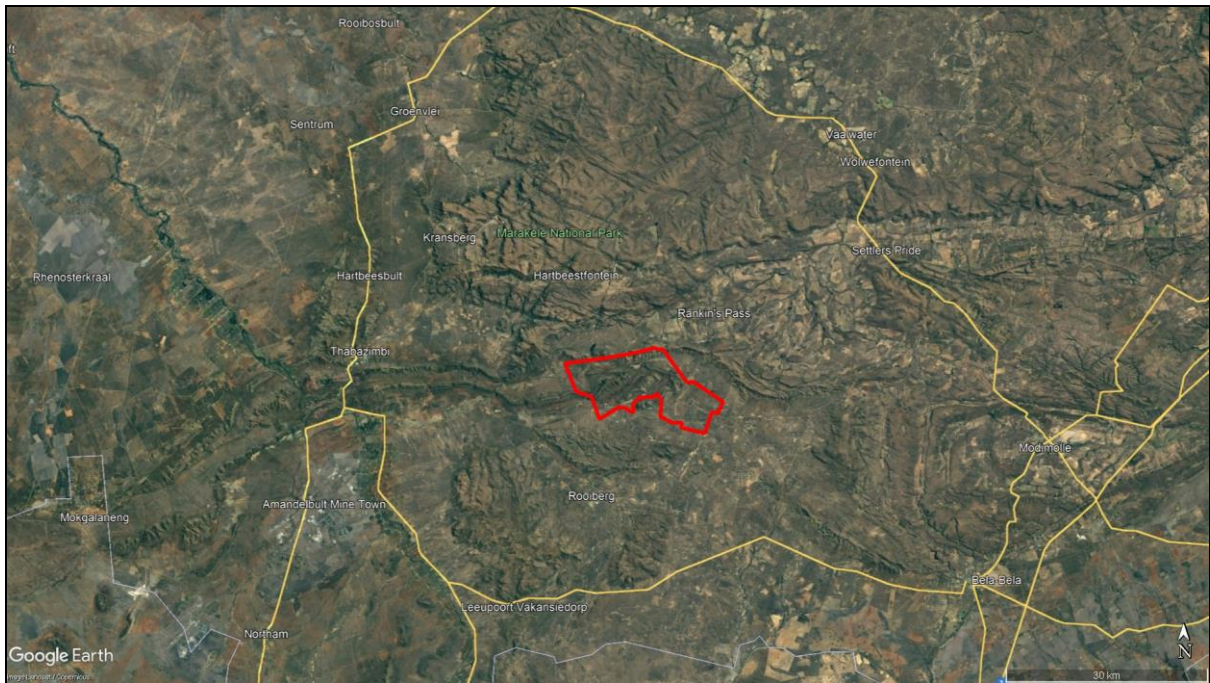


Figure 5: General view of survey area within general context (Google Earth Pro 2023)



Figure 6: General view of survey area within local context (Google Earth Pro 2023)

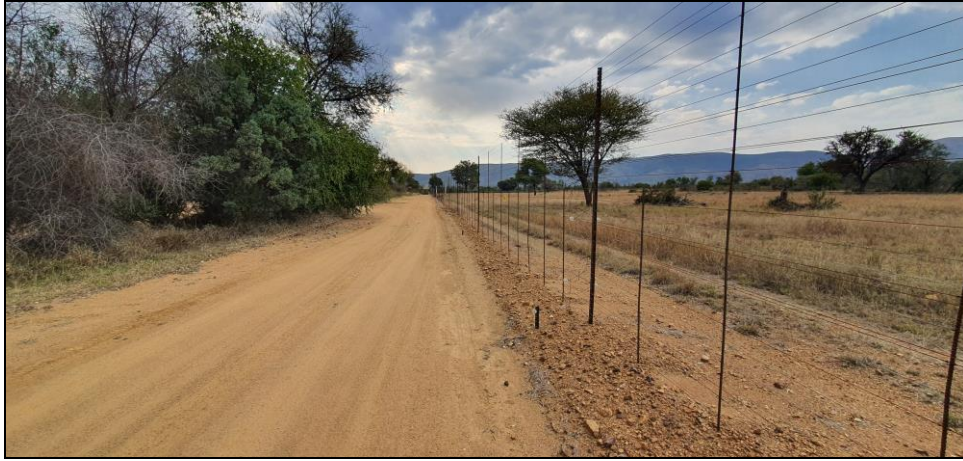


Figure 7: General view of the existing infrastructure (roads and fences)



Figure 8: General view of a construction camp near Letamo Lodge



Figure 9: General view of the burrow pit near Letamo Lodge



Figure 10: General view of the eastern section of the survey footprint



Figure 11: General view of the northern section of the survey footprint



Figure 12: General view of the western section of the survey footprint



Figure 13: General view of the south-western section of the survey footprint



Figure 14: General view of the south-western section of the survey footprint



Figure 15: General view of the western section of the survey footprint



Figure 16: General view of the central section of the survey footprint

4. Proposed Project Description

SARPHC Properties purchased the Qwabi Reserve from the previous owners in 2010 with existing infrastructure present which included Babohi lodge, Letamo lodge, a Workshop and seven staff houses. For over a decade, the main focus of the Reserve was conservation and anti-poaching and only recently has the Reserve opened the doors of its first commercial lodge, Letamo. This lodge is aimed at the luxury market with the goal of bringing international tourists year round to contribute to the local economy and boost tourism within the region. It was important that the natural recreational potential of this region be explored and in order to do so, accommodation facilities needed to be developed in the greater region to unlock the natural potential of the region.

After the purchase of the Qwabi Reserve, SARPHC Properties looked to upgrade and construct additions to the existing Babohi and Letamo Lodges inclusive of new staff accommodation. In 2017 the Thabazimbi Local Municipality granted planning approval for the proposed additions and upgrades on the back of a Record of Decision (RoD) that was issued by LEDET in 2009. Based on these approvals, SARPHC Properties was in good faith under the impression that the improvements were compliant in terms of NEMA and fell within the bounds of the RoD issued in 2009. The upgrades were effected and completed in 2019 as per the approved SDP's. In 2022, Dr André Uys was appointed as the new General Manager of SARPHC Properties. As part of a good governance processes, an internal compliance audit was undertaken to verify that all authorizations were in place for the Qwabi Reserve if future developments were to take place. The outcome of the internal compliance audit was that the RoD on which Thabazimbi Municipality approved the development may not have been valid and may have expired by the time the developments were undertaken in 2018/2019. Additionally, the RoD issued in 2009 approved the development of an 18-hole golf course, clubhouse, 513 residential stands, ten 20 bed lodges, 20 room hotel, equestrian center and associated infrastructure. It did not approve the development of the 95 bed Babohi and Letamo Lodges (as approved by the municipality). Therefore, any violation of the NEMA regulations was because of a good faith misunderstanding of the scope and extent of the 2009 RoD, not only by SARPHC Properties, but also by the Thabazimbi Municipality. SARPHC Properties did not intentionally operate in breach of NEMA.

The following infrastructure components have been constructed and were investigated during the survey:

Activity	Area covered by the activity (m ²)
Babohi Lodge	109 977
Babohi Helipad	5 931
Letamo Lodge	49 284
Letamo Helipad	7 387
Admin building	1 634
Junior Staff Housing Letamo	9 364
Junior staff Babohi	
Senior staff units	4 219
Contractors Camp	11 930
Workshop, GM Housing and	15 126
Post office house	740
River Crossings	1 000
New Roads	230 km

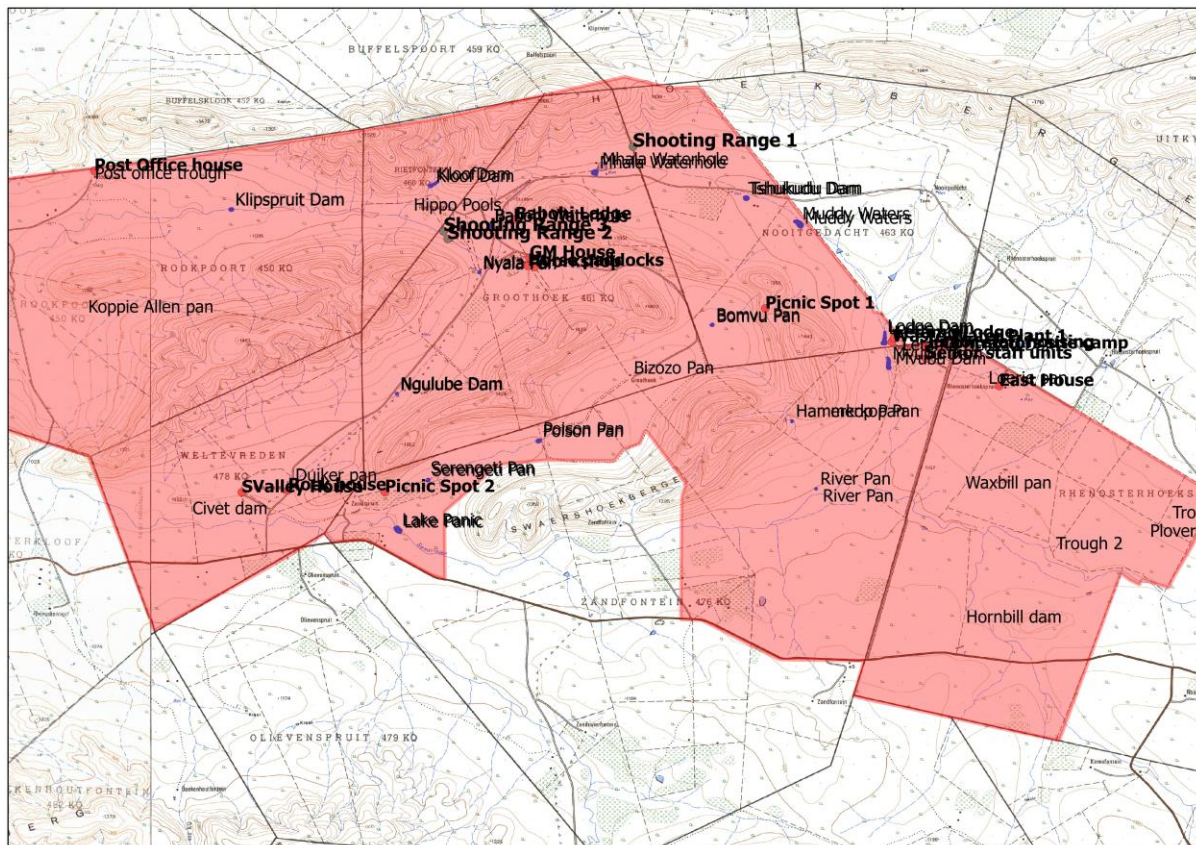


Figure 17: Location of the various developments throughout Qwabi Private Game Reserve

5. Legal Framework

APPLICABLE LEGISLATION AND GUIDELINES USED TO COMPILE THE REPORT	REFERENCE APPLIED
The Constitution of the Republic of South Africa (Act No. 108 of 1996)	
The National Environmental Management Act (Act No. 107 of 1998)	Section 24(1) Section 28(1)
The National Water Act (Act No. 36 of 1998)	Section 21 (a)(b)

Air Quality Act (Act No. 39 of 2004)	Section 21
National Forests Act, Act of 84 of 1998	-
The National Heritage Resources Act (Act No. 25 of 1999)	Section 38, 34, 35, 36
Conservation of Agricultural Resources Act (Act No. 85 of 1983)	
Mineral and Petroleum Resources Development Act (Act No. 28 of 2002)	
The National Water Act (Act No. 36 of 1998);	
Mine Health and Safety Act (Act No. 29 of 1996) (MHSA)	
Biodiversity Act (Act 10 of 2004)	
Thabazimbi Local Municipality IDP 2022	

Table 3: Legal framework

All applicable EIA listed activities associated with development that occurred within Kapama Private Game Reserve are listed below:

ECA EIA Contraventions: between 08 September 1997 and end of 09 May 2002		
Activities commenced with on or after 08 September 1997 and before end 09 May 2002: EIA regulations promulgated in terms of the ECA, Act 73 of 1989		
Indicate the number and date of the relevant notice: e.g. R. 983, 08 December 2014	Activity No (s) (in terms of the relevant notice) e.g. 1(a)	Describe each listed activity as per project description¹: e.g. Construction of a 600 mW generator
Environment Conservation Act, 1989 (Act No. 73 of 1989) GNR 1182 & 1183	1 (d)	The construction or upgrading of roads, railways, airfields and associated structures outside the borders of town planning schemes. Game drive tracks and routes were developed pre 2007 to 2022 (approximately 230 km).
	1 (m)	The construction or upgrading of public and private resorts and associated infrastructure. Babohi and Letamo Lodges were originally constructed pre 2007. Babohi Lodge initial bed numbers were 34.
	1 (i)	The construction or upgrading of canals and channels, including diversions of the normal flow of water in a river bed and water transfer schemes between water catchments and impoundments. 10 low water crossings have been constructed that do not impede the flow and one high water crossing
	1 (j)	The construction or upgrading of dams, levees and weirs affecting the flow of a river. 4 dams have been constructed.
ECA EIA Contraventions: between 10 May 2002 and end of 02 July 2006		
Activities unlawfully commenced with on or after 10 May 2002 and before end 02 July 2006: EIA regulations promulgated in terms of the ECA, Act 73 of 1989		
Indicate the number and date of the relevant notice: e.g. R. 983, 08 December 2014	Activity No (s) (in terms of the relevant notice) e.g. 1(a)	Describe each listed activity as per project description²: e.g. Construction of a 600 mW generator

Amendment of the ECA EIA Regulations promulgated in terms of the ECA, Act No 73 of 1989. GNR 670 and GNR 672	1 (d)	The construction or upgrading of roads, railways, airfields and associated structures. Game drive tracks and routes were developed pre 2007 to 2022 (approximately 230 km).
	1 (i)	The construction or upgrading of canals and channels, including structures causing disturbances to the flow of water in a river bed, and water transfer schemes between water catchments and impoundments. 10 low water crossings have been constructed that do not impede the flow and one high water crossing.
	1 (m)	The construction or upgrading of public and private resorts and associated infrastructure. Babohi and Letamo Lodges were originally constructed pre 2007. Babohi Lodge initial bed numbers were 34.
NEMA EIA Contraventions: between 03 July 2006 and end of 01 August 2010		
Activities unlawfully commenced with on or after 03 July 2006 and before end 01 August 2010: EIA regulations promulgated in terms of the NEMA		
Indicate the number and date of the relevant notice: e.g. R. 983, 08 December 2014	Activity No (s) (in terms of the relevant notice) e.g. 1(a)	Describe each listed activity as per project description³: e.g. Construction of a 600 mW generator
2006 EIA Regulations promulgated in terms of the NEMA, Act No 107 of 1998. GNR 386	1 (m)	The construction of facilities or infrastructure, including associated structures or infrastructure, for any purpose in the one in ten year flood line of a river or stream, or within 32 metres from the bank of a river or stream where the flood line is unknown, excluding purposes associated with existing residential use, but including - i. canals; ii. channels; iii. bridges; iv. dams; and v. Weirs. Certain roads are located within 32 m of a watercourse. The 10 river crossings are constructed within the watercourse
	1 (q) (i) (ii)	The construction of facilities or infrastructure, including associated structures or infrastructure, for the landing, parking and maintenance of aircraft including – i. helicopter landing pads, excluding helicopter landing facilities and stops used exclusively by emergency services; The Babohi helipad constructed in 2012 was expanded from approximately 300 m ² to approximately 1800 m ² in 2016. In February 2023 the helipad was removed and rehabilitated in accordance with the Qwabi Reserve Ecologist's rehabilitation plan. The Letamo helipad was expanded in 2016 and a new Babohi helipad was constructed in 2022.

	4	<p>The dredging, excavation, infilling, removal or moving of soil, sand or rock exceeding 5 cubic metres from a river, tidal lagoon, tidal river, lake, in-stream dam, floodplain or wetland.</p> <p>10 river crossings have been constructed whereby 5 cubic meters or more of sand and soil was removed.</p>
NEMA EIA Contraventions: between 02 August 2010 and end of 07 December 2014		
Activities unlawfully commenced with on or after 02 August 2010 and before end 07 December 2014: EIA regulations promulgated in terms of the NEMA, Act 107 of 1998		
Indicate the number and date of the relevant notice: e.g. R. 983, 08 December 2014	Activity No (s) (in terms of the relevant notice) e.g. 1(a)	Describe each listed activity as per project description⁴: e.g. Construction of a 600 mW generator
2010 EIA Regulations promulgated in terms of the NEMA, Act No 107 of 1998	GNR 544: 11 (iv) (xi)	<p>The construction of: (iv) dams; (xi) infrastructure or structures covering 50 square metres or more</p> <p>Where such construction occurs within a watercourse or within 32 m of a water course. 4 dams and 10 low water crossings have been constructed that do not impede the flow and one high water crossing.</p>
	GNR 544: 18 (i)	<p>The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 5 cubic metres from: (i) a watercourse;</p> <p>10 low water crossings have been constructed that do not impede the flow and one high water crossing</p>
	GNR 546: 4 (a) (ii) (bb) (ee) (gg)	<p>The construction of a road wider than 4 metres with a reserve less than 13,5 metres in (a) Limpopo (ii) outside urban areas in (bb) National Protected Area Expansion Strategy Focus Areas, (ee) critical biodiversity areas, (gg) within 5 Km from any other protected area identified in terms of NEMPAA</p> <p>Many game drive routes have been constructed over the years, some of which exceed 4 m in width.</p> <p>The northern portion of the Reserve is located within the Limpopo Central Bushveld focus area, majority of the Reserve is located within CBA 1 and 2, the Blesbok Private Nature Reserve is located 3 Km from the Reserve.</p>

<p>GNR 546: 6 (a) (ii) (bb) (ee) (gg) (ii)</p>	<p>The construction of resorts, lodges or other tourism accommodation facilities that sleep 15 people or more (a) Limpopo (ii) outside urban areas in (bb) National Protected Area Expansion Strategy Focus Areas, (ee) critical biodiversity areas, (gg) within 5 Km from any other protected area identified in terms of NEMPAA (ii) areas within 100 meters from the edge of a watercourse. Babohi Lodge sleeps 98 Guests and 40 staff (as expanded in 2018). Letamo Lodge sleeps 116 guests and 28 staff (as expanded in 2018).</p> <p>The northern portion of the Reserve is located within the Limpopo Central Bushveld focus area, majority of the Reserve is located within CBA 1 and 2, the Blesbok Private Nature Reserve is located 3 Km from the Reserve.</p> <p>Letamo Lodge is located 85 m from the edge of a watercourse.</p>
<p>GNR 546: 12 (b)</p>	<p>The clearance of an area of 300 square metres or more of vegetation where 75% or more of the vegetative cover constitutes indigenous vegetation.</p> <p>A total of approximately 32 Ha of indigenous vegetation have been cleared.</p>
<p>GNR 546: 13 (a) (b), (c) (ii) (bb) (ff)</p>	<p>The clearance of an area of 1 hectare or more of vegetation where 75% or more of the vegetative cover constitutes indigenous vegetation in (a) critical biodiversity area (b) National protected area expansion strategy focus areas in (c) Limpopo (ii) outside urban areas in (bb) National Protected Area Expansion Strategy Focus Areas, (ff) within 5 Km from any other protected area identified in terms of NEMPAA.</p> <p>A total of approximately 32 Ha of indigenous vegetation has been cleared.</p> <p>The northern portion of the Reserve is located within the Limpopo Central Bushveld focus area, majority of the Reserve is located within CBA 1 and 2, the Blesbok Private Nature Reserve is located 3 Km from the Reserve</p>
<p>GNR 546: 14 (a) (i)</p>	<p>The clearance of an area of 5 hectare or more of vegetation where 75% or more of the vegetative cover constitutes indigenous vegetation in (a) Limpopo (i) all areas outside urban areas.</p> <p>A total of approximately 32 Ha of indigenous vegetation has been cleared</p>
<p>GNR 546: 16 (iv)</p>	<p>The construction of: (iv) infrastructure covering 10 square metres or more where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line.</p> <p>The ten river crossings are constructed within the watercourse</p>

	GNR 546: 18 (a) (ii) (bb) (ee) (gg)	The expansion of a resort, lodge, hotel and tourism or hospitality facilities where the development footprint will be expanded more (a) Limpopo (ii) outside urban areas in (bb) National Protected Area Expansion Strategy Focus Areas, (ee) critical biodiversity areas, (gg) within 5 Km from any other protected area identified in terms of NEMPAA Babohi Lodge was originally constructed pre 2007 and consisted of 34 guest beds. In 2018, Babohi was expanded to sleep 98 guests and 40 staff.
	GNR 546: 19 (a) (ii) (bb) (ee) (gg)	The widening of a road by more than 4 metres, or the lengthening of a road by more than 1 kilometre (a) Limpopo (ii) outside urban areas in (bb) National Protected Area Expansion Strategy Focus Areas, (ee) critical biodiversity areas, (gg) within 5 Km from any other protected area identified in terms of NEMPAA Post 2007, many game viewing tracks have been constructed and old roads lengthened by more than 1 Km. The northern portion of the Reserve is located within the Limpopo Central Bushveld focus area, majority of the Reserve is located within CBA 1 and 2, the Blesbok Private Nature Reserve is located 3 Km from the Reserve.
NEMA EIA Contraventions: between 08 December 2014 and 06 April 2017		
Activities unlawfully commenced with on or after 08 December 2014 and before end 06 April 2017: EIA regulations promulgated in terms of the NEMA, Act 107 of 1998		
Indicate the number and date of the relevant notice: e.g. R. 983, 08 December 2014	Activity No (s) (in terms of the relevant notice) e.g. 1(a)	Describe each listed activity as per project description⁵: e.g. Construction of a 600 mW generator
2014 EIA Regulations promulgated in terms of the NEMA, Act No 107 of 1998	GNR 983: 12 (iii) (iv) (xii); (a) (c)	The development of— (iii) bridges exceeding 100 square metres in size; (iv) dams, where the dam, including infrastructure and water surface area, exceeds 100 square metres in size; (xii) infrastructure or structures with a physical footprint of 100 square metres or more; where such development occurs— (a) within a watercourse; (c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse The ten river crossings are constructed within the watercourse. Lake panic and Mvubu dam are located within a watercourse.
	GNR 983: 19 (i)	The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 5 cubic metres from (i) a watercourse; 10 low water crossings have been constructed that do not impede the flow and one high water crossing. Mvubu dam and lake panic.

	GNR 983: 27	<p>The clearance of an area of 1 hectares or more, but less than 20 hectares of indigenous vegetation</p> <p>A total of approximately 32 Ha of indigenous vegetation have been cleared.</p>
	GNR 985: 4 (a) (ii) (bb) (ee) (gg)	<p>The development of a road wider than 4 metres with a reserve less than 13,5 metres (a) Limpopo (ii) outside urban areas in (bb) National Protected Area Expansion Strategy Focus Areas, (ee) critical biodiversity areas, (gg) within 5 Km from any other protected area identified in terms of NEMPAA.</p> <p>Many game drive routes have been constructed over the years, some of which exceed 4 meters in width.</p> <p>The northern portion of the Reserve is located within the Limpopo Central Bushveld focus area, majority of the Reserve is located within CBA 1 and 2, the Blesbok Private Nature Reserve is located 3 Km from the Reserve.</p>
	GNR 985: 6 (a) (ii) (bb) (ee) (gg) (ii)	<p>The development of resorts, lodges, hotels and tourism or hospitality facilities that sleeps 15 people or more (a) Limpopo (ii) outside urban areas in (bb) National Protected Area Expansion Strategy Focus Areas, (ee) critical biodiversity areas, (gg) within 5 Km from any other protected area identified in terms of NEMPAA (ii) areas within 100 meters from the edge of a watercourse.</p> <p>Babohi Lodge sleeps 98 Guests and 40 staff (as expanded in 2018).</p> <p>Letamo Lodge sleeps 116 guests and 28 staff (as expanded in 2018).</p> <p>Numerous staff accommodation totalling 278 staff beds.</p> <p>The northern portion of the Reserve is located within the Limpopo Central Bushveld focus area, majority of the Reserve is located within CBA 1 and 2, the Blesbok Private Nature Reserve is located 3 Km from the Reserve.</p> <p>Letamo Lodge is located 85 m from the edge of a watercourse.</p>
	GNR 985: 12 (a) (ii)	<p>The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan in (a) Limpopo (ii) within CBA</p> <p>A total of approximately 32 Ha of indigenous vegetation has been cleared.</p> <p>The northern portion of the Reserve is located within the Limpopo Central Bushveld focus area, majority of the Reserve is located within CBA 1 and 2.</p>

	<p>GNR 985: 14 (ii) (iii) (iv) (x) (xi) (xii) (a) (c); (a) (ii) (bb) (ff) (hh)</p>	<p>The development of— (iii) bridges exceeding 10 square metres in size; (iv) dams, where the dam, including infrastructure and water surface area exceeds 10 square metres in size; (x) buildings exceeding 10 square metres in size; (xi) boardwalks exceeding 10 square metres in size; or (xii) infrastructure or structures with a physical footprint of 10 square metres or more;</p> <p>where such development occurs— (a) within a watercourse; (c) if no development setback has been adopted, within 32 metres of a watercourse, measured from the edge of a watercourse;</p> <p>In (a) Limpopo (ii) outside urban areas in (bb) National Protected Area Expansion Strategy Focus Areas, (ff) critical biodiversity areas, (hh) within 5 Km from any other protected area identified in terms of NEMPAA.</p> <p>The ten river crossings are constructed within the watercourse and 4 dams have been constructed.</p> <p>The northern portion of the Reserve is located within the Limpopo Central Bushveld focus area, majority of the Reserve is located within CBA 1 and 2, the Blesbok Private Nature Reserve is located 3 Km from the Reserve.</p>
	<p>GNR 985: 17 (a) (ii) (bb) (ee) (gg)</p>	<p>The expansion of a resort, lodge, hotel and tourism or hospitality facilities where the development footprint will be expanded in (a) Limpopo (ii) outside urban areas in (bb) National Protected Area Expansion Strategy Focus Areas, (ee) critical biodiversity areas, (gg) within 5 Km from any other protected area identified in terms of NEMPAA.</p> <p>Babohi Lodge sleeps 98 Guests and 40 staff (as expanded in 2018). Letamo Lodge sleeps 116 guests and 28 staff (as expanded in 2018).</p>
	<p>GNR 985: 18 (a) (ii) (bb) (ee) (gg)</p>	<p>The widening of a road by more than 4 metres, or the lengthening of a road by more than 1 kilometre (a) Limpopo (ii) outside urban areas in (bb) National Protected Area Expansion Strategy Focus Areas, (ee) critical biodiversity areas, (gg) within 5 Km from any other protected area identified in terms of NEMPAA.</p> <p>Post 2007, many game viewing tracks have been constructed and old roads lengthened by more than 1 Km.</p>
NEMA EIA Contraventions: on or after 07 April 2017		
Activities unlawfully commenced with on or after 07 April 2017: EIA regulations promulgated in terms of the NEMA, Act 107 of 1998		
<p>Indicate the number and date of the relevant notice: e.g. R. 983, 08 December 2014</p>	<p>Activity No (s) (in terms of the relevant notice) e.g. 1(a)</p>	<p>Describe each listed activity as per project description⁶: e.g. Construction of a 600 mW generator</p>

Amended 2014 EIA Regulations promulgated in terms of the NEMA, Act No 107 of 1998	GNR 327: 12 (i) (ii) (a) (c)	<p>The development of</p> <p>(i) dams or weirs, where the dam or weir, including infrastructure and water surface area, exceeds 100 square metres; or</p> <p>(ii) infrastructure or structures with a physical footprint of 100 square metres or more;</p> <p>where such development occurs—</p> <p>(a) within a watercourse;</p> <p>(c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse</p> <p>The ten river crossings are constructed within the watercourse and 4 dams have been constructed.</p>
	GNR 327: 19	<p>The infilling or depositing of any material of more than 10 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10 cubic metres from a watercourse;</p> <p>The ten river crossings are constructed within the watercourse and 4 dams have been constructed.</p>
	GNR 327: 27	<p>The clearance of an area of 1 hectares or more, but less than 20 hectares of indigenous vegetation</p> <p>A total of approximately 32 Ha of indigenous vegetation have been cleared.</p>
	GNR 324: 4 (e) (i) (bb) (ee) (gg)	<p>The development of a road wider than 4 metres with a reserve less than 13,5 metres (e) Limpopo (i) outside urban areas in (bb) National Protected Area Expansion Strategy Focus Areas, (ee) critical biodiversity areas, (gg) within 5 Km from any other protected area identified in terms of NEMPAA.</p> <p>Many game drive routes have been constructed over the years, some of which exceed 4 meters in width.</p> <p>The northern portion of the Reserve is located within the Limpopo Central Bushveld focus area, majority of the Reserve is located within CBA 1 and 2, the Blesbok Private Nature Reserve is located 3 Km from the Reserve.</p>
	GNR 324: 6 (e) (i) (bb) (ee) (gg) (hh)	<p>The development of resorts, lodges, hotels and tourism or hospitality facilities that sleeps 15 people or more (e) Limpopo (i) outside urban areas in (bb) National Protected Area Expansion Strategy Focus Areas, (ee) critical biodiversity areas, (gg) within 5 Km from any other protected area identified in terms of NEMPAA (hh) areas within 100 meters from the edge of a watercourse.</p> <p>Babohi Lodge sleeps 98 Guests and 40 staff (as expanded in 2018).</p> <p>Letamo Lodge sleeps 116 guests and 28 staff (as expanded in 2018).</p> <p>Numerous staff accommodation totalling 278 staff beds.</p> <p>The northern portion of the Reserve is located within the Limpopo Central Bushveld focus area, majority of the Reserve is located within CBA 1 and 2, the Blesbok Private Nature Reserve is located 3 Km from the Reserve.</p> <p>Letamo Lodge is located 85 m from the edge of a watercourse.</p>

	GNR 324: 12 (e) (ii) (iii)	<p>The clearance of an area of 300 square metres or more of indigenous vegetation in (e) Limpopo (ii) critical biodiversity areas (iii) on land zoned open space, conservation or had an equivalent zoning.</p> <p>A total of approximately 32 Ha of indigenous vegetation have been cleared.</p> <p>Qwabi PGR is located within Limpopo Province, where majority of the reserve is classified as CBA 1 and 2.</p>
	GNR 324: 14 (ii) (a) (c); (e) (i) (ff) (hh)	<p>The development of (ii) infrastructure or structures with a physical footprint of 10 square meters or more where such development occurs within (a) a watercourse or (c) within 32 m of a watercourse in (e) Limpopo (i) outside urban areas in (ff) critical biodiversity areas and (hh) within 5 Km of any other protected area.</p> <p>The river crossings are constructed within the watercourse.</p> <p>The northern portion of the Reserve is located within the Limpopo Central Bushveld focus area, majority of the Reserve is located within CBA 1 and 2, the Blesbok Private Nature Reserve is located 3 Km from the Reserve .</p>
	GNR 324: 17 (e) (i) (ee) (gg)	<p>The expansion of a resort, lodge, hotel, tourism or hospitality facilities where the development footprint will be expanded and the expanded facility can accommodate an additional 15 people or more in (e) Limpopo (i) outside urban areas in (dd) sites or areas identified in terms of an international convention (ee) critical biodiversity areas within (gg) 5 Km of any protected area</p> <p>Babohi Lodge sleeps 98 Guests and 40 staff (as expanded in 2018).</p> <p>Letamo Lodge sleeps 116 guests and 28 staff (as expanded in 2018).</p> <p>Letamo and Babohi helipads were expanded in 2016.</p> <p>Numerous staff accommodation was constructed totalling 278 beds.</p> <p>The northern portion of the Reserve is located within the Limpopo Central Bushveld focus area, majority of the Reserve is located within CBA 1 and 2, the Blesbok Private Nature Reserve is located 3 Km from the Reserve</p>
	GNR 324: 18 (e) (i) (bb) (ee) (gg)	<p>The widening of a road by more than 4 meters, or the lengthening of a road by more than 1 Km (e) Limpopo (i) outside urban areas in (bb) National Protected Area Expansion Strategy Focus Areas, (ee) critical biodiversity areas, (gg) within 5 Km from any other protected area identified in terms of NEMPAA.</p> <p>Post 2007, many game viewing tracks have been constructed and old roads lengthened by more than 1 Km.</p> <p>The northern portion of the Reserve is located within the Limpopo Central Bushveld focus area, majority of the Reserve is located within CBA 1 and 2, the Blesbok Private Nature Reserve is located 3 Km from the Reserve</p>

Table 4: Listing activities

- Section 38 of the NHRA (Act No. 25 of 1999) stipulates that the following activities trigger a heritage survey:

Development criteria in terms of Section 38(1a-e) of the NHRA (Act No. 25 of 1999)	Yes/No
Construction of road, wall, powerline, pipeline, canal or other linear form of development or barrier exceeding 300m in length	Yes
Construction of bridge or similar structure exceeding 50m in length	Yes
Development exceeding 5000 m ² in extent	Yes
Development involving three or more existing erven or subdivisions	No
Development involving three or more erven or divisions that have been consolidated within past five years	No
Rezoning of site exceeding 10 000 m ²	No
Any other development category, public open space, squares, parks, recreation grounds	Yes

Table 5: Activities that trigger Section 38 of the NHRA

- Field rating system as recommended by SAHRA:

Field Rating	Grade	Significance	Recommended Mitigation
National Significance	Grade I	High significance	Conservation by SAHRA, national site nomination, mention any relevant international ranking. No alteration whatsoever without permit from SAHRA.
Provincial Significance	Grade II	High significance	Conservation by provincial heritage authority, provincial site nomination. No alteration whatsoever without permit from provincial heritage authority.
Local Significance	Grade III-A	High significance	Conservation by local authority, no alteration whatsoever without permit from provincial heritage authority. Mitigation as part of development process not advised.
Local Significance	Grade III-B	High significance	Conservation by local authority, no external alteration without permit from provincial heritage authority. Could be mitigated and (part) retained as heritage register site.
Generally Protected A	Grade IV-A	High/medium significance	Conservation by local authority. Site should be mitigated before destruction. Destruction permit required from provincial heritage authority.
Generally Protected B	Grade IV-B	Medium significance	Conservation by local authority. Site should be recorded before destruction. Destruction permit required from provincial heritage authority.
Generally Protected C	Grade IV-C	Low significance	Conservation by local authority. Site has been sufficiently recorded in the Phase 1 HIA. It requires no further recording before destruction. Destruction permit required from provincial heritage authority.

Table 6: Field rating system to determine site significance

- Heritage resources have lasting value in their own right and provide evidence of the origins of South African society and they are valuable, finite, non-renewable and irreplaceable.
- All archaeological remains, features, structures and artefacts older than 100 years and historic structures older than 60 years are protected by the relevant legislation, in this case the **National Heritage Resources Act (NHRA) (Act No. 25 of 1999, Section 34 & 35)**. The Act makes an archaeological impact assessment as part of an EIA and EMPR mandatory (see **Section 38**). No archaeological artefact, assemblage or settlement (site) may be moved or destroyed without the necessary approval from the **South African Heritage Resources Agency (SAHRA)**. Full cognisance is taken of this Act in making recommendations in this report.

- Cognisance will also be taken of the Mineral and Petroleum Resources Development Act (Act No 28 of 2002) and the National Environmental Management Act (Act No 107 of 1998) when making any recommendations.
- Human remains older than 60 years are protected by the NHRA, with reference to Section 36. Human remains that are less than 60 years old are protected by the Regulations Relating to the Management of Human Remains (GNR 363 of 22 May 2013) made in terms of the National Health Act No. 61 of 2003 as well as local Ordinances and regulations.
- With reference to the evaluation of sites, the certainty of prediction is definite, unless stated otherwise.
- The guidelines as provided by the NHRA (Act No. 25 of 1999) in Section 3, with special reference to subsection 3, and the Australian ICOMOS (International Council on Monuments and Sites) Charter (also known as the Burra Charter) are used when determining the cultural significance or other special value of archaeological or historical sites.
- A copy of this report will be submitted on SAHRIS as stipulated by the National Heritage Resources Act (NHRA) (Act No. 25 of 1999), Section 38 (especially subsection 4) and the relevant Provincial Heritage Resources Authority (PHRA).
- Note that the final decision for the approval of permits, or the removal or destruction of sites, structures and artefacts identified in this report, rests with the SAHRA (or relevant PHRA).

6. Study Approach/Methodology

Geographical information (KML shapefiles) on the proposed prospecting activities was supplied by NuLeaf Planning and Environmental (Pty) Ltd. The most up-to-date Google Earth images and topographic maps were used to indicate the survey area. Topographic maps were sources from the Surveyor General. Please note that all maps are orientated with north facing upwards (unless stated otherwise).

The strategy during this survey was to focus on the footprints associated with all the existing infrastructure developments. The main focus was to establish if there was any impact on cultural heritage remains during the construction of the facilities. Intensive pedestrian surveys was conducted all the specified (listed) sites.

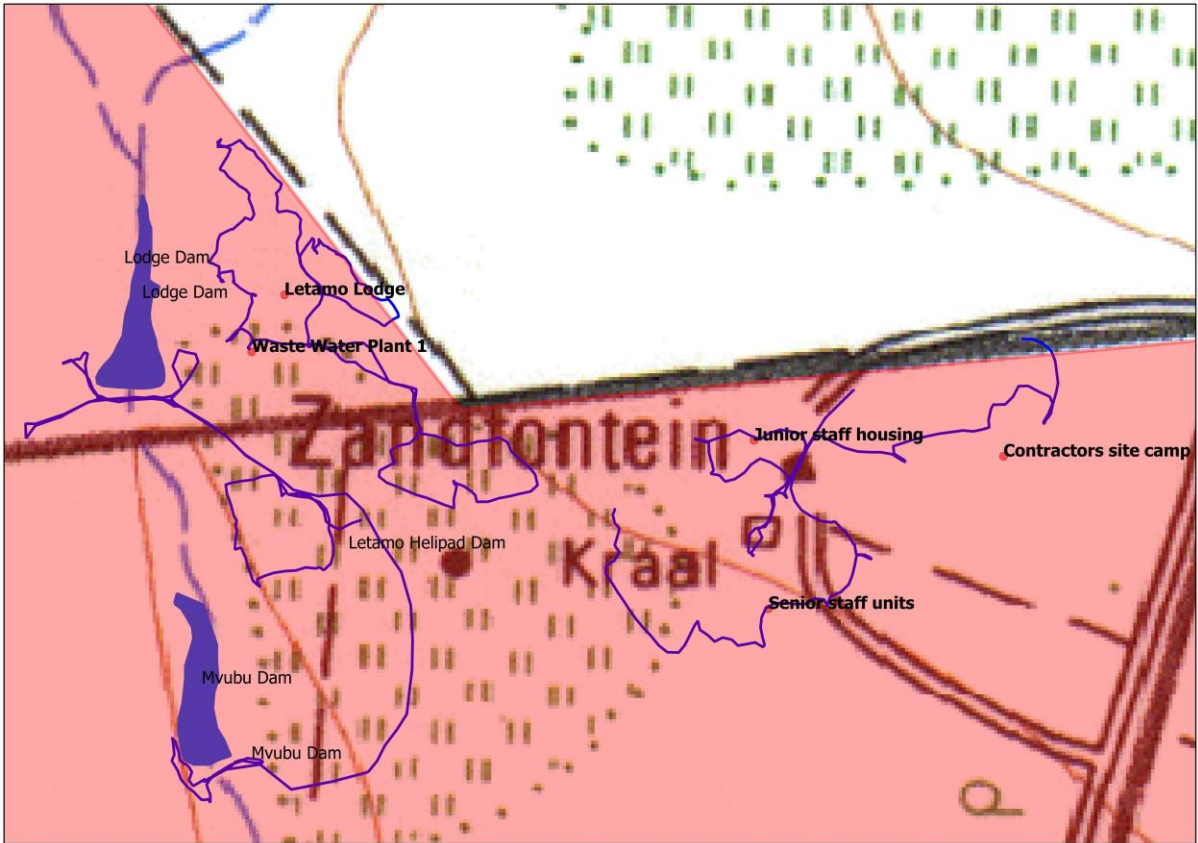


Figure 18: Recorded survey tracks at Letamo Lodge, Helipad, Lodge Dam, Mvubu Dam, Junior Staff housing, Senior Staff housing and Contractors Camp site



Figure 19: Recorded survey tracks at the rehabilitated shooting range

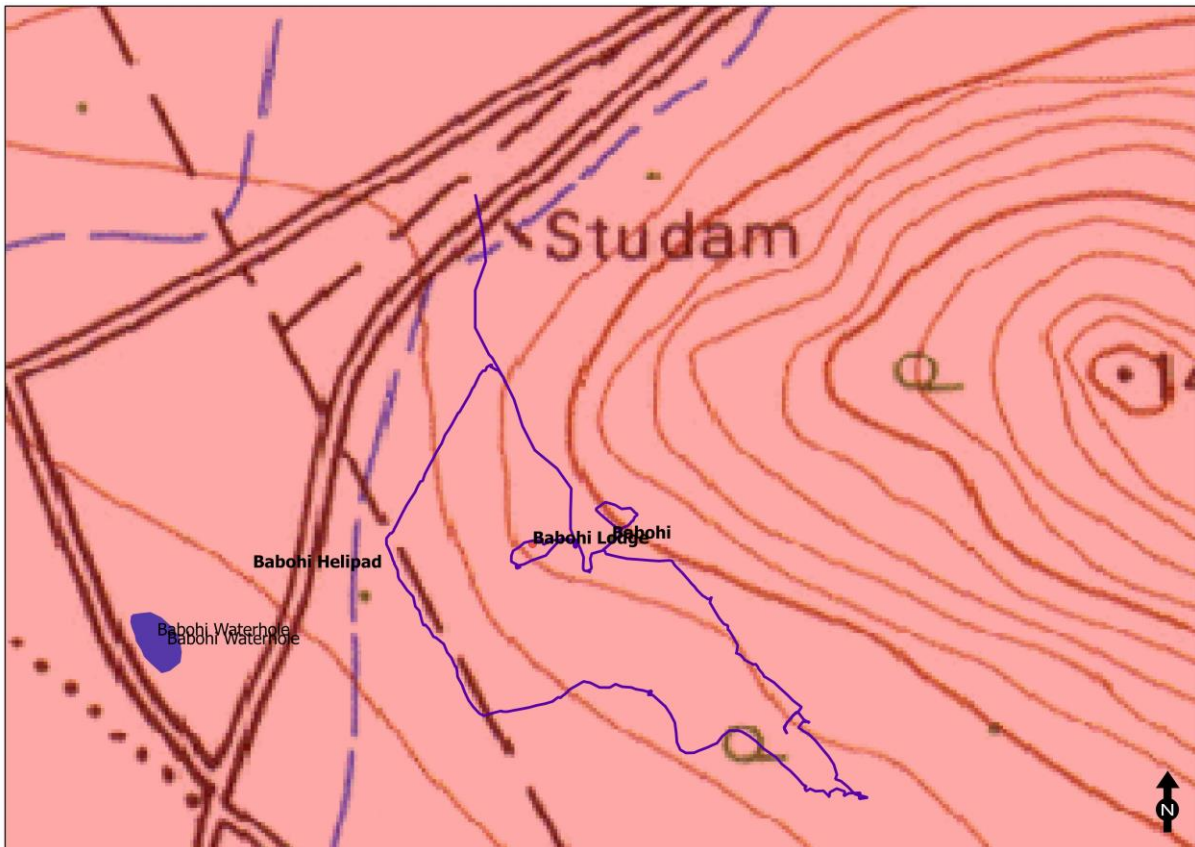


Figure 20: Recorded survey tracks at Babohi Lodge and rehabilitated helipad

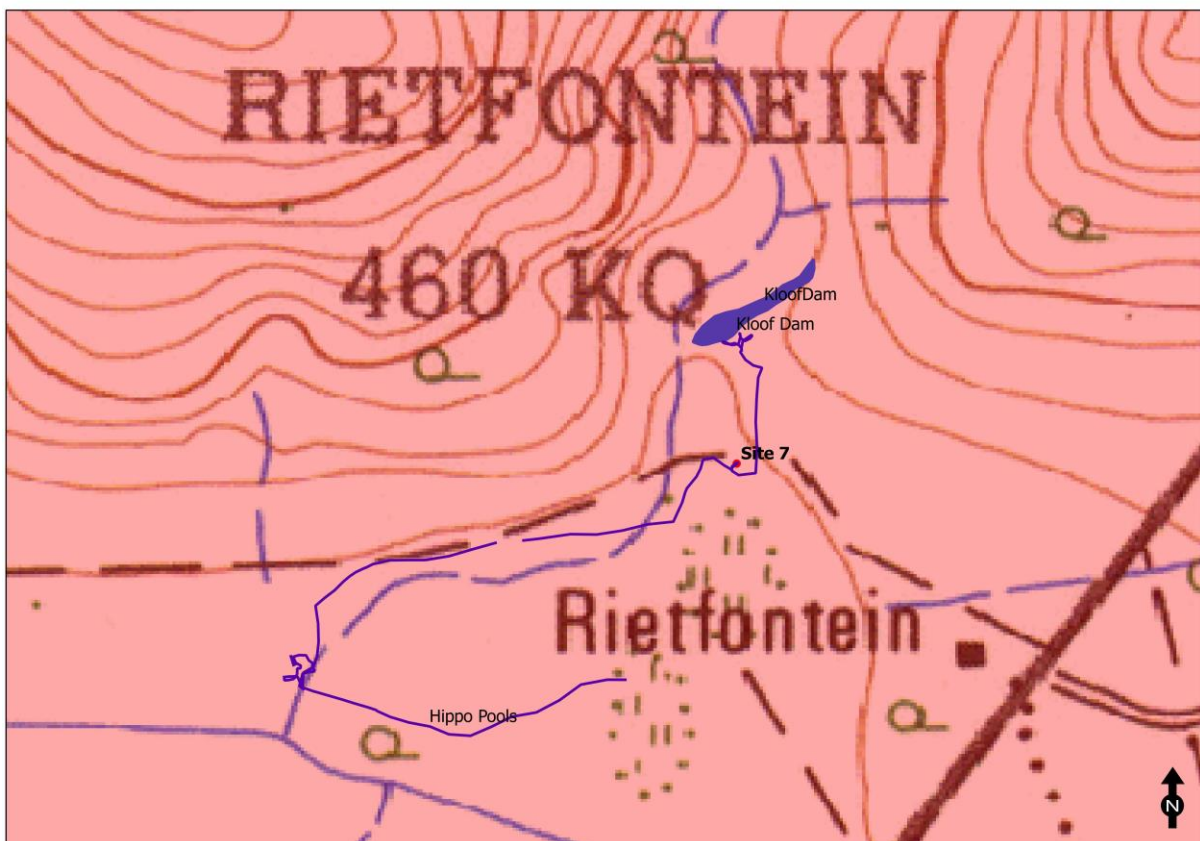


Figure 21: Recorded survey tracks at the walls of Kloof Dam and Hippo Dam Camp and a river crossing

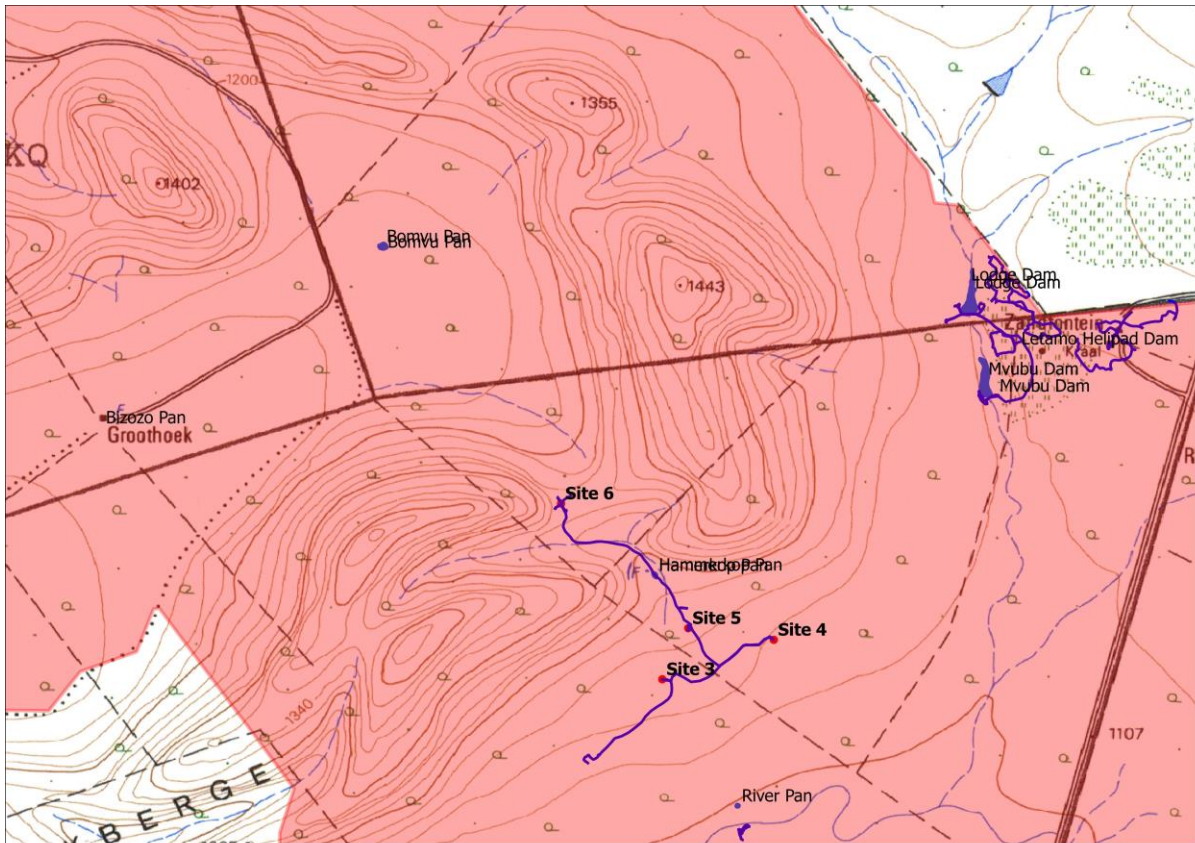


Figure 22: Recorded survey tracks at Hamerkop Pan and valley road up the mountain

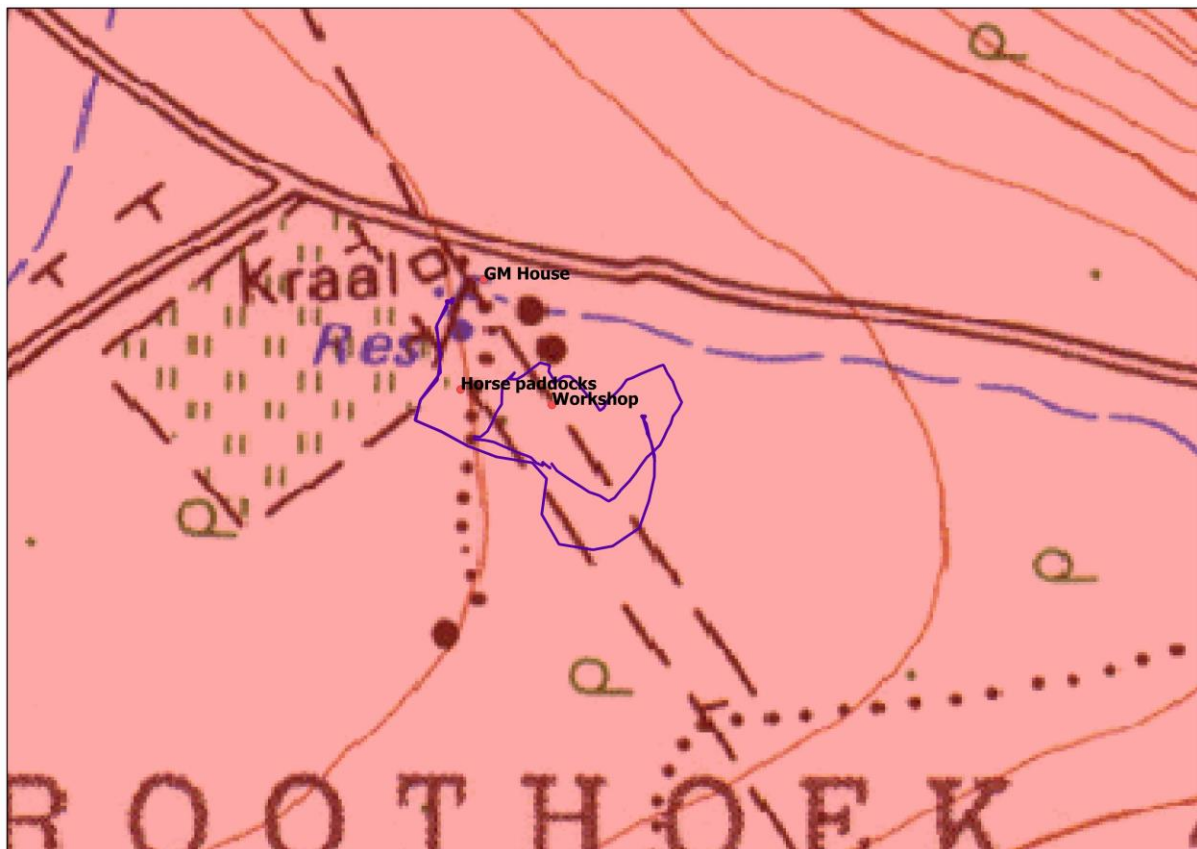


Figure 23: Recorded survey tracks at the workshop and GM house

6.1 Review of existing information/data

Additional information on the cultural heritage of the area was sourced from the following records:

- National Mapping Project by SAHRA (which lists heritage impact assessment reports submitted for South Africa);
- Environmental Potential Atlas (ENPAT);
- Online SAHRIS database;
- National Automated Archival Information retrieval System (NAAIRS);
- Maps and information documents supplied by the client; and
- Several heritage surveys have been conducted in the vicinity of the survey area (published and unpublished material on the area (Birkholtz & Steyn 2002; Coetzee 2014; Hutton 2008; Kusel 2007; Pistorius 2007; Van Schalkwyk 2012).

Although a few heritage surveys and research projects have been completed in the general vicinity of the project footprint during the last few years, none were conducted in the current survey footprint. The SAHRIS database indicates that Pistorius (2007) completed a cursory survey over the area (helicopter flight survey following the new Eskom power line) and no sites were recorded for this section of the route. Birkholtz and Steyn (2002) focussed on the Marakele Park (identifying 130 tangible heritage sites, including Stone Age surface scatters, historic cemeteries, historic farmsteads and outbuildings as well as Early and Late Iron Age sites) situated to the north of the survey footprint (SANParks 2014:4). A survey by Kusel (2007) located to the north, revealed surface scatters of Middle Stone Age flakes and two graveyards dated to the 1970s, associated with early farm labourers. A survey located to the north-west of the current survey footprint was conducted by Hutton (2008), but no cultural heritage sites were recorded. A survey near Thabazimbi by Van Schalkwyk (2012) yielded a number of historical buildings (farmhouses and mill) a cemetery and a memorial monument (also see Addendum 2).

The Surveyor General's map of the farm Weltevreden 478 KQ confirmed that the farm was first surveyed in 1904 and the Deed of Grant was awarded to C.G. Erasmus in 1873. The farm Rhenosterhoekspruit 466 KQ was first surveyed in 1898. The farm Rookpoort 450 KQ was first surveyed in 1905 however the Deed of Grant was registered to H.J. van Staden in 1874. It seems the farm Meletse 706 KQ was surveyed in 2009 and consisted of three incorporated farms namely: Groothoek 461 KQ (surveyed in 1904 and granted to P.J. Schoerie in 1868), Zandfontein 476 KQ (surveyed in 1905 and granted to J.H. van der Bank in 1863) and Nooitgedacht 463 KQ (surveyed in 1904 and granted to P.A. Eloff in 1869) (also see Addendum 3).

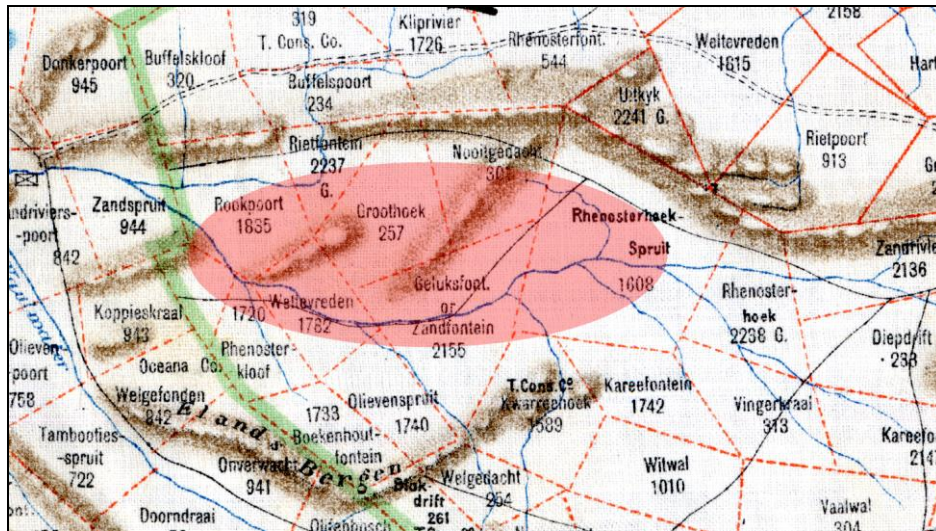


Figure 24: Jeppe's Map dating to 1899 indicates the location the farms under investigation

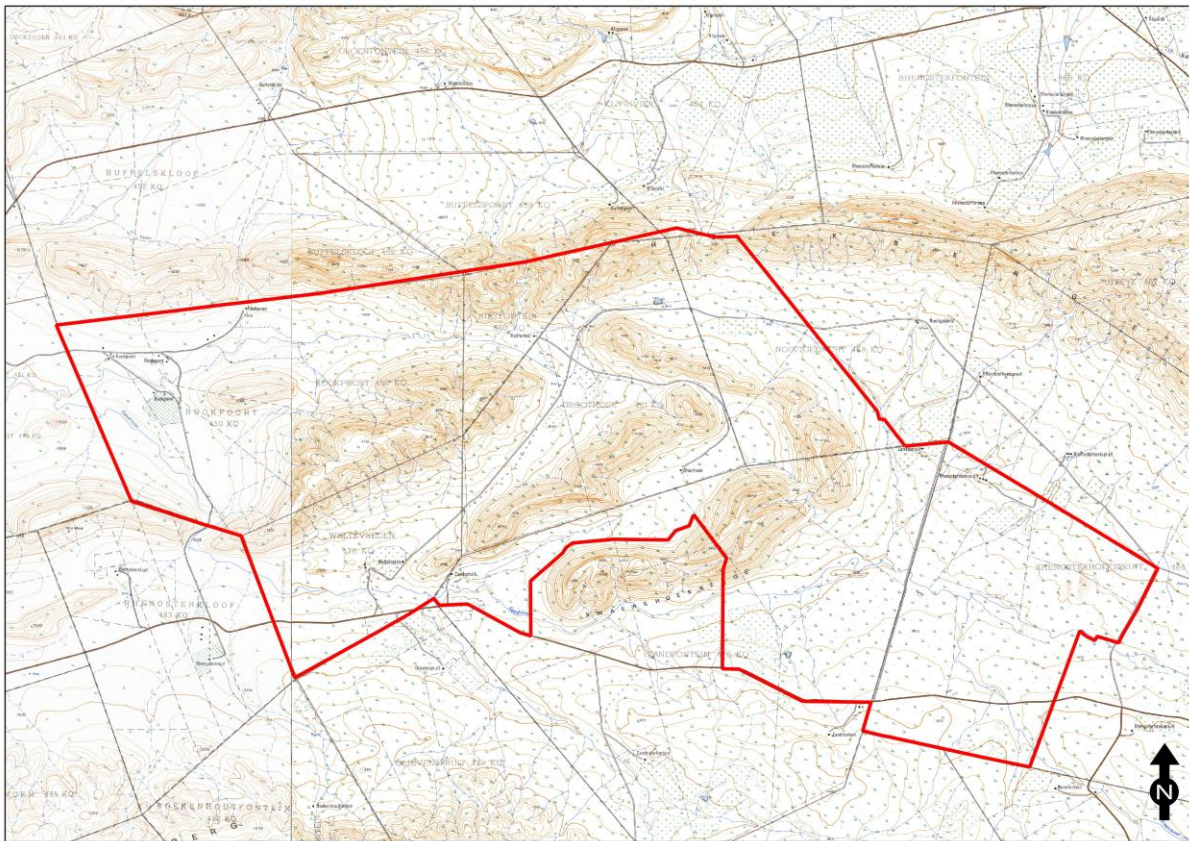


Figure 25: The survey area as indicated on the 1:50 000 topographic map 2427DA and 2427DB (1967)

Note that no declared National or Provincial Heritage Sites have been noted near the survey footprint, however several cultural heritage sites have been recorded in the region.

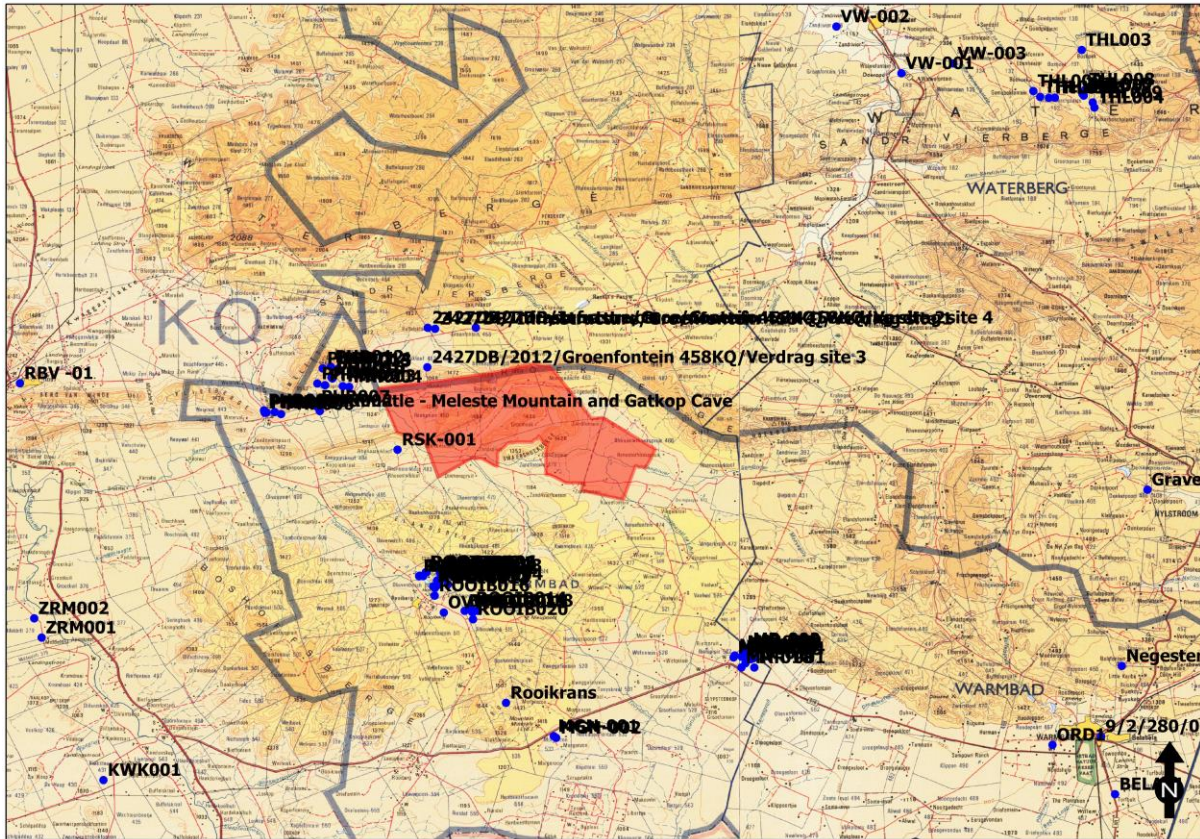


Figure 26: Recorded heritage sites near the survey footprint (SAHRIS as at June 2023)

6.2 Palaeontological sensitivity

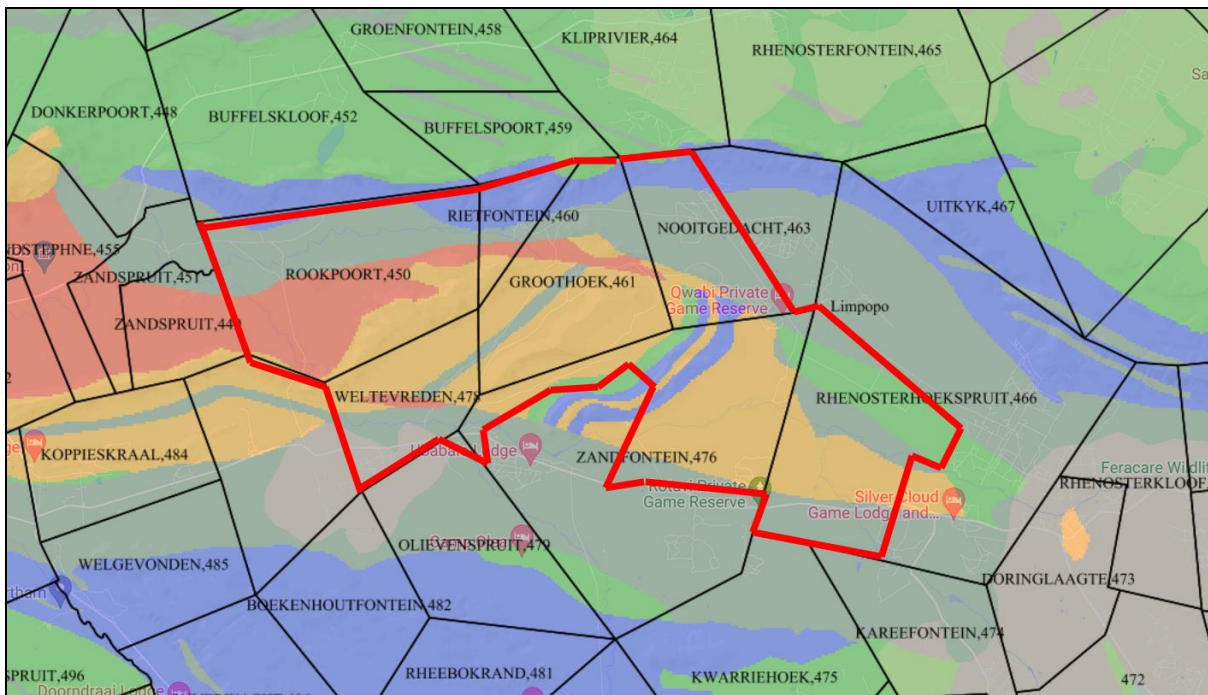


Figure 27: Palaeontological sensitivity zones as indicated for the survey footprint (SAHRIS 2023)

Colour	Sensitivity	Required Action
RED	VERY HIGH	Field assessment and protocol for finds is required

ORANGE/YELLOW	HIGH	Desktop study is required and based on the outcome of the desktop study, a field assessment is likely
GREEN	MODERATE	Desktop study is required
BLUE	LOW	No palaeontological studies are required however a protocol for finds is required
GREY	INSIGNIFICANT/ZERO	No palaeontological studies are required
WHITE/CLEAR	UNKNOWN	Will require a minimum of a desktop study. As more information comes to light, SAHRA will continue to populate the map.

The palaeontological sensitivity map was extracted from the SAHRIS database indicates the whole spectrum of sensitivity from red to white (very high to unknown) sensitivity. As a result palaeontological field assessment study will be required for the survey footprint.

6.3 Site visits

The field survey was conducted from 12- 15 June 2023.

6.4 Social interaction and current inhabitants

The park manager and various personnel working at Game reserve were consulted during the survey to locate any potential heritage sites in the region.

6.5 Public Consultation and Stakeholder Engagement

Standard procedures and public meetings are being held. The Public Participation Process is being conducted with advertisements in the local paper and signs at the site. Any and all persons interested and/or affected by the development an opportunity to register and participate in the process. A 30 day registration period is allowed for, as well as, an opportunity to ask questions, submit concerns etc.

6.6 Assumptions, restrictions, gaps and limitations

No severe physical restrictions were encountered as the survey area was fairly accessible.

6.7 Methodology for assessment of potential impacts

All impacts identified during the EIA stage of the study will be classified in terms of their significance. Issues were assessed in terms of the following criteria:

- The **nature**, a description of what causes the effect, what will be affected and how it will be affected;
- The **physical extent**, wherein it is indicated whether:
 - 1 - the impact will be limited to the site;
 - 2 - the impact will be limited to the local area;
 - 3 - the impact will be limited to the region;
 - 4 - the impact will be national; or
 - 5 - the impact will be international.
- The **duration**, wherein it is indicated whether the lifetime of the impact will be:
 - 1 - of a very short duration (0–1 years);

- 2 - of a short duration (2-5 years);
- 3 - of a medium-term (5–15 years);
- 4 - of a long term (> 15 years); or
- 5 - permanent.
- The **magnitude** of impact, quantified on a scale from 0-10, where a score is assigned:
 - 0 - small and will have no effect;
 - 2 - minor and will not result in an impact;
 - 4 - low and will cause a slight impact;
 - 6 - moderate and will result in processes continuing but in a modified way;
 - 8 - high, (processes are altered to the extent that they temporarily cease); or
 - 10 - very high and results in complete destruction of patterns and permanent cessation of processes;
- The **probability** of occurrence, which describes the likelihood of the impact actually occurring and is estimated on a scale where:
 - 1 - very improbable (probably will not happen);
 - 2 - improbable (some possibility, but low likelihood);
 - 3 - probable (distinct possibility);
 - 4 - highly probable (most likely); or
 - 5 - definite (impact will occur regardless of any prevention measures);
- The **significance**, which is determined through a synthesis of the characteristics described above (refer formula below) and can be assessed as low, medium or high;
- The **status**, which is described as either positive, negative or neutral;
 - The degree to which the impact can be reversed;
 - The degree to which the impact may cause irreplaceable loss of resources; and
 - The degree to which the impact can be mitigated.

The significance is determined by combining the criteria in the following formula:

$S = (E+D+M) \times P$; where:

S = Significance weighting

E = Extent

D = Duration

M = Magnitude

P = Probability

Points	Significance Weighting	Discussion
< 30 points	Low	Where this impact would not have a direct influence on the decision to develop in the area.
31-60 point	Medium	Where the impact could influence the decision to develop in the area unless it is effectively mitigated.
> 60 points	High	Where the impact must have an influence on the decision process to develop in the area.

7. The Cultural Heritage Sites

7.1. Isolated occurrences

Isolated occurrences are artefacts or small features recorded on the surface with no contextual information. No other associated material culture (in the form of structures or deposits) was noted that might provide any further context. This can be the result of various impacts and

environmental factors such as erosion and modern developments. By contrast archaeological sites are often complex sites with evidence of archaeological deposit and various interrelated features such as complex deposits, stone walls and middens. However, these isolated occurrences are seen as remains of erstwhile complex or larger sites and they therefore provide a broad indication of possible types of sites or structures that might be expected to occur or have occurred in the survey footprint.

Throughout the survey footprint isolated finds were recorded. A low density ($n < 3$ artefacts per m^2 metre) concentration of Middle Stone Age artefacts were near an erosion donga in the centre of the Reserve. An isolated broken upper grindstone was also recorded.



Figure 28: An isolated broken lower grindstone was recorded near Site 6



Figure 29: MSA stone tool recorded near an erosion gully

7.2 Heritage sites

A total of 7 cultural sites were recorded during the survey, of which four of the sites are graveyards and an individual grave (Sites 1, 3, 4 and 7) and two are historical structures (Sites 2 and 5) and one Iron Age livestock enclosure (Site 6). The historical sites are probably associated with a late 19th and early 20th phase of occupation as we know the Deed of Transfer of the farms was already awarded in the 1860 and 1870s. Site 5 seems to be an earlier farm house. Subsequent farm houses were possible added later as the occupation footprint of the owner expanded.

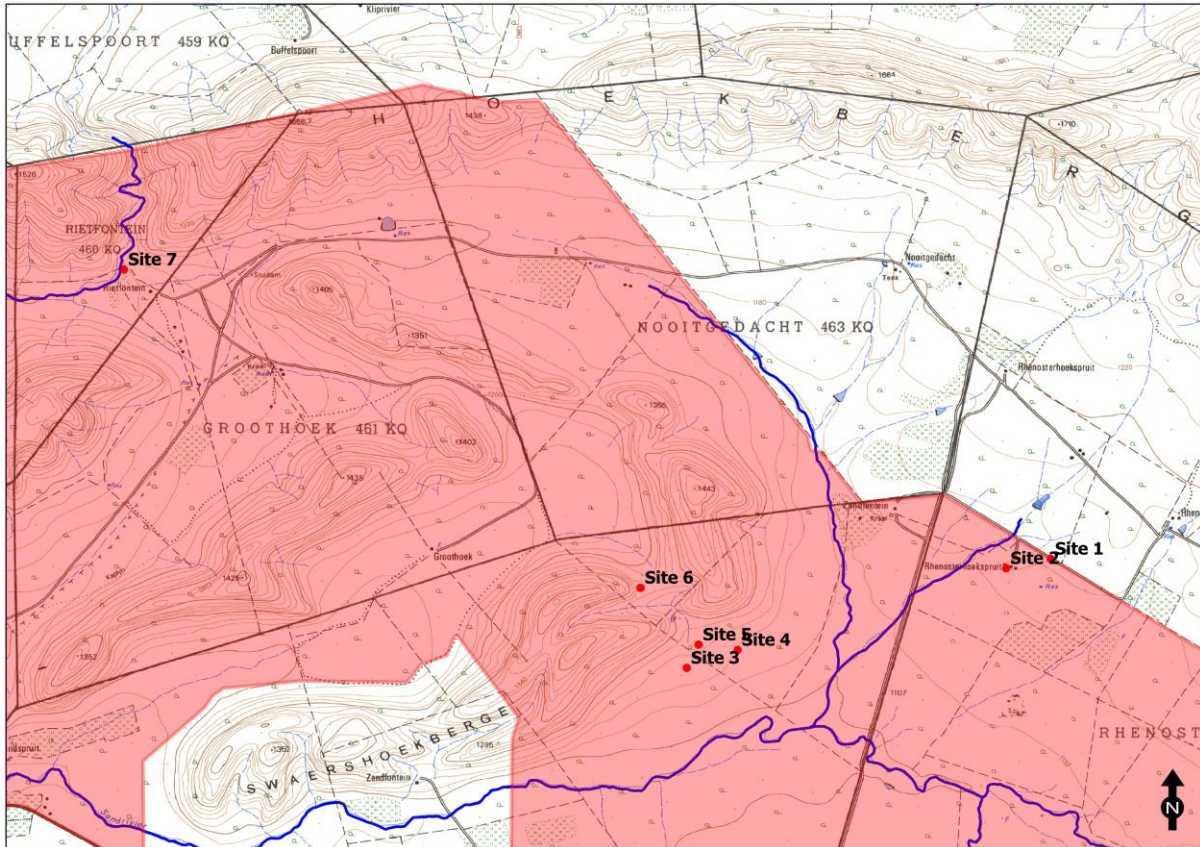
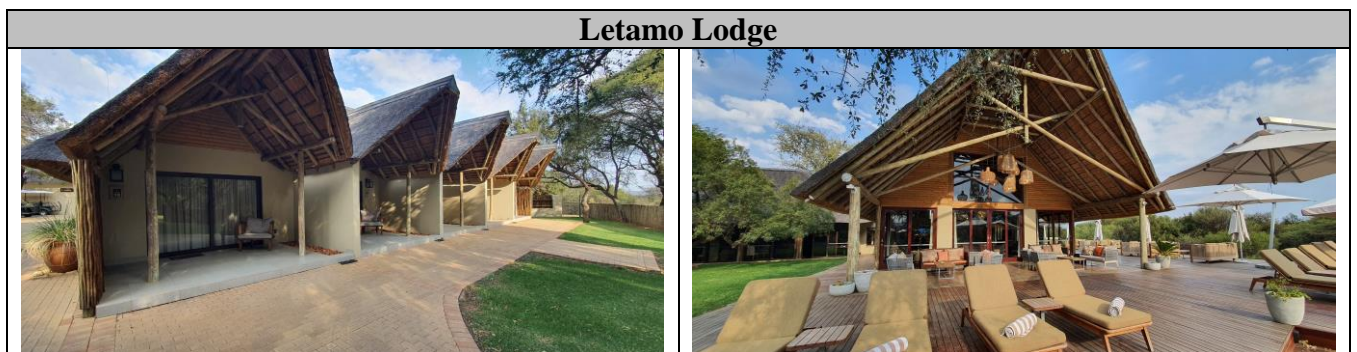


Figure 30: Location of the heritage sites within the survey footprint

8. Locations and Evaluation of Sites

During the retrospective assessment of the potential impact of the existing developments consisting of lodges, roads, dams, fences, river crossing, support staff accommodation, workshops and manager houses, no indication was that cultural heritage remains were damaged or destroyed. A number of houses and structures were upgraded (modernised) to accommodate management staff and families. Case in point is the Post Office building that probably dated to the early 20th century, but which has been altered to serve as a dedicated space for modern living. Various dams were investigated with the emphasis on the dam wall and associated roads to access possible impact on heritage remains. As such, in all instances no indications were found of damaged or destroyed heritage structures or features.

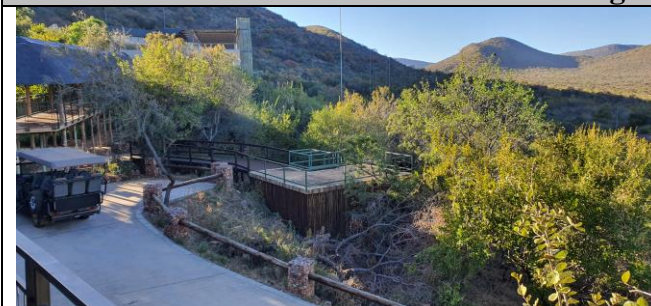




Junior and Senior Staff Housing: Letamo



Babohi Lodge and Staff Building





Workshop and GM Housing



Shooting Range (Rehabilitated)



Babohi Helipad



Lodge Dam and Mvubu Dam



Letamo Helipad



River Crossings



Kloof Dam and Hippo Dam



Post office house



Admin building



Contractors Camp

Note that during the survey a total of seven heritage sites were recorded within the boundaries of the Game reserve. However, the location of the sites fall well outside any impact zone of the existing infrastructure developments.

Site No	Coordinates	Site Type	Field Rating of Significance	Impact	Proposed Mitigation
1	24.630403°S 27.898201°E	Beukes Family Graveyard	Generally Protected A High significance	None	• Maintain 50 m buffer zone
2	24.631428°S 27.893351°E	Family farmhouse	Generally Protected C Low significance	None	• Maintain 50 m buffer zone
3	24.642262°S 27.858596°E	Graveyard	Generally Protected A High significance	None	• Maintain 50 m buffer zone
4	24.640307°S 27.864131°E	Grave	Generally Protected A High significance	None	• Maintain 50 m buffer zone
5	24.639728°S 27.859884°E	Foundation of historical farm house	Generally Protected C Low significance	None	• Maintain 50 m buffer zone
6	24.633550°S 27.853573°E	Late Iron Age Livestock enclosures	Generally Protected C Low significance	None	• Maintain 50 m buffer zone
7	24.598957°S 27.797366°E	Graveyard	Generally Protected A High significance	None	• Maintain 50 m buffer zone

9. Management Measures

Heritage sites are fixed features in the environment, occurring within specific spatial confines. Any impact upon them is permanent and non-reversible. Those resources that cannot be avoided and that are directly impacted by the proposed development can be excavated/recorded and a management plan can be developed for future action. Those sites that are not impacted on can be written into the management plan, whence they can be avoided or cared for in the future.

9.1 Objectives

- Protection of archaeological, historical and any other site or land considered being of cultural value within the project boundary against vandalism, destruction and theft.

- The preservation and appropriate management of new discoveries in accordance with the NHRA, should these be discovered during construction activities

The following shall apply:

- Known sites should be clearly marked in order that they can be avoided during construction activities.
- The contractors and workers should be notified that archaeological sites might be exposed during the construction activities.
- Should any heritage artefacts be exposed during excavation, work on the area where the artefacts were discovered, shall cease immediately and the Environmental Control Officer shall be notified as soon as possible;
- All discoveries shall be reported immediately to a heritage practitioner so that an investigation and evaluation of the finds can be made. Acting upon advice from these specialists, the Environmental Control Officer will advise the necessary actions to be taken;
- Under no circumstances shall any artefacts be removed, destroyed or interfered with by anyone on the site; and
- Contractors and workers shall be advised of the penalties associated with the unlawful removal of cultural, historical, archaeological or palaeontological artefacts, as set out in the NHRA (Act No. 25 of 1999), Section 51. (1).

9.2 Control

In order to achieve this, the following should be in place:

- A person or entity, e.g. the Environmental Control Officer, should be tasked to take responsibility for the heritage sites and should be held accountable for any damage.
- Known sites should be located and isolated, e.g. by fencing them off. All construction workers should be informed that these are no-go areas, unless accompanied by the individual or persons representing the Environmental Control Officer as identified above.
- In areas where the vegetation is threatening the heritage sites, e.g. growing trees pushing walls over, it should be removed, but only after permission for the methods proposed has been granted by SAHRA. A heritage official should be part of the team executing these measures.

10. Recommendations and Conclusions

No archaeological (both Stone Age and Iron Age) or historical artefacts, assemblages, features, structures or settlements were recorded during the survey at the locations of the various existing developments.

Based on the assessment, from a heritage perspective, no archaeological or historical remains were impacted on during the developmental phase of the existing infrastructure, however, care should be taken not to cause any future impact on cultural heritage remains that might still exist in the region. As such, no re-active mitigation measures are required.

Also, please note:

Archaeological deposits usually occur below ground level. Should archaeological artefacts or skeletal material be revealed in the area during development activities, such activities should

be halted, and a university or museum notified in order for an investigation and evaluation of the find(s) to take place (*cf.* NHRA (Act No. 25 of 1999), Section 36 (6)).

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Addendum 1: Archaeological and Historical Sequence

The table provides a general overview of the chronological sequence of the archaeological periods in South Africa.

PERIOD	APPROXIMATE DATES
Earlier Stone Age	more than 2 million years ago to >200 000 years ago
Middle Stone Age	<300 000 years ago to >20 000 years ago
Later Stone Age (Includes hunter-gatherer rock art)	<40 000 years ago up to historical times in certain areas
Early Iron Age	c. AD 200 - c. AD 900
Middle Iron Age	c. AD 900 – c. AD 1300
Late Iron Age (Stonewalled sites)	c. AD 1300 - c. AD 1840 (c. AD 1640 - c. AD 1840)

< = less than; > = greater than

Archaeological Context

Stone Age Sequence

Concentrations of Early Stone Age (ESA) sites are usually present on the flood-plains of perennial rivers and may date to over 2 million years ago. These ESA open sites may contain scatters of stone tools and manufacturing debris and secondly, large concentrated deposits ranging from pebble tool choppers to core tools such as handaxes and cleavers. The earliest hominins who made these stone tools, probably not always actively hunted, instead relying on the opportunistic scavenging of meat from carnivore kill sites.

Middle Stone Age (MSA) sites also occur on flood plains, but are also associated with caves and rock shelters (overhangs). Sites usually consist of large concentrations of knapped stone flakes such as scrapers, points and blades and associated manufacturing debris. Tools may have been hafted but organic materials, such as those used in hafting, seldom preserve. Limited drive-hunting activities are also associated with this period.

Sites dating to the Later Stone Age (LSA) are better preserved in rock shelters, although open sites with scatters of mainly stone tools can occur. Well-protected deposits in shelters allow for stable conditions that result in the preservation of organic materials such as wood, bone, hearths, ostrich eggshell beads and even bedding material. By using San (Bushman) ethnographic data a better understanding of this period is possible. South African rock art is also associated with the LSA.

The following chronological sequence was recently established by prominent Stone Age archaeologists (Lombard et al 2012):

Later Stone Age

- Age Range: recent to 20-40 thousand years ago
 - General characteristics: expect variability between assemblages, a wide range of formal tools, particularly scrapers (microlithic and macrolithic), backed artefacts, evidence of hafted stone and bone tools, borers, bored stones, upper and lower grindstones, grooved stones, ostrich eggshell (OES) beads and other ornaments, undecorated/decorated OES fragments, flasks/flask fragments, bone tools (sometimes with decoration), fishing equipment, rock art, and ceramics in the final phase.
- **Ceramic or Final Later Stone Age**
 - Generally < 2 thousand years ago
 - MIS 1
 - Contemporaneous with, and broadly similar to, final Later Stone Age, but includes ceramics
 - Economy may be associated with hunter-gatherers or herders

Technological characteristics

- Stone tool assemblages are often microlithic
 - In some areas they are dominated by long end scrapers and few backed microliths; in others formal tools are absent or rare
 - Grindstones are common, ground stone artefacts, stone bowls and boat-shaped grinding grooves may occur
 - Includes grit- or grass-tempered pottery
 - Ceramics can be coarse, or well-fired and thin-walled; some times with lugs, spouts and conical bases; sometimes with decoration; sometimes shaped as bowls
 - Ochre is common
 - Ostrich eggshell (OES) is common
 - Metal objects, glass beads and glass artefacts also occur
- **Final Later Stone Age**
 - 100 – 4000 years ago
 - MIS 1
 - Hunter-gatherer economy

Technological characteristics

- Much variability can be expected
 - Variants include macrolithic (similar to Smithfield [Sampson 1974]) and/or microlithic (similar to Wilton) assemblages
 - Assemblages are mostly informal (Smithfield)
 - Often characterised by large untrimmed flakes (Smithfield)
 - Sometimes microlithic with scrapers, blades and bladelets, backed tools and adzes (Wilton-like)
 - Worked bone is common
 - OES is common
 - Ochre is common
 - Iron objects are rare
 - Ceramics are absent
- **Wilton**

- 4000 – 8000 years ago
- MIS 1
- At some sites continues into the final Later Stone Age as regional variants (e.g. Wilton Large Rock Shelter and Cave James)

Technological characteristics

- Fully developed microlithic tradition with numerous formal tools
 - Highly standardised backed microliths and small convex scrapers (for definition of standardisation see Eerkens & Bettinger 2001)
 - OES is common
 - Ochre is common
 - Bone, shell and wooden artefacts occur
- **Oakhurst**
 - 7000 – 12 000 years ago
 - MIS 1
 - Includes Albany, Lockshoek and Kuruman as regional variants

Technological characteristics

- Flake based industry
 - Characterised by round, end, and D-shaped scrapers and adzes
 - Wide range of polished bone tools
 - Few or no microliths
- **Robberg**
 - 12 000 to 18 000 years ago
 - MIS 2

Technological characteristics

- Characterised by systematic bladelet (<26mm) production and the occurrence of outils ecailles or scaled pieces
 - Significant numbers of unretouched bladelets and bladelet cores
 - Few formal tools
 - Some sites have significant macrolithic elements
- **Early Late Stone Age**
 - 18 000 – 40 000 years ago
 - MIS 2-3
 - Informal designation
 - Also known as transitional MSA-LSA
 - Overlapping in time with final Middle Stone Age

Technological Characteristics

- Characterised by unstandardised, often microlithic, pieces and includes the bipolar technique
- Described at some sites, but not always clear whether assemblages represent a real archaeological phase or a mixture of LSA/MSA artefacts

Middle Stone Age

- Age Range: 20 000 – 30 000 years ago
- General characteristics: Levallois or prepared core techniques (for definitions see Van Peer 1992; Boeda 1995; Pleurdeau 2005) occur in which triangular flakes with convergent dorsal scars, often with faceted striking platforms, are produced. Discoidal systems (for definition see Inizan et al. 1999) and intentional blade production from volumetric cores (for definition see Pleurdeau 2005) also occur; formal tools may include unifacially and bifacially retouched points, backed artefacts, scrapers, and denticulates (for definition see Bisson 2000); evidence of hafted tools; occasionally includes marine shell beads, bone points, engraved ochre nodules, engraved OES fragments, engraved bone fragments, and grindstones.
- In the sequence below we highlight differences or characteristics that may be used to refine interpretations depending on context.
- **Final Middle Stone Age**
 - 20 000 – 40 000 years ago
 - MIS 3
 - Informal designation partly based on the Sibudu sequence

Technological characteristics

- Characterised by high regional variability that may include, e.g. bifacial tools, bifacially retouched points, hollow-based points
- Triangular flake and blade industries (similar to Strathalan and Melikane)
- Small bifacial and unifacial points (similar to Sibudu and Rose Cottage Cave)
- Sibudu point characteristics: short, stout, lighter in mass compared to points from the Sibudu technocomplex, but heavier than those from the Still Bay
- Can be microlithic
- Can include bipolar technology
- Could include backed geometric shapes such as segments, as well as side scrapers

Sibudu

- 45 000 – 58 000 years ago
- MIS 3
- Previously published as informal late Middle Stone Age and post-Howieson's Poort at Sibudu
- Formerly known post-Howieson's Poort, MSA 3 generally, and MSA III at Klasies River

Technological characteristics

- Most points are produced using Levallois technique
- Most formal retouch aimed at producing unifacial points
- Sibudu unifacial point (type fossil) characteristics: faceted platform; shape is somewhat elongated with a mean length of 43.9 mm), a mean breadth of 26.8 mm and mean thickness of 8.8 mm (L/B ratio 1.7); their mean mass is 11.8 g (Mohapi, 2012)
- Some plain butts
- Rare bifacially retouched points
- Some side scrapers are present
- Backed pieces are rare

- **Howieson's Poort**

- 58 000 – 66 000 years ago
- MIS 3-4

- **Technological characteristics**

- Characterised by blade technology
- Includes small (<4 cm) backed tools, e.g. segments, scrapers, trapezes and backed blades
- Some denticulate blades
- Pointed forms are rare or absent

- **Still Bay**

- 70 000 – 77 000 years ago
- MIS 4-5a

- **Technological characteristics**

- Characterised by thin (<10 mm), bifacially worked foliate or lanceolate points
- Semi-circular or wide-angled pointed butts
- Could include blades and finely serrated points (Lombard et al. 2010)

- **Pre-Still Bay**

- 72 000 – 96 000 years ago
- MIS 4-5

- **Technological characteristics**

- Characteristics currently being determined / studied

- **Mossel Bay**

- 77 000 to —105 000 years ago
- MIS 5a-4
- Also known as MSA II at Klasies River or MSA 2b generally

- **Technological characteristics**

- Characterised by recurrent unipolar Levallois point and blade reduction
- Products have straight profiles; percussion bulbs are prominent and often splintered or ring-cracked
- Formal retouch is infrequent and restricted to sharpening the tip or shaping the butt

- **Klasies River**

- 105 000 to —130 000 years ago
- MIS 5d-5e
- Also referred to as MSA I at Klasies River or MSA 2a generally

- **Technological characteristics**

- Recurrent blade and convergent flake production
- End products are elongated and relatively thin, often with curved profiles
- Platforms are often small with diffused bulbs
- Low frequencies of retouch
- Denticulate pieces

- **Early Middle Stone Age**
 - Suggested age MIS 6 to MIS 8 (130 000 to —300 000 years ago)
 - Informal designation

Technological characteristics

- This phase needs future clarification regarding the designation of cultural material and sequencing
- Includes discoidal and Levallois flake technologies, blades from volumetric cores and a generalised toolkit

- **Earlier Stone Age**

- Age range: >200 000 to 2 000 000 years ago
- General characteristics: early stages include simple flakes struck from cobbles, core and pebble tools; later stages include intentionally shaped handaxes, cleavers and picks; final or transitional stages have tools that are smaller than the preceding stages and include large blades.
- In the sequence below we highlight differences or characteristics that may be used to refine interpretations depending on context.

- **ESA-MSA transition**

- 200 to —600 thousand years ago
- MIS 7-15

Technological characteristics

- Described at some sites as Fauresmith or Sangoan
- Relationships, descriptions, issues of mixing and ages yet to be clarified
- Fauresmith assemblages have large blades, points, Levallois technology, and the remaining ESA components have small bifaces
- The Sangoan contains small bifaces (<100 mm), picks, heavy and light-duty denticulated and notched scrapers
- The Sangoan is less well described than the Fauresmith

- **Acheulean**

- 300 thousand to —1.5 million years ago
- MIS 8-50

Technological characteristics

- Bifacially worked handaxes and cleavers, large flakes > 10 cm
- Some flakes with deliberate retouch, sometimes classified as scrapers
- Gives impression of being deliberately shaped, but could indicate result of knapping strategy
- Sometimes shows core preparation
- Generally found in disturbed open-air locations

- **Oldowan**

- 1.5 to >2 million years ago
- MIS 50-75

Most of the early farmers in the Waterberg were employed by the Company and they early on also started operating trade stores and they were therefore instrumental in establishing an extensive trade network in the region. However, tragedy struck in 1895 with the outbreak of rinderpest which killed thousands of head of cattle in the region. Most of these cattle ranches were closed down by the Company. Arthur lost his managership but could still lease his farm. Most of these early farmsteads were mud-walled and thatched structures (Hunter 2010:28).



Figure 33: Early life on farms in the Waterberg region (after Hunter 2010)



Figure 34: Arthur Peacock and his wife Katherine and her sisters Edith and Molly and Ted Davidson (after Hunter 2010)




Figure 35: Trade routes and shops in the region (after Hunter 2010)

Addendum 2: Description of the Recorded Sites

A system for grading the significance of heritage sites was established by the NHRA (Act No. 25 of 1999) and further developed by the South African Heritage Resources Agency (SAHRA 2007) and has been approved by ASAPA for use in southern Africa and was utilised during this assessment.

Site 1

A. GENERAL SITE DESCRIPTION				
Site type	Family graveyard			
Site Period	Early to mid 20 th century			
Physical description	The site comprises a family graveyard of the Beukes family. They were the previous owners of the farm Rhenosterhoekspuit 466 KQ and occupied the farm for several generations. All the graves have an east-west orientation with the headstone on the western side and demarcated with granite headstones and bases. The graveyard is currently fenced off.			
Integrity of deposits or structures	Stable			
Site extent	10 m x 10 m			
B. SITE EVALUATION				
B1. HERITAGE VALUE			Yes	No
Historic Value				
It has importance to the community or pattern of South Africa's history or precolonial history.				X
It has strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa.				X
It has significance relating to the history of slavery in South Africa.				X
Aesthetic Value				
It has importance in exhibiting particular aesthetic characteristics valued by a particular community or cultural group.				X
Scientific Value				
It has potential to yield information that will contribute to an understanding of South Africa's natural and cultural heritage.				X
It has importance in demonstrating a high degree of creative or technical achievement at a particular period.				X
It has importance to the wider understanding of the temporal change of cultural landscapes, settlement patterns and human occupation.				X
Social Value				
It has strong or special association with a particular community or cultural group for social, cultural or spiritual reasons (sense of place).				X
Tourism Value				
It has significance through its contribution towards the promotion of a local sociocultural identity and can be developed as tourist destination.				X
Rarity Value				
It possesses unique, uncommon, rare or endangered aspects of South Africa's natural or cultural heritage.				X
Representative Value				
It is importance in demonstrating the principle characteristics of a particular class of South Africa's natural or cultural places or objects.				X
B2. REGIONAL CONTEXT				
Other similar sites in the regional landscape.			X	
C. SPHERE OF SIGNIFICANCE		High	Medium	Low
International				X
National			X	
Provincial			X	
Local		X		

Specific community	X		
D. FIELD REGISTER RATING			
National/Grade 1 [should be registered, retained]			
Provincial/Grade 2 [should be registered, retained]			
Local/Grade 3A [should be registered, mitigation not advised]			
Local/Grade 3B [High significance; mitigation, partly retained]			
Generally Protected A [High/Medium significance, mitigation]			X
Generally protected B [Medium significance, to be recorded]			
Generally Protected C [Low significance, no further action]			
E. GENERAL STATEMENT OF SITE SIGNIFICANCE			
Low			
Medium			
High			X
F. RATING OF POTENTIAL IMPACT OF DEVELOPMENT			
None			X
Peripheral			
Destruction			
Uncertain			
G. RECOMMENDED MITIGATION			
<ul style="list-style-type: none"> Maintain a buffer zone of 50 metres 			
H. APPLICABLE LEGISLATION AND LEGAL REQUIREMENTS			
<ul style="list-style-type: none"> National Heritage Resources Act (Act No. 25 of 1999, Section 36) Regulations Relating to the Management of Human Remains, in terms of the National Health Act No. 61 of 2003 Removal of Graves and Dead Bodies Ordinance (Ordinance No. 7 of 1925) Ordinance on Exhumations (Ordinance No. 12 of 1980) Local and regional provisions, laws and by-laws 			
I. PHOTOGRAPHS			
			
<p>Figure 36: The graveyard of the Beukes family</p>			

Site 2

A. GENERAL SITE DESCRIPTION	
Site type	Historical farmhouse Complex
Site Period	Early 20 th century
Physical description	The site comprises a farmhouse and associated outbuildings. The main farmhouse is a face-brick multi-room structure with a standing tiled roof. One of the sheds is constructed with dressed ferricrete stones and has a corrugated iron roof. Several other structures are in association, however no midden was recorded at the site.

Integrity of deposits or structures	Stable			
Site extent	40 x 30 metres			
B. SITE EVALUATION				
B1. HERITAGE VALUE			Yes	No
Historic Value				
It has importance to the community or pattern of South Africa's history or precolonial history.				X
It has strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa.				X
It has significance relating to the history of slavery in South Africa.				X
Aesthetic Value				
It has importance in exhibiting particular aesthetic characteristics valued by a particular community or cultural group.				X
Scientific Value				
It has potential to yield information that will contribute to an understanding of South Africa's natural and cultural heritage.				X
It has importance in demonstrating a high degree of creative or technical achievement at a particular period.				X
It has importance to the wider understanding of the temporal change of cultural landscapes, settlement patterns and human occupation.				X
Social Value				
It has strong or special association with a particular community or cultural group for social, cultural or spiritual reasons (sense of place).				X
Tourism Value				
It has significance through its contribution towards the promotion of a local sociocultural identity and can be developed as tourist destination.				X
Rarity Value				
It possesses unique, uncommon, rare or endangered aspects of South Africa's natural or cultural heritage.				X
Representative Value				
It is importance in demonstrating the principle characteristics of a particular class of South Africa's natural or cultural places or objects.				X
B2. REGIONAL CONTEXT				
Other similar sites in the regional landscape.			X	
C. SPHERE OF SIGNIFICANCE		High	Medium	Low
International				X
National				X
Provincial				X
Local				X
Specific community				X
D. FIELD REGISTER RATING				
National/Grade 1 [should be registered, retained]				
Provincial/Grade 2 [should be registered, retained]				
Local/Grade 3A [should be registered, mitigation not advised]				
Local/Grade 3B [High significance; mitigation, partly retained]				
Generally Protected A [High/Medium significance, mitigation]				
Generally protected B [Medium significance, to be recorded]				
Generally Protected C [Low significance, no further action]				X
E. GENERAL STATEMENT OF SITE SIGNIFICANCE				
Low				X
Medium				
High				
F. RATING OF POTENTIAL IMPACT OF DEVELOPMENT				
None				X
Peripheral				
Destruction				
Uncertain				
G. RECOMMENDED MITIGATION				

- Maintain a buffer zone of 50 metres

H. APPLICABLE LEGISLATION AND LEGAL REQUIREMENTS

- National Heritage Resources Act (Act No. 25 of 1999, Section 34)

I. PHOTOGRAPHS



Figure 37: The main farmhouse building associated with the Beukes family



Figure 38: The shed constructed from dressed ferricrete rocks

Site 3

A. GENERAL SITE DESCRIPTION				
Site type	Graveyard			
Site Period	Early 20 th century			
Physical description	The site comprises a graveyard with at least two graves. The graves have an east-west orientation with the headstone on the western side. The graves are demarcated with cement bases and headstone. The following inscriptions were recorded: <ul style="list-style-type: none"> • Eva Ramushu (Died: 10/11/ 1932) • Z Ramushu (Died: 10/08/1916) 			
Integrity of deposits or structures	Stable			
Site extent	5x 3 metres			
B. SITE EVALUATION				
B1. HERITAGE VALUE			Yes	No
Historic Value				
It has importance to the community or pattern of South Africa's history or precolonial history.				X
It has strong or special association with the life or work of a person, group or organisation of				X

importance in the history of South Africa.			
It has significance relating to the history of slavery in South Africa.			X
Aesthetic Value			
It has importance in exhibiting particular aesthetic characteristics valued by a particular community or cultural group.			X
Scientific Value			
It has potential to yield information that will contribute to an understanding of South Africa's natural and cultural heritage.			X
It has importance in demonstrating a high degree of creative or technical achievement at a particular period.			X
It has importance to the wider understanding of the temporal change of cultural landscapes, settlement patterns and human occupation.			X
Social Value			
It has strong or special association with a particular community or cultural group for social, cultural or spiritual reasons (sense of place).			X
Tourism Value			
It has significance through its contribution towards the promotion of a local sociocultural identity and can be developed as tourist destination.			X
Rarity Value			
It possesses unique, uncommon, rare or endangered aspects of South Africa's natural or cultural heritage.			X
Representative Value			
It is importance in demonstrating the principle characteristics of a particular class of South Africa's natural or cultural places or objects.			X
B2. REGIONAL CONTEXT			
Other similar sites in the regional landscape.			X
C. SPHERE OF SIGNIFICANCE			
	High	Medium	Low
International			X
National		X	
Provincial		X	
Local	X		
Specific community	X		
D. FIELD REGISTER RATING			
National/Grade 1 [should be registered, retained]			
Provincial/Grade 2 [should be registered, retained]			
Local/Grade 3A [should be registered, mitigation not advised]			
Local/Grade 3B [High significance; mitigation, partly retained]			
Generally Protected A [High/Medium significance, mitigation]			X
Generally protected B [Medium significance, to be recorded]			
Generally Protected C [Low significance, no further action]			
E. GENERAL STATEMENT OF SITE SIGNIFICANCE			
Low			
Medium			
High			X
F. RATING OF POTENTIAL IMPACT OF DEVELOPMENT			
None			X
Peripheral			
Destruction			
Uncertain			
G. RECOMMENDED MITIGATION			
<ul style="list-style-type: none"> Maintain a buffer zone of 50 metres 			
H. APPLICABLE LEGISLATION AND LEGAL REQUIREMENTS			
<ul style="list-style-type: none"> National Heritage Resources Act (Act No. 25 of 1999, Section 36) Regulations Relating to the Management of Human Remains, in terms of the National Health Act No. 61 of 2003 Removal of Graves and Dead Bodies Ordinance (Ordinance No. 7 of 1925) Ordinance on Exhumations (Ordinance No. 12 of 1980) Local and regional provisions, laws and by-laws 			

I. PHOTOGRAPHS

Figure 39: The two graves demarcated with cement bases

Site 4

A. GENERAL SITE DESCRIPTION				
Site type	Grave			
Site Period	Early 20 th century			
Physical description	The site comprises a single grave. The graves have an east-west orientation with the headstone on the western side. The graves are demarcated with packed stone and a stone headstone. No inscriptions could be discerned.			
Integrity of deposits or structures	Stable			
Site extent	1.5 x 0.5 metres			
B. SITE EVALUATION				
B1. HERITAGE VALUE			Yes	No
Historic Value				
It has importance to the community or pattern of South Africa's history or precolonial history.				X
It has strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa.				X
It has significance relating to the history of slavery in South Africa.				X
Aesthetic Value				
It has importance in exhibiting particular aesthetic characteristics valued by a particular community or cultural group.				X
Scientific Value				
It has potential to yield information that will contribute to an understanding of South Africa's natural and cultural heritage.				X
It has importance in demonstrating a high degree of creative or technical achievement at a particular period.				X
It has importance to the wider understanding of the temporal change of cultural landscapes, settlement patterns and human occupation.				X
Social Value				
It has strong or special association with a particular community or cultural group for social, cultural or spiritual reasons (sense of place).				X
Tourism Value				
It has significance through its contribution towards the promotion of a local sociocultural identity and can be developed as tourist destination.				X
Rarity Value				
It possesses unique, uncommon, rare or endangered aspects of South Africa's natural or cultural heritage.				X

Representative Value			
It is importance in demonstrating the principle characteristics of a particular class of South Africa's natural or cultural places or objects.			X
B2. REGIONAL CONTEXT			
Other similar sites in the regional landscape.			X
C. SPHERE OF SIGNIFICANCE	High	Medium	Low
International			X
National		X	
Provincial		X	
Local	X		
Specific community	X		
D. FIELD REGISTER RATING			
National/Grade 1 [should be registered, retained]			
Provincial/Grade 2 [should be registered, retained]			
Local/Grade 3A [should be registered, mitigation not advised]			
Local/Grade 3B [High significance; mitigation, partly retained]			
Generally Protected A [High/Medium significance, mitigation]			X
Generally protected B [Medium significance, to be recorded]			
Generally Protected C [Low significance, no further action]			
E. GENERAL STATEMENT OF SITE SIGNIFICANCE			
Low			
Medium			
High			X
F. RATING OF POTENTIAL IMPACT OF DEVELOPMENT			
None			X
Peripheral			
Destruction			
Uncertain			
G. RECOMMENDED MITIGATION			
<ul style="list-style-type: none"> Maintain a buffer zone of 50 metres 			
H. APPLICABLE LEGISLATION AND LEGAL REQUIREMENTS			
<ul style="list-style-type: none"> National Heritage Resources Act (Act No. 25 of 1999, Section 36) Regulations Relating to the Management of Human Remains, in terms of the National Health Act No. 61 of 2003 Removal of Graves and Dead Bodies Ordinance (Ordinance No. 7 of 1925) Ordinance on Exhumations (Ordinance No. 12 of 1980) Local and regional provisions, laws and by-laws 			
I. PHOTOGRAPHS			



Figure 40: A single grave marked with packed stone and headstone

Site 5

A. GENERAL SITE DESCRIPTION			
Site type	Historical farmhouse		
Site Period	Late 19 th to early 20 th century		
Physical description	The site comprises the foundations of a farmhouse. The two-room house is demarcated with dressed sandstone boulders. The veranda is on the southern side of the house. No midden was recorded at the site.		
Integrity of deposits or structures	Unstable		
Site extent	8 x 11 metres		
B. SITE EVALUATION			
B1. HERITAGE VALUE		Yes	No
Historic Value			
It has importance to the community or pattern of South Africa's history or precolonial history.			X
It has strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa.			X
It has significance relating to the history of slavery in South Africa.			X
Aesthetic Value			
It has importance in exhibiting particular aesthetic characteristics valued by a particular community or cultural group.			X
Scientific Value			
It has potential to yield information that will contribute to an understanding of South Africa's natural and cultural heritage.			X
It has importance in demonstrating a high degree of creative or technical achievement at a			X


particular period.			
It has importance to the wider understanding of the temporal change of cultural landscapes, settlement patterns and human occupation.			X
Social Value			
It has strong or special association with a particular community or cultural group for social, cultural or spiritual reasons (sense of place).			X
Tourism Value			
It has significance through its contribution towards the promotion of a local sociocultural identity and can be developed as tourist destination.			X
Rarity Value			
It possesses unique, uncommon, rare or endangered aspects of South Africa's natural or cultural heritage.			X
Representative Value			
It is importance in demonstrating the principle characteristics of a particular class of South Africa's natural or cultural places or objects.			X
B2. REGIONAL CONTEXT			
Other similar sites in the regional landscape.		X	
C. SPHERE OF SIGNIFICANCE			
	High	Medium	Low
International			X
National			X
Provincial			X
Local			X
Specific community			X
D. FIELD REGISTER RATING			
National/Grade 1 [should be registered, retained]			
Provincial/Grade 2 [should be registered, retained]			
Local/Grade 3A [should be registered, mitigation not advised]			
Local/Grade 3B [High significance; mitigation, partly retained]			
Generally Protected A [High/Medium significance, mitigation]			
Generally protected B [Medium significance, to be recorded]			
Generally Protected C [Low significance, no further action]			X
E. GENERAL STATEMENT OF SITE SIGNIFICANCE			
Low			X
Medium			
High			
F. RATING OF POTENTIAL IMPACT OF DEVELOPMENT			
None			X
Peripheral			
Destruction			
Uncertain			
G. RECOMMENDED MITIGATION			
<ul style="list-style-type: none"> Maintain a buffer zone of 50 metres 			
H. APPLICABLE LEGISLATION AND LEGAL REQUIREMENTS			
<ul style="list-style-type: none"> National Heritage Resources Act (Act No. 25 of 1999, Section 34) 			
I. PHOTOGRAPHS			



Figure 41: The foundation of the historical farmhouse

Site 6


A. GENERAL SITE DESCRIPTION			
Site type	Late Iron Age		
Site Period	Early 19 th century		
Physical description	The site comprises a two livestock enclosures situated in a neck of two small hills. The larger enclosure is approximately 20 metres in diameter and the smaller enclosure roughly 12 metres in diameter. No other structures were recorded in association.		
Integrity of deposits or structures	Stable		
Site extent	35 x 40 metres		
B. SITE EVALUATION			
B1. HERITAGE VALUE		Yes	No
Historic Value			
It has importance to the community or pattern of South Africa's history or precolonial history.			X
It has strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa.			X
It has significance relating to the history of slavery in South Africa.			X
Aesthetic Value			
It has importance in exhibiting particular aesthetic characteristics valued by a particular community or cultural group.			X
Scientific Value			
It has potential to yield information that will contribute to an understanding of South Africa's natural and cultural heritage.			X
It has importance in demonstrating a high degree of creative or technical achievement at a particular period.			X
It has importance to the wider understanding of the temporal change of cultural landscapes, settlement patterns and human occupation.			X
Social Value			
It has strong or special association with a particular community or cultural group for social, cultural or spiritual reasons (sense of place).			X
Tourism Value			
It has significance through its contribution towards the promotion of a local sociocultural identity and can be developed as tourist destination.			X
Rarity Value			
It possesses unique, uncommon, rare or endangered aspects of South Africa's natural or cultural heritage.			X
Representative Value			
It is importance in demonstrating the principle characteristics of a particular class of South Africa's natural or cultural places or objects.			X

B2. REGIONAL CONTEXT			
Other similar sites in the regional landscape.			X
C. SPHERE OF SIGNIFICANCE	High	Medium	Low
International			X
National			X
Provincial			X
Local			X
Specific community			X
D. FIELD REGISTER RATING			
National/Grade 1 [should be registered, retained]			
Provincial/Grade 2 [should be registered, retained]			
Local/Grade 3A [should be registered, mitigation not advised]			
Local/Grade 3B [High significance; mitigation, partly retained]			
Generally Protected A [High/Medium significance, mitigation]			
Generally protected B [Medium significance, to be recorded]			
Generally Protected C [Low significance, no further action]			X
E. GENERAL STATEMENT OF SITE SIGNIFICANCE			
Low			X
Medium			
High			
F. RATING OF POTENTIAL IMPACT OF DEVELOPMENT			
None			X
Peripheral			
Destruction			
Uncertain			
G. RECOMMENDED MITIGATION			
<ul style="list-style-type: none"> Maintain a buffer zone of 50 metres 			
H. APPLICABLE LEGISLATION AND LEGAL REQUIREMENTS			
<ul style="list-style-type: none"> National Heritage Resources Act (Act No. 25 of 1999, Section 35) 			
I. PHOTOGRAPHS			
			
<p>Figure 42: The outer stone wall of the larger livestock enclosure</p>			

Site 7

A. GENERAL SITE DESCRIPTION	
Site type	Graveyard
Site Period	Early 20 th century
Physical description	The site comprises a graveyard with at least three graves. The graves have an east-west orientation with the headstone on the western side. The graves are demarcated with cement bases and headstone. The following inscriptions were recorded:

	<ul style="list-style-type: none"> • Johannes Petrus Helberg (Born: 17/12/1904; Died: 23 June 1906) • Oscar Justus Friedrich Hartung (Born: 27 February 1878; Died:26/01//1912) 			
Integrity of deposits or structures	Stable			
Site extent	10 x 10 metres			
B. SITE EVALUATION				
B1. HERITAGE VALUE			Yes	No
Historic Value				
It has importance to the community or pattern of South Africa's history or precolonial history.				X
It has strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa.				X
It has significance relating to the history of slavery in South Africa.				X
Aesthetic Value				
It has importance in exhibiting particular aesthetic characteristics valued by a particular community or cultural group.				X
Scientific Value				
It has potential to yield information that will contribute to an understanding of South Africa's natural and cultural heritage.				X
It has importance in demonstrating a high degree of creative or technical achievement at a particular period.				X
It has importance to the wider understanding of the temporal change of cultural landscapes, settlement patterns and human occupation.				X
Social Value				
It has strong or special association with a particular community or cultural group for social, cultural or spiritual reasons (sense of place).				X
Tourism Value				
It has significance through its contribution towards the promotion of a local sociocultural identity and can be developed as tourist destination.				X
Rarity Value				
It possesses unique, uncommon, rare or endangered aspects of South Africa's natural or cultural heritage.				X
Representative Value				
It is importance in demonstrating the principle characteristics of a particular class of South Africa's natural or cultural places or objects.				X
B2. REGIONAL CONTEXT				
Other similar sites in the regional landscape.				X
C. SPHERE OF SIGNIFICANCE		High	Medium	Low
International				X
National			X	
Provincial			X	
Local		X		
Specific community		X		
D. FIELD REGISTER RATING				
National/Grade 1 [should be registered, retained]				
Provincial/Grade 2 [should be registered, retained]				
Local/Grade 3A [should be registered, mitigation not advised]				
Local/Grade 3B [High significance; mitigation, partly retained]				
Generally Protected A [High/Medium significance, mitigation]				X
Generally protected B [Medium significance, to be recorded]				
Generally Protected C [Low significance, no further action]				
E. GENERAL STATEMENT OF SITE SIGNIFICANCE				
Low				
Medium				
High				X
F. RATING OF POTENTIAL IMPACT OF DEVELOPMENT				
None				X
Peripheral				
Destruction				

Uncertain	
G. RECOMMENDED MITIGATION	
<ul style="list-style-type: none">• Maintain a buffer zone of 50 metres	
H. APPLICABLE LEGISLATION AND LEGAL REQUIREMENTS	
<ul style="list-style-type: none">• National Heritage Resources Act (Act No. 25 of 1999, Section 36)• Regulations Relating to the Management of Human Remains, in terms of the National Health Act No. 61 of 2003• Removal of Graves and Dead Bodies Ordinance (Ordinance No. 7 of 1925)• Ordinance on Exhumations (Ordinance No. 12 of 1980)• Local and regional provisions, laws and by-laws	
I. PHOTOGRAPHS	
	
Figure 43: The three graves demarcated with cement bases	

Addendum 3: Surveyor General Farm Diagram

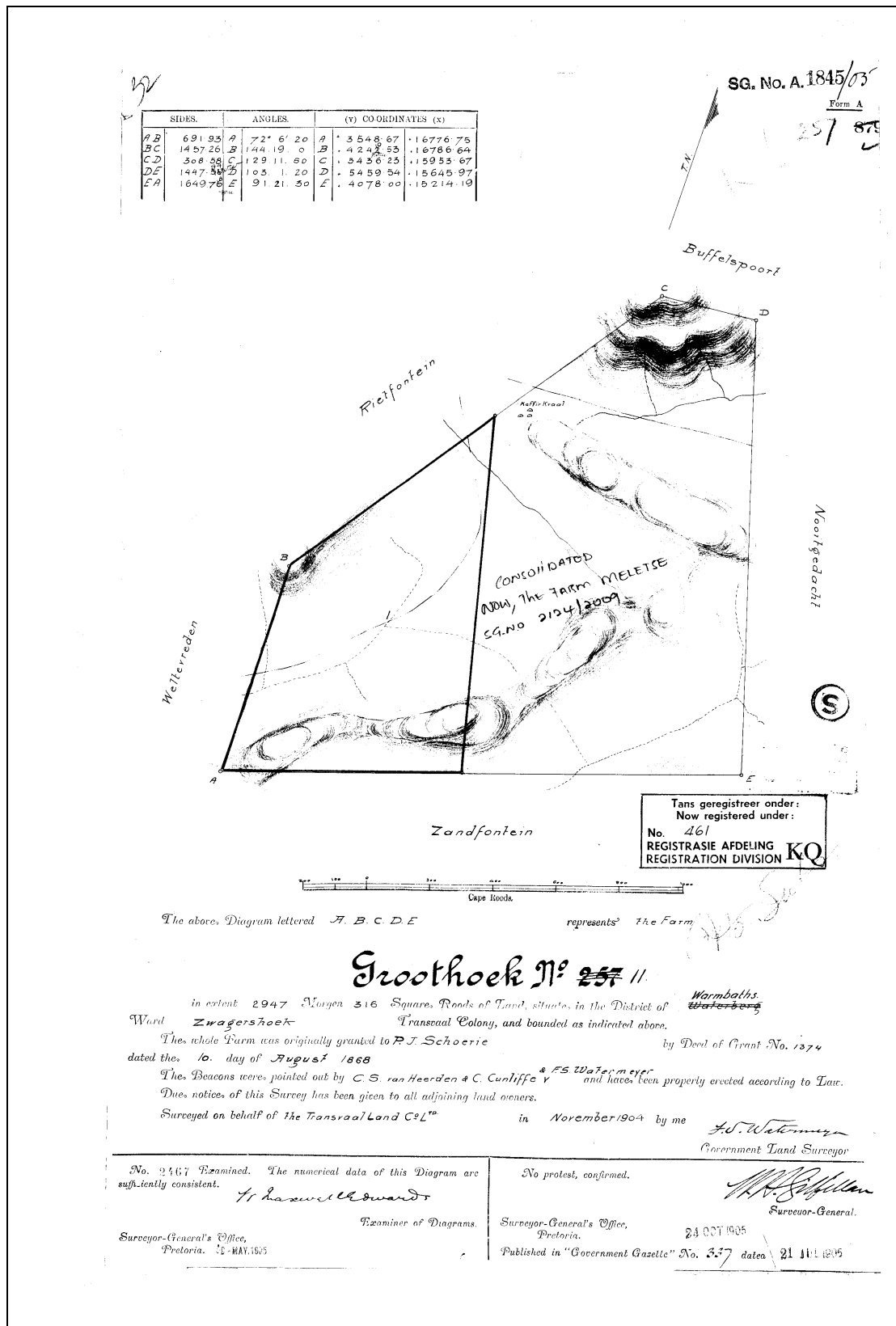


Figure 44: Surveyor General's sketch of the farm Groothoek 461 KQ which was first surveyed in 1904

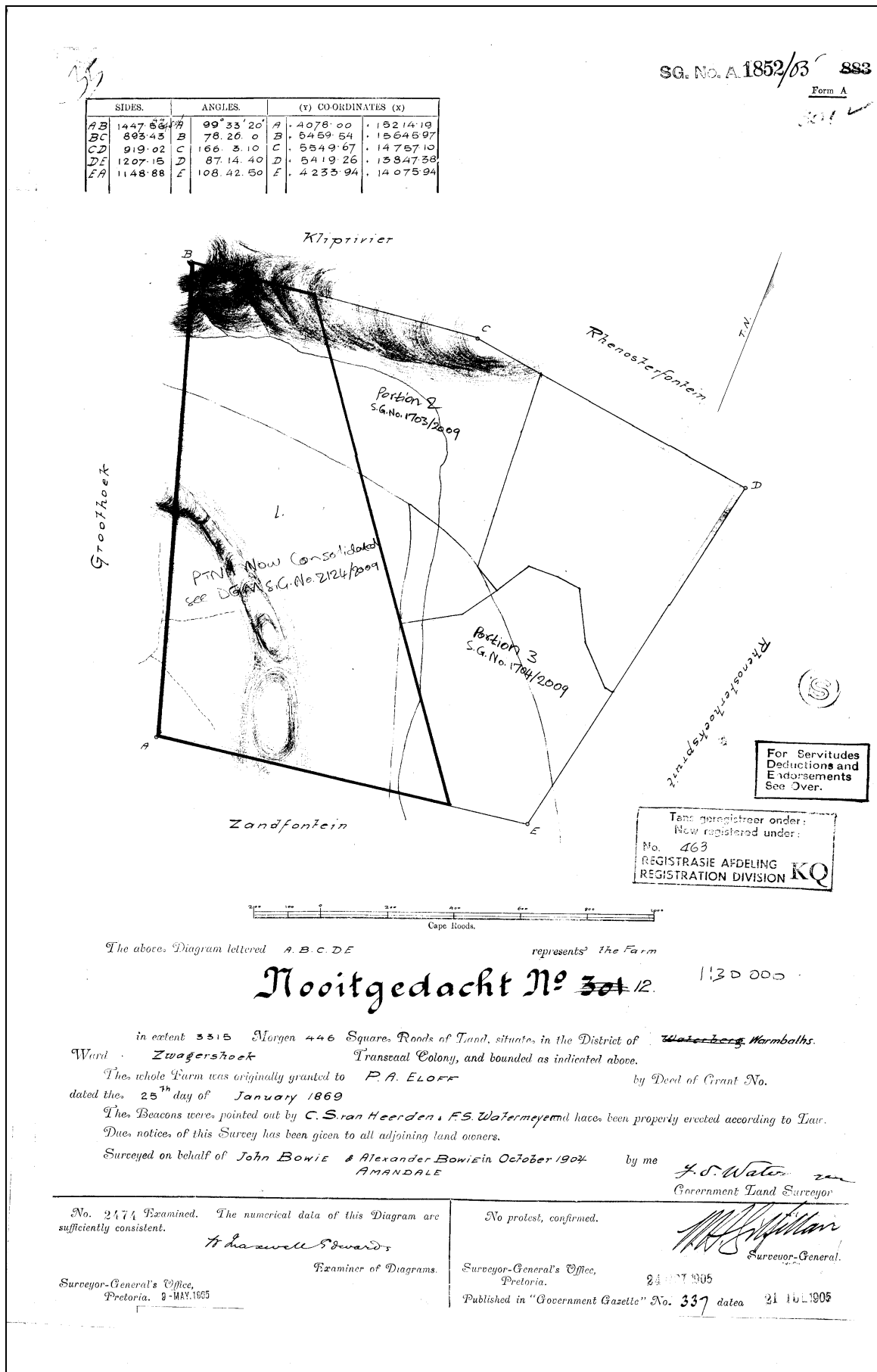


Figure 45: Surveyor General's sketch of the farm Nooitgedacht 463 KQ which was first surveyed in 1905

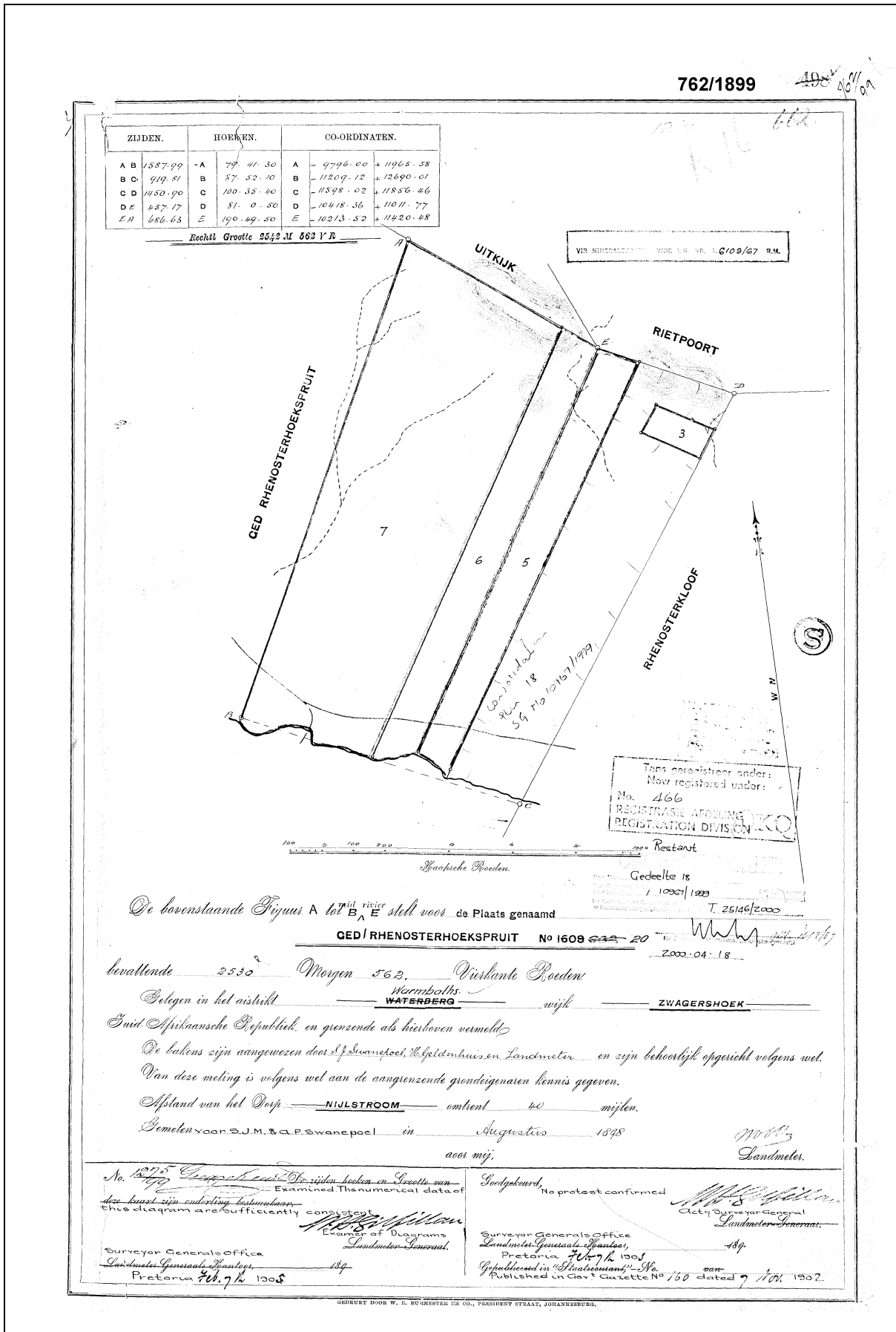


Figure 46: Surveyor General's sketch of the farm Rhenosterhoekspruit 466 KQ which was first surveyed in 1898

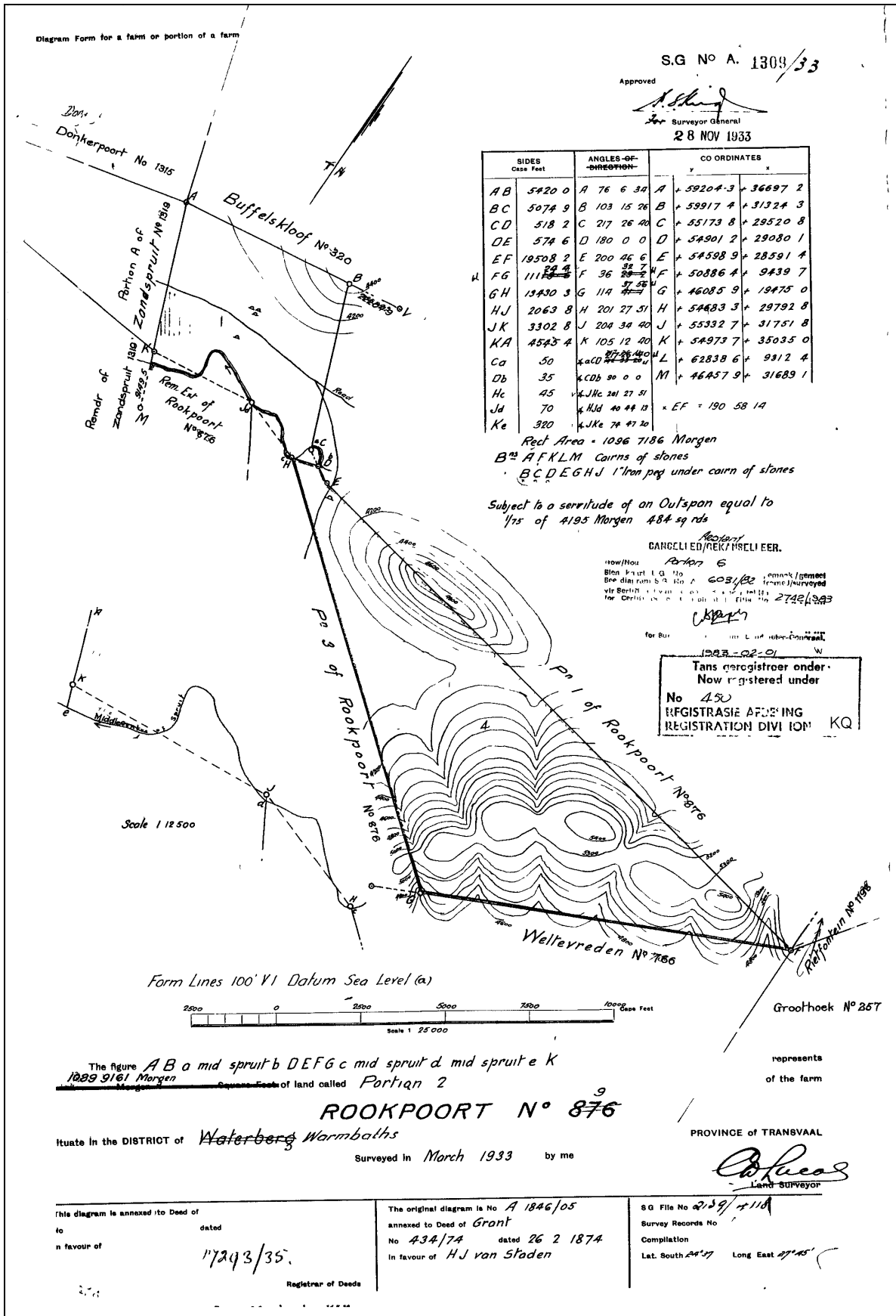


Figure 47: Surveyor General's sketch of the farm Rookpoort 450 KQ which was first surveyed in 1905

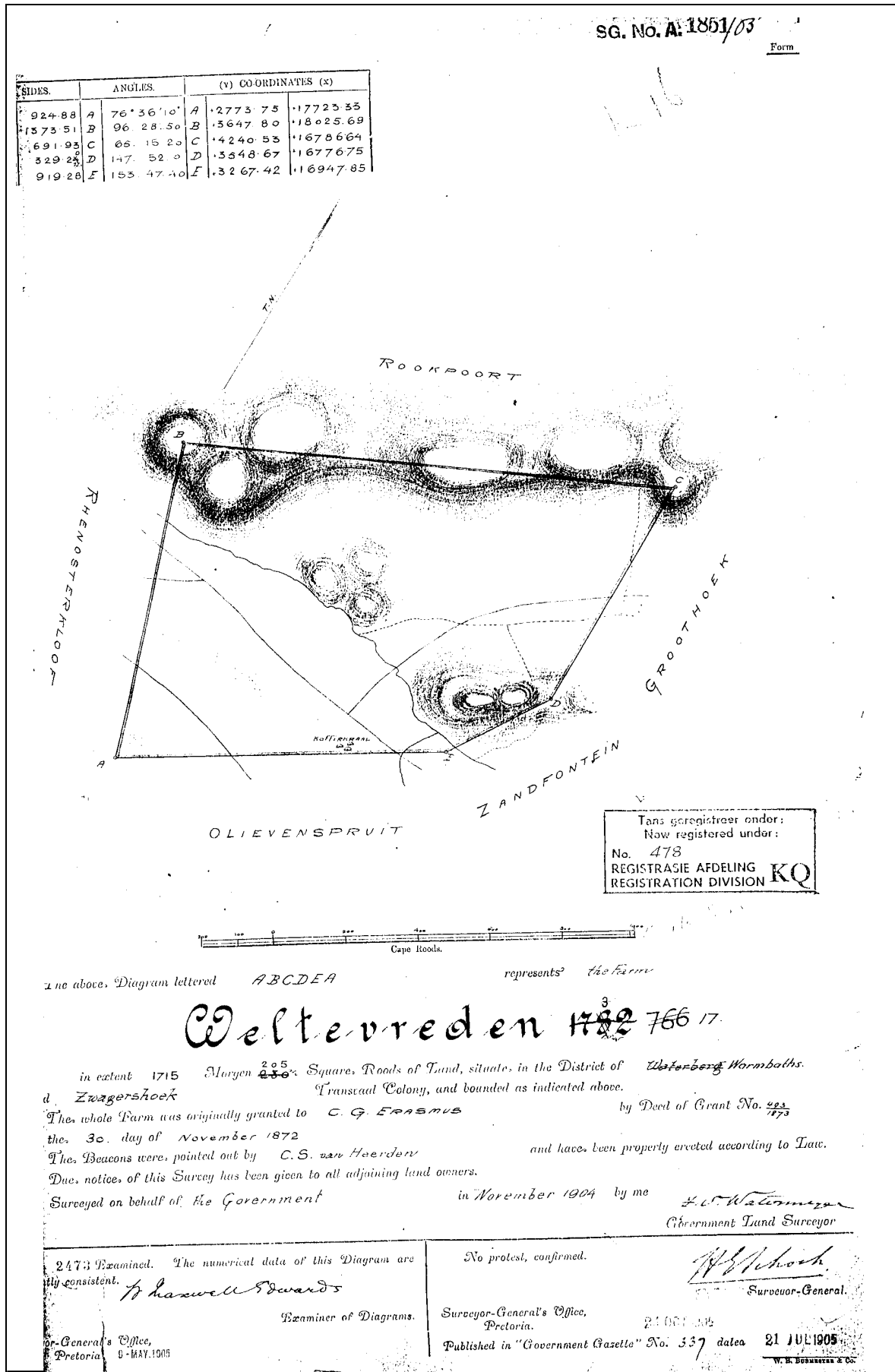


Figure 48: Surveyor General's sketch of the farm Weltevreden 478 KQ which was first surveyed in 1905

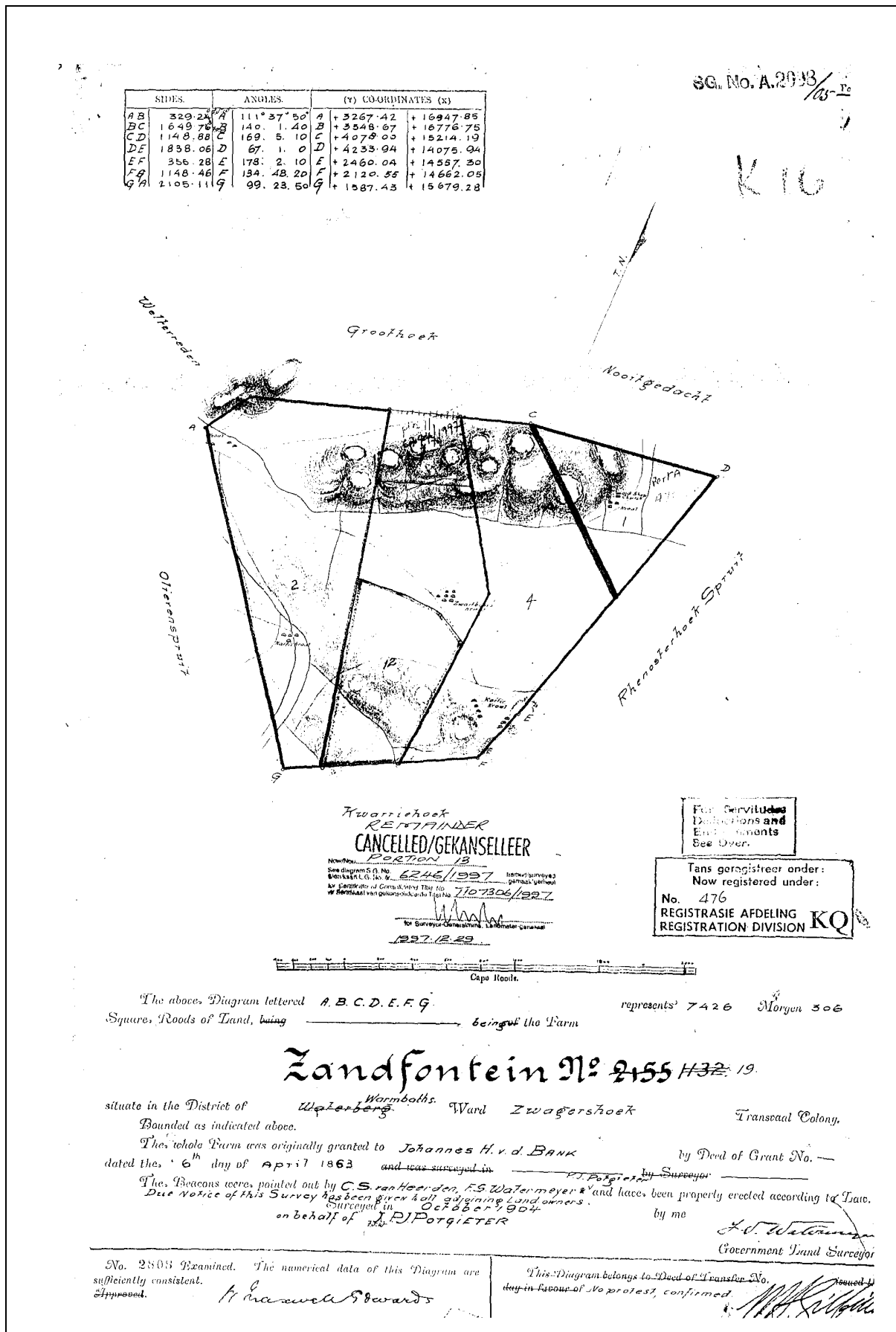


Figure 49: Surveyor General's sketch of the farm Zandfontein 476 KQ which was first surveyed in 1905

Addendum 4: Relocation of Graves

Marked graves younger than 60 years do not fall under the protection of the NHRA (Act No. 25 of 1999) with the result that exhumation, relocation and reburial can be conducted by an undertaker. This will include logistical aspects such as social consultation, purchasing of plots in cemeteries, procurement of coffins, etc. Other legislative measures which may be pertinent include the Removal of Graves and Dead Bodies Ordinance (Ordinance No. 7 of 1925), Regulations Relating to the Management of Human Remains (GNR 363 of 22 May 2013) made in terms of the National Health Act No. 61 of 2003, Ordinance on Exhumations (Ordinance No. 12 of 1980) as well as any local and regional provisions, laws and by-laws that may be in place.

Marked graves older than 60 years are protected by the NHRA (Act No. 25 of 1999) and as a result an archaeologist must be in attendance to assist with the exhumation and documentation of the graves. Note that unmarked graves are by default regarded as older than 60 years and therefore also falls under the NHRA (Act No. 25 of 1999, Section 36).

The relocation of graves entails the following procedure:

- Notices of intent to relocate the graves must be put up at the burial site for a period of 60 days. This should contain contact information where communities and family members can register as interested and affected parties. All information pertaining to the identification of the graves must be documented for the application of a SAHRA permit. All notices must be in at least 3 languages, of which English is one. This is a requirement by law.
- These notices of intention must also be placed in at least two local newspapers and have the same information as above.
- Local radio stations can also be used to try contact family members. This is not required by law, but can be helpful.
- During this time (60 days) a suitable cemetery must be identified near to the development or otherwise one specified by the family of the deceased.
- An open day for family members should be arranged after the period of 60 days so that they can gather to discuss the way forward, and to sort out any problems. The developer needs to take the families requirements into account.
- Once the 60 days have passed and all the information from the family members have been received, a permit can be requested from SAHRA. This is a requirement by law.
- Once the permit has been issued, the graves may be exhumed and relocated.
- All headstones must be relocated with the graves as well as any remains and any additional objects found in the grave.

Information needed for the SAHRA permit application

- The permit application must be done by an archaeologist.
- A map of the area where the graves have been located.
- A survey report of the area prepared by an archaeologist.
- All the information on the families that have identified graves.
- A letter of permission from the landowner granting permission to the developer to exhume and relocate the graves.

- A letter (or proof of purchase of the plots) from the new cemetery confirming that the graves will be reburied there.
- Details of the farm name and number, magisterial district and GPS coordinates of the gravesite.

Graves are generally be classified into four categories. These are:

- Graves younger than 60 years;
- Graves older than 60 years, but younger than 100 years;
- Graves older than 100 years; and
- Graves of victims of conflict or of individuals of royal descent.