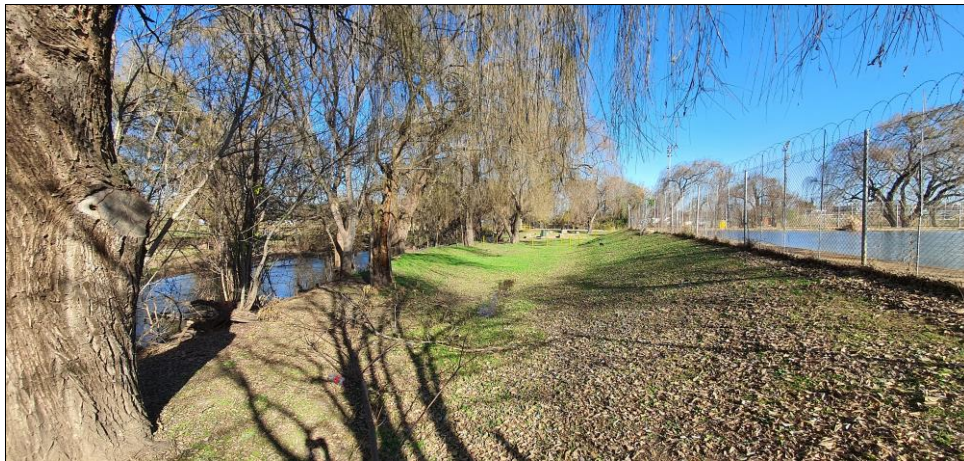


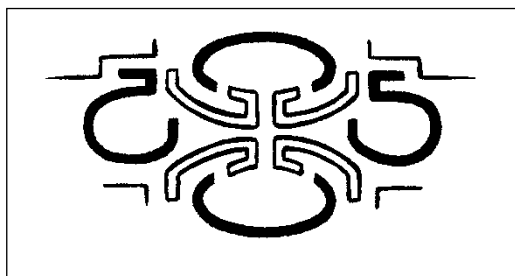
Cultural Heritage Impact Assessment:

Phase 1 Investigation for Proposed Construction of a new Concrete Bridge over the Mooi River, a Functional Overflow for the Retention Dam, a Wastewater Treatment Plant, Route NWU Sewer Usage Volume to the Treatment Plant and Upgrade the Existing Storm Water Canal (Concrete Culvert) on Portion 24 and Portion 412 of the Farm Potchefstroom Town and Townlands 435 IQ and Portion 1 of Erf 1302, JB Marks Local Municipality, Dr Kenneth Kaunda District Municipality, North West Province



For

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Date:	June 2023
Version:	1 (Final Draft)

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 Milnex CC. Milnex CC was contracted by North West University (NWU) as the independent environmental consultant to undertake an Environmental Authorisation Process for the proposed construction of a new concrete bridge over the Mooi River, a functional overflow for the retention dam, a wastewater treatment plant, route NWU sewer usage volume to the treatment plant and upgrade the existing storm water canal (concrete culvert) on Portion 24 and Portion 412 of the Farm Potchefstroom Town and Townlands 435 IQ and Portion 1 of Erf 1302, JB Marks Local Municipality, Dr Kenneth Kaunda District Municipality, North West Province. The development footprint is situated within the Fanie du Toit Sports Facility (NWU) which is located in Potchefstroom. The Environmental Authorisation for the proposed developments is conducted in terms of the National Environmental Management Act (Act No. 107 of 1998) (NEMA) and the EIA Regulations, 2014.

No historical or archaeological (both Stone Age and Iron Age) artefacts, assemblages, features, structures or settlements were recorded during the survey of the project footprint. It is, however, well known that historical buildings and structures associated with the South African War (1899 – 1902) and even Late Iron Age stone-walled settlements do generally occur in Potchefstroom and surrounds.

It is therefore recommended, from a cultural heritage perspective that the proposed infrastructure developments may proceed, and no 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
BAR:	Basic Assessment Report
EMPr:	Environmental Management Programme report
DMR:	Department of Mineral Resources
DEDECT:	Department of Economic Development, Environment, Conservation and Tourism
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.



Francois P Coetzee
Cultural Heritage Consultant
Accredited Archaeologist for the SADC Region
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1. Introduction and Terms of Reference

Milnex CC was contracted by North West University (NWU) as the independent environmental consultant to undertake an Environmental Authorisation Process for the proposed construction of a new concrete bridge over the Mooi River, a functional overflow for the retention dam, a wastewater treatment plant, route NWU sewer usage volume to the treatment plant and upgrade the existing storm water canal (concrete culvert) on Portion 24 and Portion 412 of the Farm Potchefstroom Town and Townlands 435 IQ and Portion 1 of Erf 1302, JB Marks Local Municipality, Dr Kenneth Kaunda District Municipality, North West Province. The development footprint is situated within the Fanie du Toit Sports Facility (NWU) which is located in Potchefstroom. The Environmental Authorisation for the proposed developments is conducted in terms of the National Environmental Management Act (Act No. 107 of 1998) (NEMA) and the EIA Regulations, 2014. A Cultural Heritage Impact Assessment (HIA) was requested by Milnex CC on behalf of the client to evaluate the potential impact of the proposed infrastructure developments.

2. Objectives

The general 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

The heritage survey footprint is situated within the NWU on the North West University Potchefstroom Campus at Fanie du Toit Sports grounds just north of the Potchefstroom CBD.

Farm Name(s) and Portions	<ul style="list-style-type: none"> • Potchefstroom Town and Townlands 435 IQ <ul style="list-style-type: none"> ○ Portion 24 ○ Portion 412 • Erf 1302 <ul style="list-style-type: none"> ○ Portion 1
Size of Survey Areas	Total survey area: 1.3 hectares
Magisterial District	JB Marks Local Municipality Dr Kenneth Kaunda District Municipality
1:50 000 Map Sheet	2627CA
1:250 000 Map Sheet	2626
Central Coordinates of the Development	27.102758°E 26.693749°S

Table 1: Physical Environment

The survey footprint falls within the Grassland Biome, particularly the Mesic Highveld Grassland Bioregion and more specifically the Rand Highveld Grassland (Gm 11). This vegetation type occurs in Gauteng, North West, Free State and Mpumalanga Provinces and in areas between rocky ridges from Pretoria to Witbank, extending onto ridges in the Stoffberg and Roossenekal regions as well as west of Krugersdorp centred in the vicinity of Derby and Potchefstroom, extending southwards and northeastwards from there (Mucina & Rutherford 2006).

The survey footprint is dominated by sport fields, tracks and associated infrastructure such as pavilions (stands), paved tracks and tarred roads. Various administration buildings are also situated throughout the area. The Mooi River transects the eastern boundary of the survey footprint, as well as a canal running perpendicular to the river.

Potchefstroom's climate is classified as warm and temperate. In winter, there is much less rainfall in Potchefstroom than in summer with the temperature averaging 17.8 °C. The least amount of rainfall occurs in July with an average of 4 mm. The most rainfall occurs in December with an average of 116 mm. Approximately 660 mm of precipitation falls annually.

Current Zoning	University sport grounds
Economic activities	Educational
Soil and basic geology	Dolomite and chert of the Malmani Subgroup (Transvaal Supergroup) supporting mostly shallow Mispah and Glenrosa soil forms typical of the Fa land type, dominating the landscapes of this unit. Deeper red to yellow apedal soils (Hutton and Clovelly forms) occur sporadically, representing the Ab land type. Aeolian and colluvial sand overlying sandstone, mudstone and shale of the Karoo Supergroup (mostly the Ecca Group) as well as older Ventersdorp Supergroup andesite and basement gneiss in the north. Soil forms are mostly Avalon, Westleigh and Clovelly.
Prior activities	Urban (built) environment
Socio Economic Environment	Ventersdorp Region consists of a vast rural / commercial farming area as well as the urban area of Ventersdorp, Tshing and Toevlug and has six villages namely Goedgevonden, Welgevonden, Tsetse, Ga-Magopa, Boikhutso and Boikhutsong. The North-West Province has close to 4.1 million inhabitants. Bojanala Platinum District comprise close to 47% of the total population of North West, Dr Keneth Kaunda DM (19%), Ngaka Modiri Molema DM (22%) and Dr Ruth Segomotsi Mompati DM (12%). Approximately 49,1% (2,0M) of the population in the North West is female and males 49.12%. Bojanala Platinum DM is the only district with a higher proportion of males. North West has close to 32% of children under 15 whilst Gauteng has the highest proportion of Youth and Adults (15-59). Around 47% of North West Population is considered poor based on the Lower Bound Poverty Line. (Money metric Poverty). 46,2% of Female headed households in North West do not have an employed household member. Most provinces are closer to the SA average for obtaining NSC, however still large disparity in obtaining post school qualifications by province, in the North West province 28.7% are able to obtain NSC/Grade 12 and 9.13% are able to obtain post school education. Grants remain a significant source of income for SA households, particularly in rural areas, 36% of household income is sourced from remittances and grants in North West.
Evaluation of Impact	An evaluation of the impact of the development on heritage resources

Table 2: Socio-economic environment

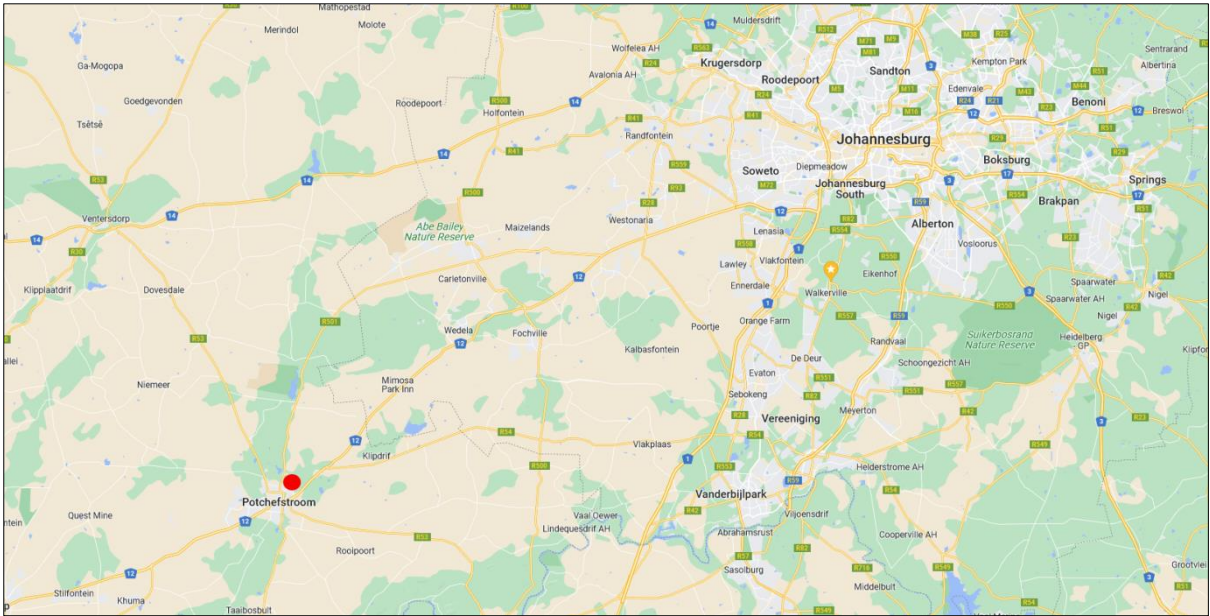


Figure 1: Regional context of the survey footprint located in Potchefstroom (indicated by the red area)

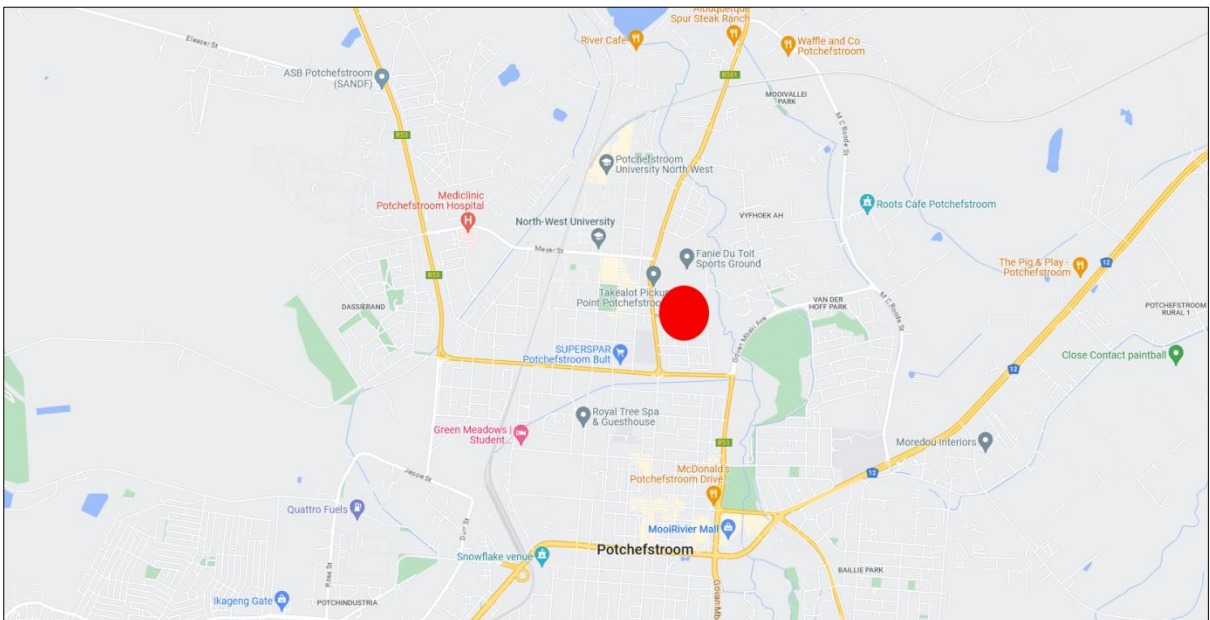


Figure 2: Local context of the survey footprint located in Potchefstroom (indicated by the red area)

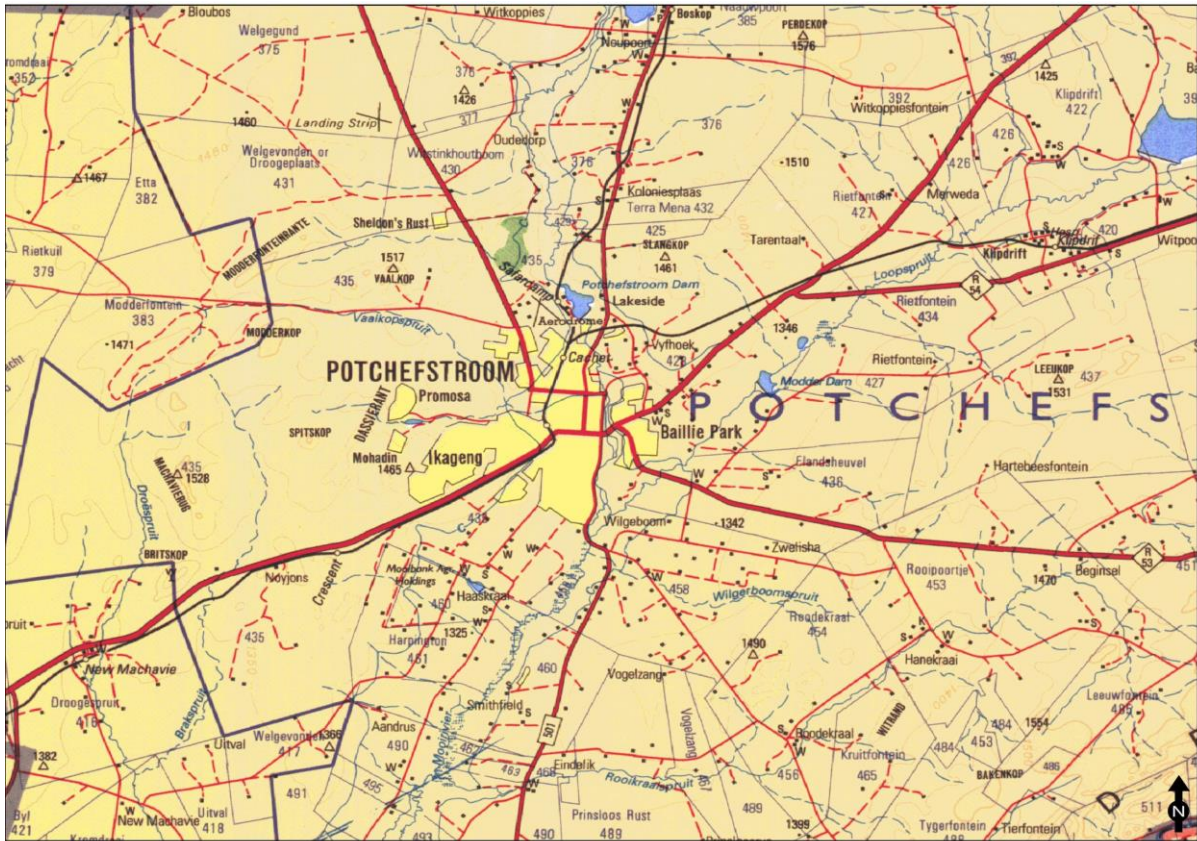


Figure 3: Local context of the survey footprint (1:250 000 Topographical Map 2626)

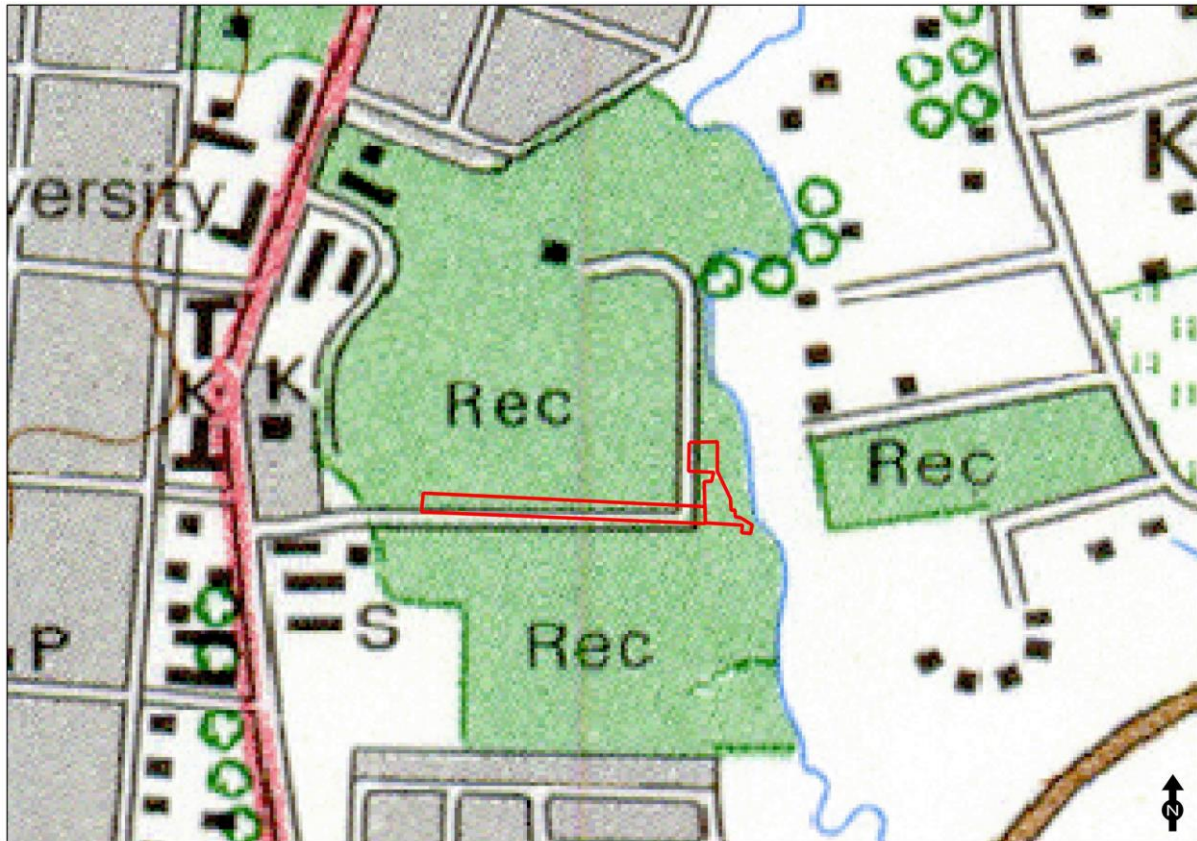


Figure 4: The survey area as indicated on the 1:50 000 topographic map 2627CA (1995)

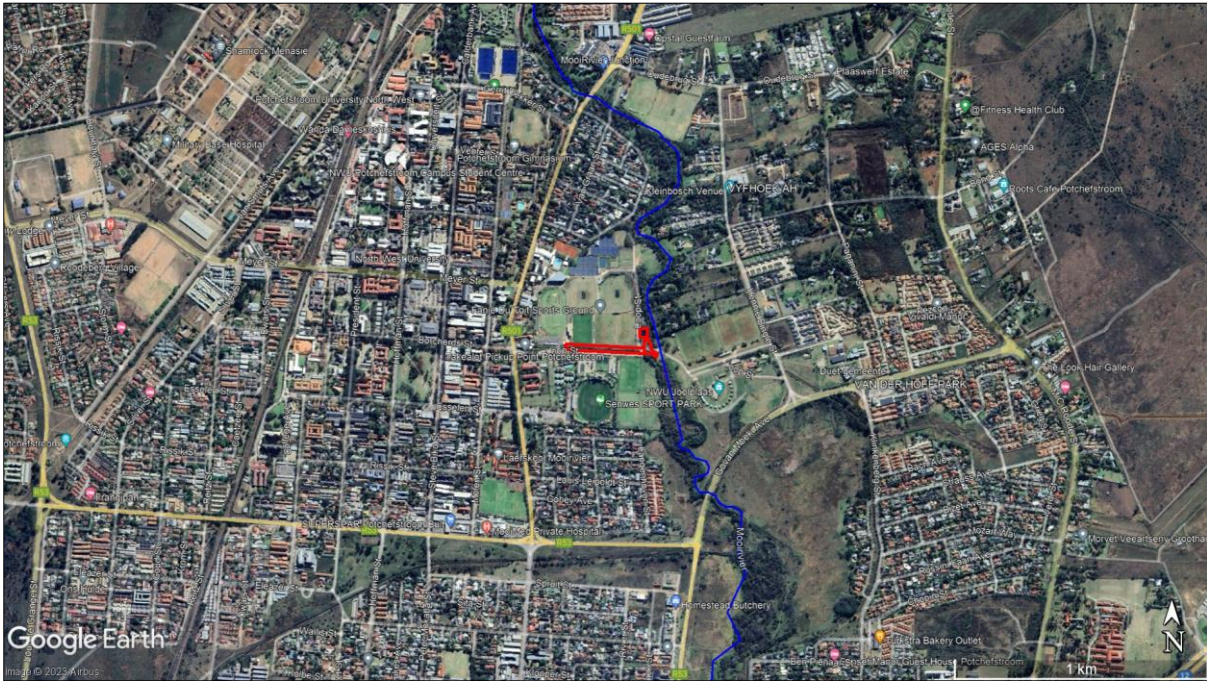


Figure 5: Survey area within general context (Google Earth Pro 2023)

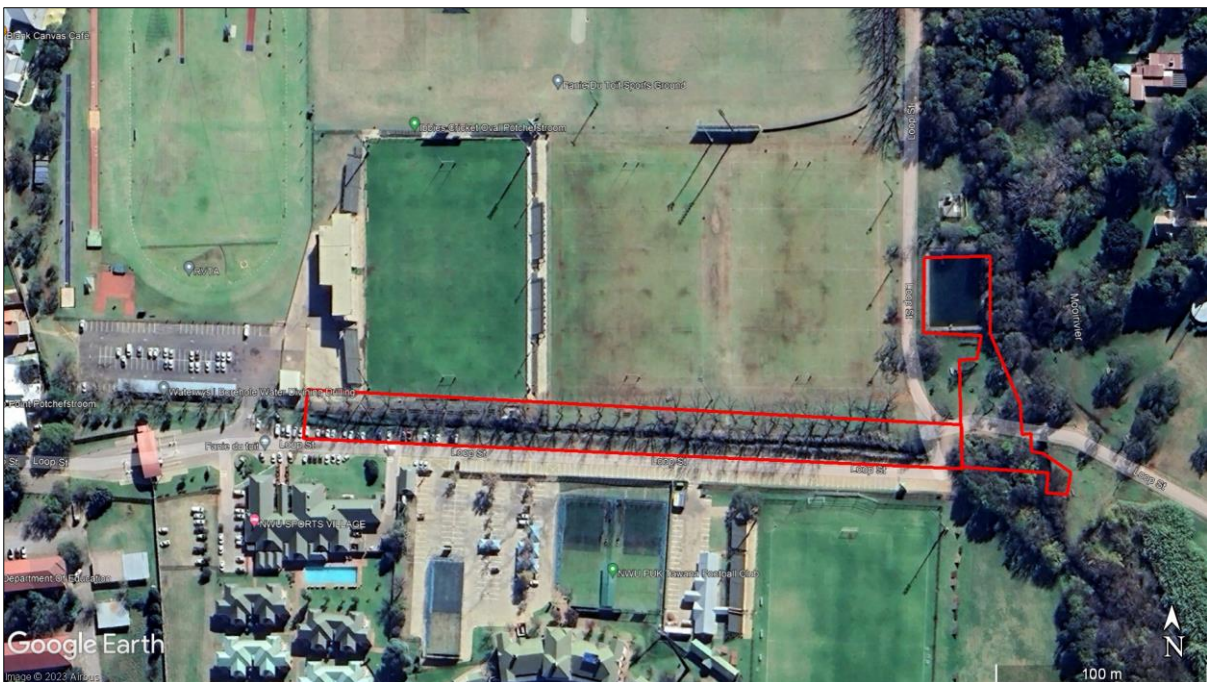


Figure 6: Detail of the survey footprint (Google Earth Pro 2023)

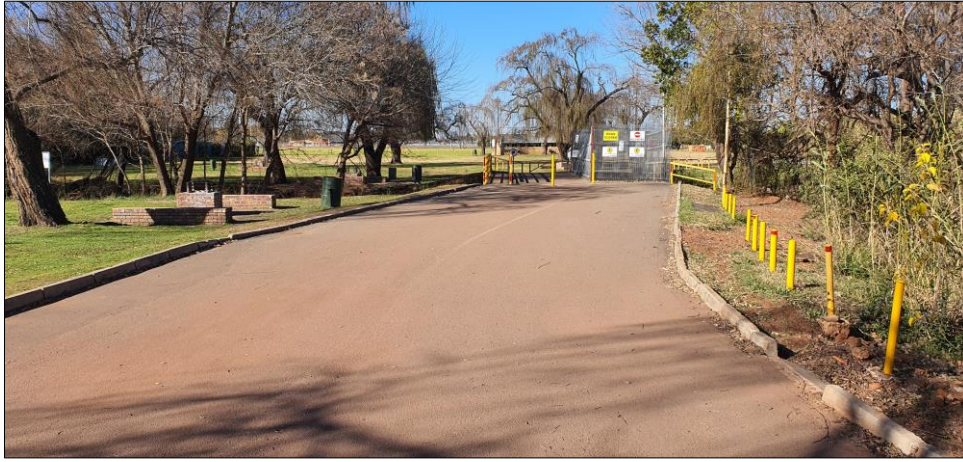


Figure 7: General view of survey footprint (unstable bridge with walkway along canal)



Figure 8: General view of survey footprint (Mooi River, unstable bridge and picnic area)



Figure 9: General view of survey footprint (Mooi River with unstable bridge)



Figure 10: General view of the survey footprint (water treatment dam)



Figure 11: General view of the survey footprint (water treatment dam)



Figure 12: General view of the Mooi River running through the area



Figure 13: General view of the unstable bridge



Figure 14: General view of the location of the new bridge



Figure 15: General view of the location of the new bridge



Figure 16: General view of the location of the new road and bridge



Figure 17: General view of the existing infrastructure in the area

4. Proposed Project Description

The area has an existing old bridge which was damaged by floods experienced in Potchefstroom in 2022. Currently the bridge is not in use, therefore, the applicant would like to align new bridge with Loop Street Road and centre line. The following is anticipated to be undertaken:

- Align new bridge with Loop Street Road and centre line
- Create sufficient pedestrian areas over the bridge
- Concrete bridge design – improves flow in peak times
- Formalise storm water retention dam
- Construct functional overflow for retention dam
- Route NWU sewer usage volume to treatment plant
- Treat and dispose grey water through settlement area to retention dam
- Pump retention dam water to existing irrigation reservoir
- Cover irrigation reservoir (Safety & Algae control)
- Irrigate grey water to all sport facilities
- Relocate student braai area to South West of river (at Soccer Fields)

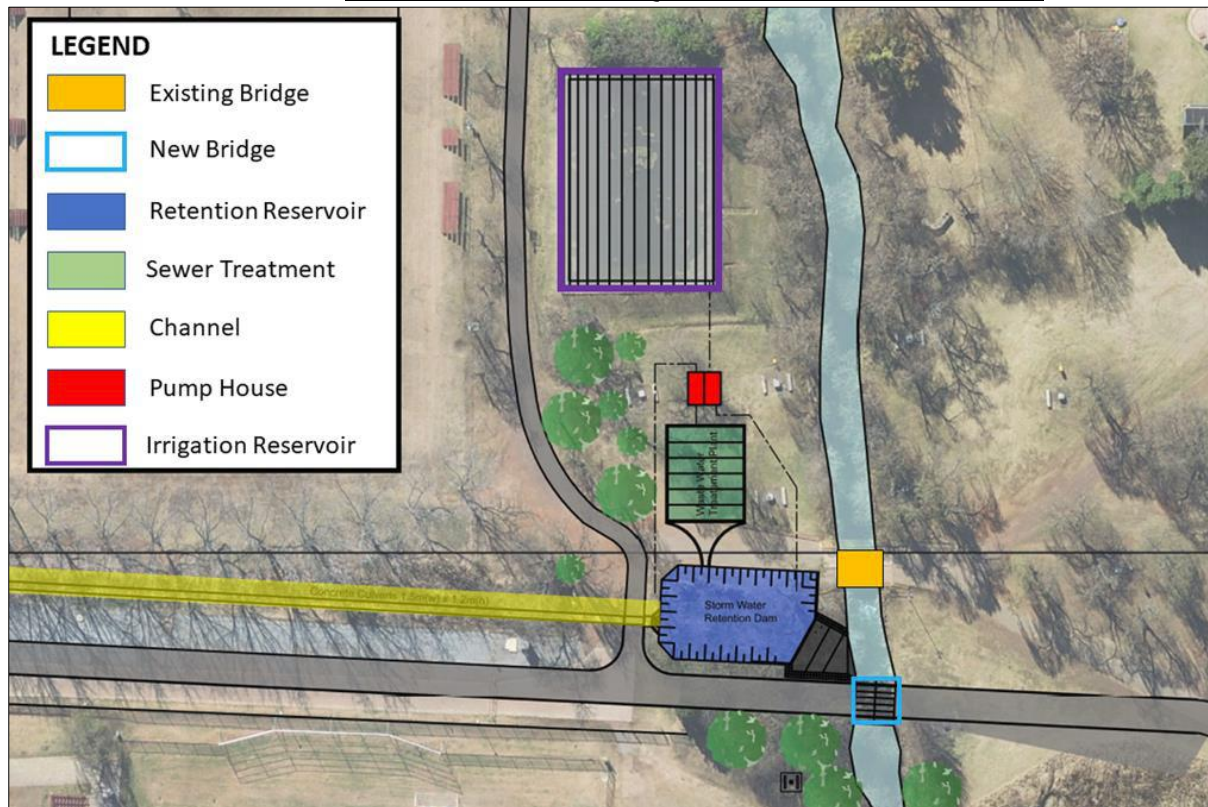


Figure 18: Location of all the proposed activities

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)	
Air Quality Act (Act No. 39 of 2004)	
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)	

Table 3: Legal framework

INDICATE THE NUMBER AND DATE OF THE RELEVANT NOTICE:	ACTIVITY NO (S) AND ACTIVITY DESCRIPTION (IN TERMS OF THE RELEVANT NOTICE)	DESCRIBE EACH LISTED ACTIVITY AS PER PROJECT DESCRIPTION
LISTING NOTICE 1		
GNR 983 Listing Notice 1 GN 517 of June 2021	Activity 12 (i)(ii)(a)(b) <i>The development of —</i> <i>(i) dams or weirs, where the dam or weir, including infrastructure and water surface area,</i> <i>(ii) infrastructure or structures with a physical footprint of 100 square metres or more; where such development occurs—</i> <i>(a) within a watercourse</i> <i>(b) in front of a development setback; or if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse;</i>	The applicant is anticipating constructing a Bridge over Mooiriver for both motorists and pedestrian at the Fanie du Toit sports grounds. The Retention dam will be developed within the watercourse. The pump house, sewage treatment plant, irrigation reservoir will take place within 32 metres of a watercourse
GNR 983 Listing Notice 1 GN 517 of June 2021	Activity 19 <i>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;</i>	The proposed development requires the construction of bridges and bulk infrastructure across tributaries/ watercourses occurring on site which will require the excavation of more than 10m ³ of material from a watercourse, thus this listed activity is triggered and applied for.
GNR 983 Listing Notice 1 GN 517 of June 2021	Activity 25 <i>The development and related operation of facilities or infrastructure for the treatment of effluent, wastewater or sewage with a daily throughput capacity of more than 2 000 cubic metres but less than 15 000 cubic metres.</i>	The applicant anticipates to construct wastewater treatment plant to treat wastewater, grey water and stormwater arising on the site for the purpose of irrigation
GNR 983 Listing Notice 1 GN 517 of June 2021	Activity 27 <i>The clearance of an area of 1 hectares or more, but less than 20 hectares of indigenous vegetation</i>	Clearance of trees found on the application area along side the river and vegetation in the vicinity of the application area. Note: This is not inclusive of vegetation to be cleared for the stormwater canal and this is classifies as a linear activity
LISTING NOTICE 3		
GNR 985 Listing Notice 3 GN 517 of June 2021	Activity 14 (ii)(a)(h)(iv) <i>The development of-</i> <i>(ii) infrastructure or structures with a physical footprint of 10 square metres or more; where such development occurs-</i>	The proposed activities will be constructed within areas identified as Critical biodiversity areas. Parts of the application area falls within Critical biodiversity

	(a) within a watercourse; (h) North West (iv) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority;	areas one (CBA1)
GNR 985 Listing Notice 3 GN 517 of June 2021	Activity 12 (h)(iv) The clearance of an area of 300 square metres or more of indigenous vegetation (h) North West (iv) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority	Clearance of trees found on the application area alongside the river and vegetation in the vicinity of the application area. The proposed activities will be constructed within areas identified as Critical biodiversity areas. Parts of the application area falls within Critical biodiversity areas one (CBA1)

Table 4: Listing Notices: 2017 Regulations as amended

- 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	No
Construction of bridge or similar structure exceeding 50m in length	No
Development exceeding 5000 m ² in extent	Yes
Development involving three or more existing erven or subdivisions	Yes
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	No

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.
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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 Milnex CC. 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 conduct a thorough investigation of the various portions of the farms that form part of the application. The aim was therefore to conduct a detailed pedestrian (foot) and predictive survey of the survey footprint, augmented by existing knowledge and aerial information of the region. Existing infrastructure was used to gain access to the area followed by detailed pedestrian investigations.

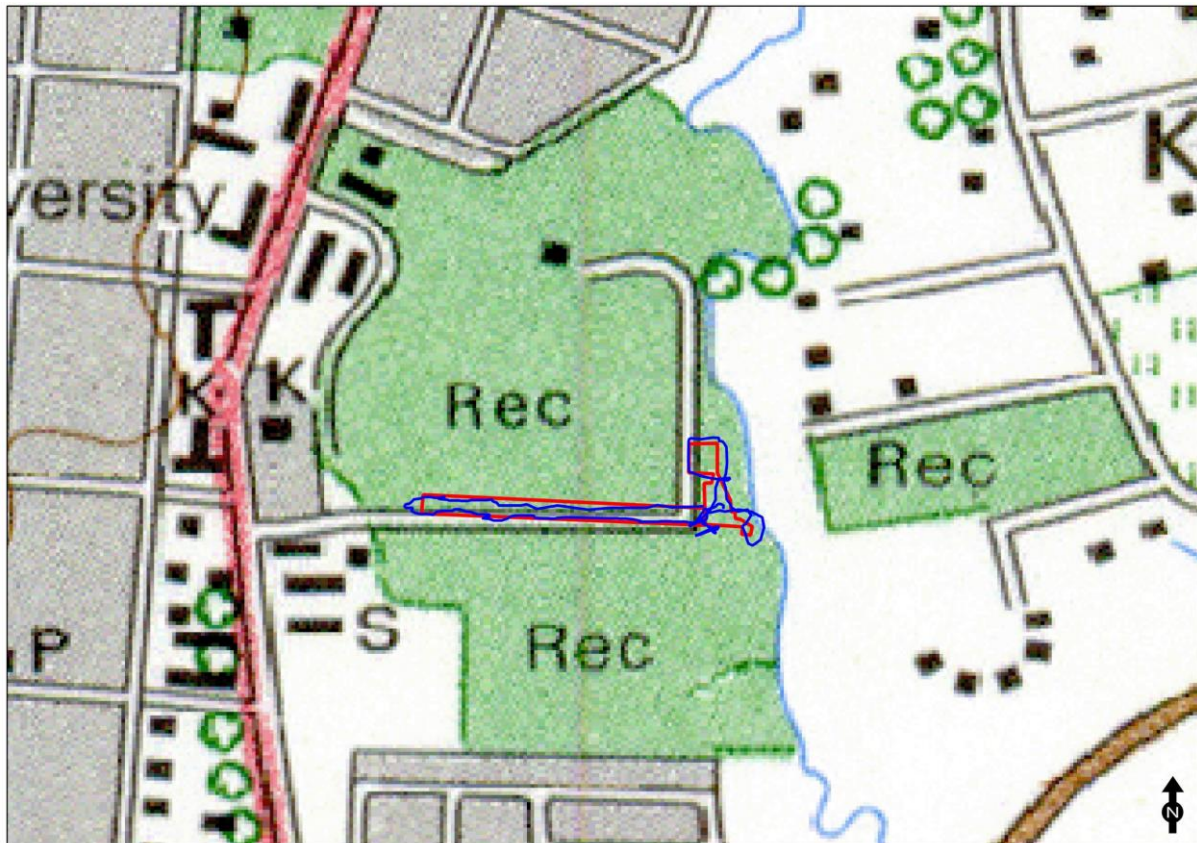


Figure 19: Recorded survey tracks on various sections of the survey footprint

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 2008, Coetzee 2022, Kusel 2007, Mlilo 2017, Munyai & Roodt 2007, Pelsler 2013 and Van Schalkwyk 1996).

The NWU officially came into being on 1 January 2004 as part of the South African government's plan to transform higher education. The former University of North West merged with the Potchefstroom University for Christian Higher Education. A third party was the Sebokeng Campus of another mainly black university, Vista, whose staff and students

were incorporated. However, Potchefstroom University developed out of the Theological School of the Reformed Churches in South Africa (Gereformeerde Kerke in Suid-Afrika in Afrikaans, abbreviated as GKSA), which was founded on 29 November 1869 in Burgersdorp in the Cape Province. Initially, there were only five students and two lecturers. In 1877 a Literary Department was established, with one professor, with the specific aim of educating students for academic degrees or as teachers. In 1905, the Theological School, including the Literary Department, was transferred from Burgersdorp to Potchefstroom in the Transvaal. In order to qualify for government subsidies, the Literary Department was separated from the Theological School in 1919 and the Potchefstroom University College for Christian Higher Education (Het Potchefstroom Universiteitskollege voor Christeljk Hooger Onderwijs in Dutch, and usually abbreviated as PUK) came into being. It was decided that the PUK would be a higher education institute separate and independent from the GKSA, although the PUK would continue to train GKSA ministers. In 1921, the Potchefstroom University College (without the 'for Christian Higher Education' suffix), was incorporated into the University of South Africa; the PUK only got the 'for Christian Higher Education' part of its name back in 1933. The Potchefstroom University College for Christian Higher Education was officially recognised as an independent university and was renamed the Potchefstroom University for Christian Higher Education in 1951

Several heritage surveys and research projects have been conducted near the project footprint during the last few years. Although several heritage impact assessments have been completed in the general vicinity of the survey area, no heritage sites were recorded inside the footprint itself.

Mlilo conducted a survey further north of the survey footprint and recorded a historical building and a formal cemetery (Mlilo 2017). A survey by Munyai and Roodt on the farm Palmietfontein 189 yielded no heritage remains (Munyai & Roodt 2007). The Rietspruit Dam (constructed in 1940) and surrounding area situated to the south of Ventersdorp was surveyed in 2015 with no heritage sites recorded (Van Schalkwyk 2015a). A survey conducted on the farms Nooitgedacht 131 IP, Zwartland 145 IP and Hartbeeslaagte 146 IP, situated north of Ventersdorp, yielded two cemeteries and a number of historical semi-circular stone-walled structures, as well as Later Stone Age deposits (Birkholtz 2008). A survey conducted on the farm Klipplaatdrift 214 IP near Ventersdorp did not yield any heritage remains (Kusel 2007). An assessment of the existing Sun Valley Broiler Facilities situated on the farm Welgegund 375 IQ south of Ventersdorp yielded no Iron Age remains, however a few Later Stone Age and Middle Stone Age scatters were recorded (Pelser 2013).

Several heritage studies were conducted in and around Potchefstroom. The old airbase to the north of the CBD was investigated and although seven residential buildings were recorded, no heritage remains of value were found (Kusel & Miller 2014). A survey was also conducted of the farm Elandsheuvel 436 IQ only yielded the remains of the old farm building dating to 1857 (Kusel 2008). A survey conducted within Ikageng Extension 13 yielded only recorded a low density scatter of Stone Age tools (Van Schalkwyk 2015b). A heritage survey for the bulk sewer pipeline in the Mohadin region west of Potchefstroom resulted in no recorded heritage remains at the site (Van Schalkwyk 2021). A survey of a new township on the farm Vyfhoek 428 IQ also yielded no heritage remains (Pelser 2020).

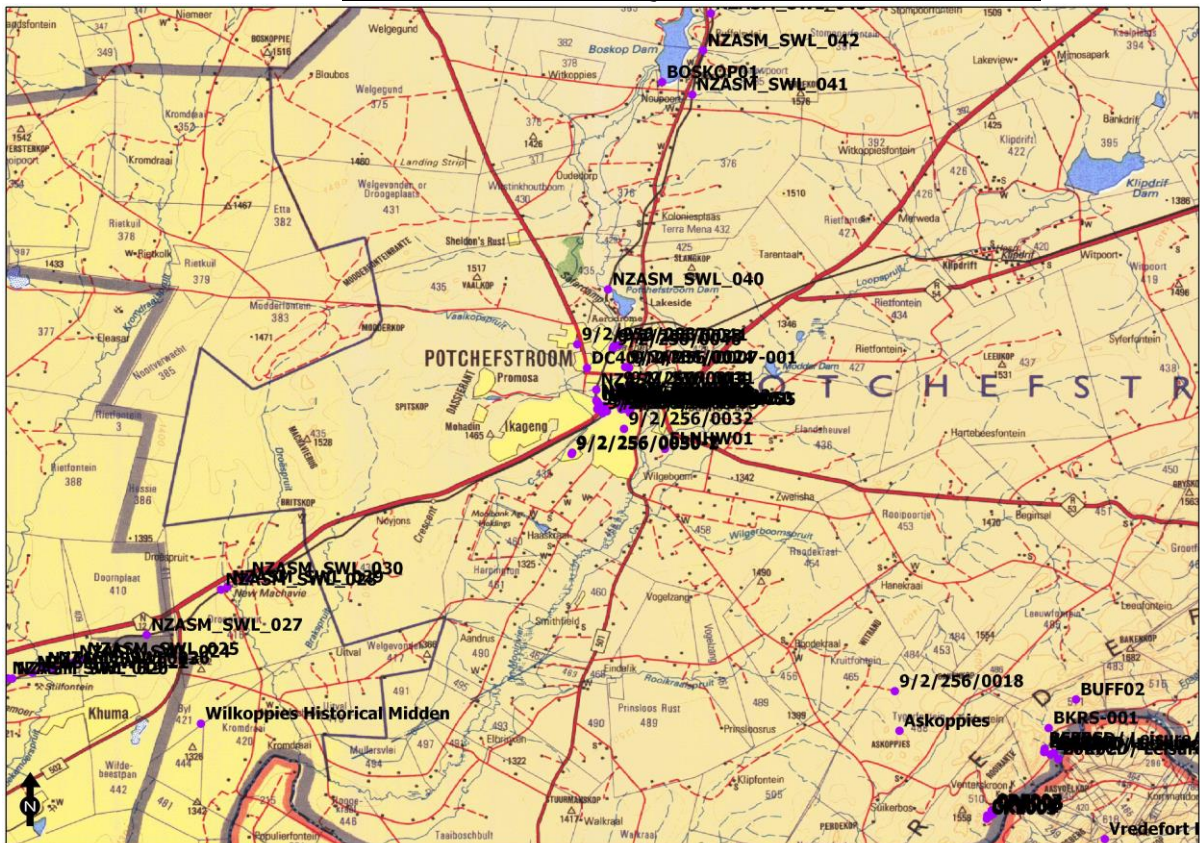


Figure 20: The location of recorded heritage sites near the survey footprint (SAHRIS as at April 2023)

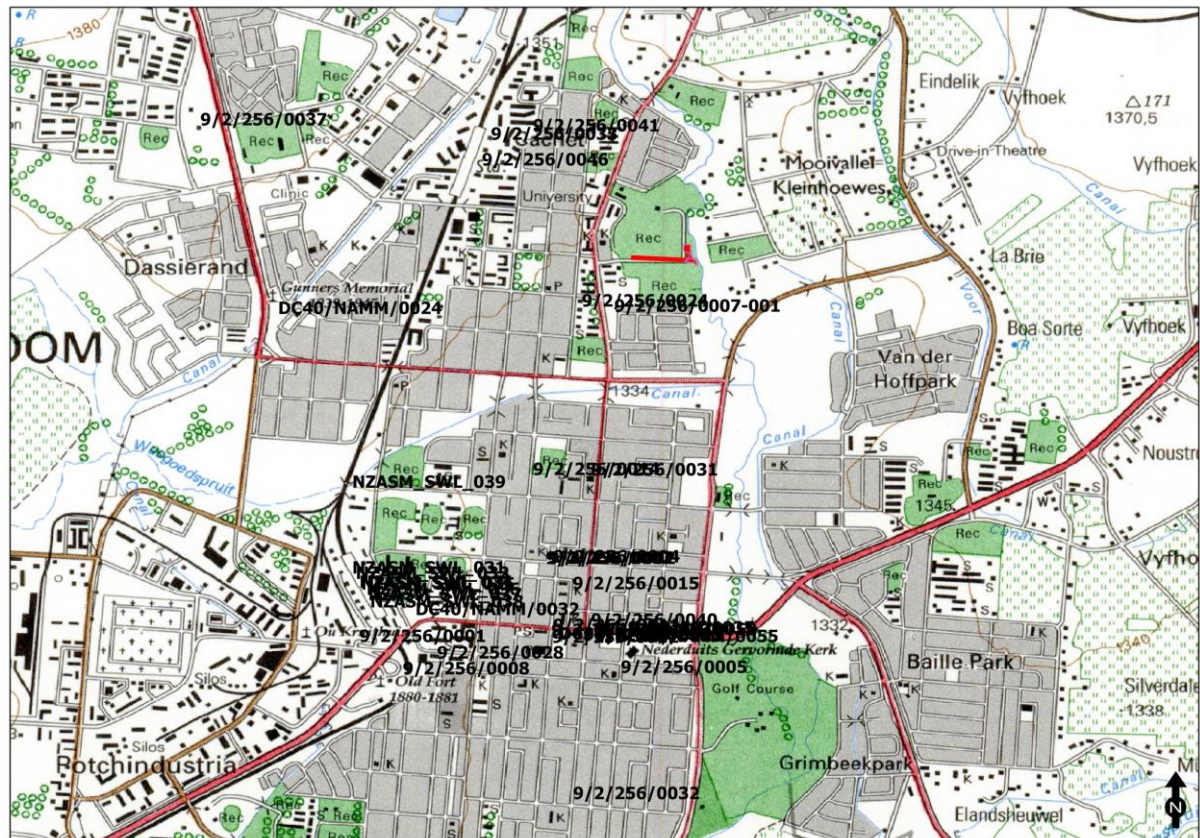


Figure 21: The location of recorded heritage sites in Potchefstroom (SAHRIS as at April 2023)

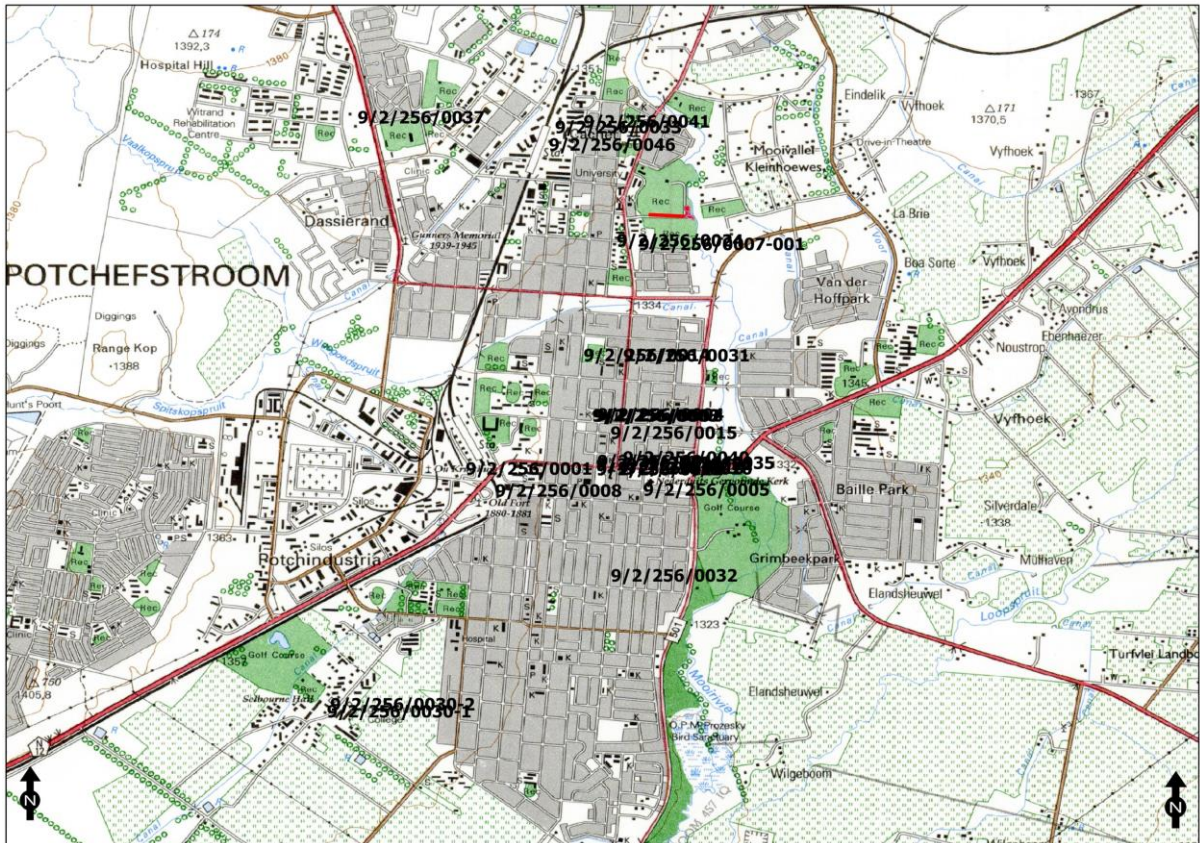


Figure 22: The location of declared Provincial heritage site in Potchefstroom (SAHRIS as at April 2023)

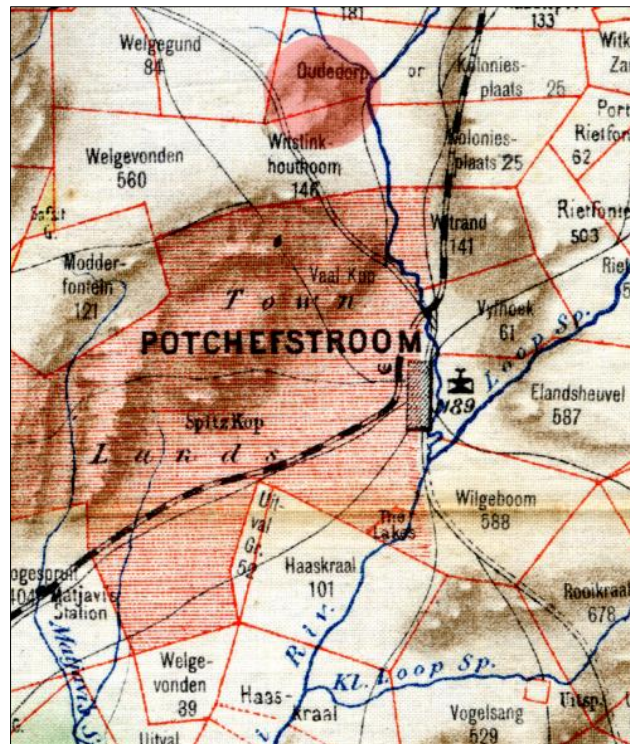


Figure 23: Jeppe's Map dating to 1899 indicates the location of Potchefstroom with 'Oude Dorp' located to the north

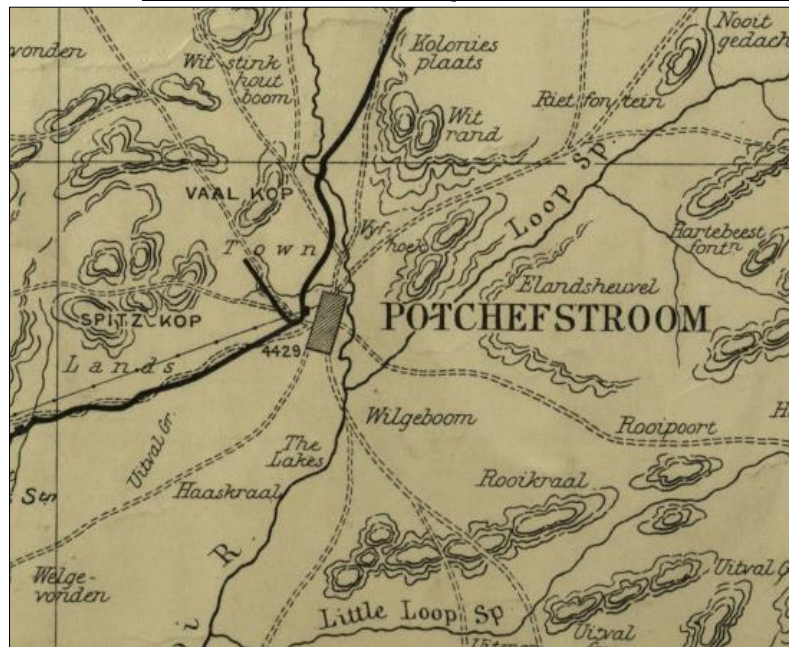


Figure 24: South African War (1899-1902): Map of Transvaal (1899)

According to the Surveyor General's database the farm Town and Townlands of Potchefstroom 435 IQ was originally surveyed in 1905. Erf 1302 is already indicated on a map dating to 1922 (see Addendum 3).

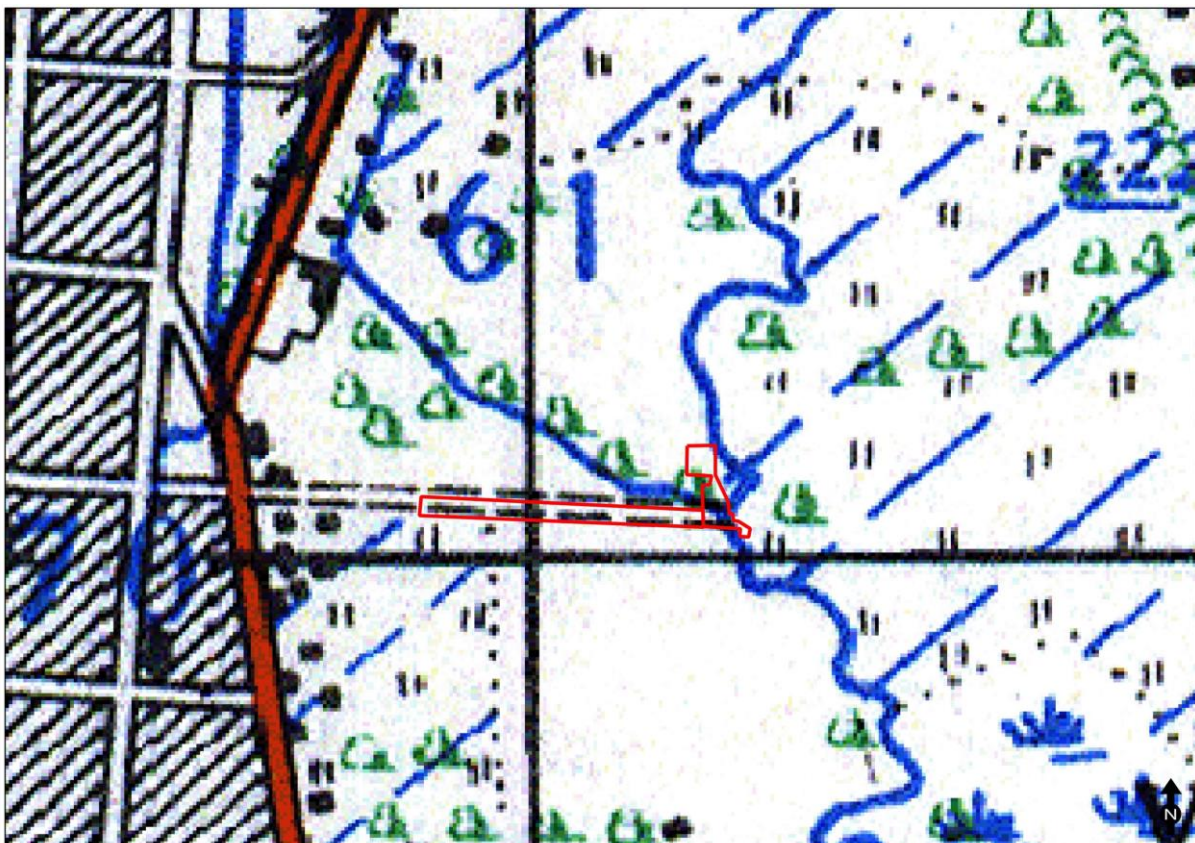


Figure 25: The survey area as indicated on the 1:50 000 topographic map 2627CA (1944)

6.2 Palaeontological sensitivity

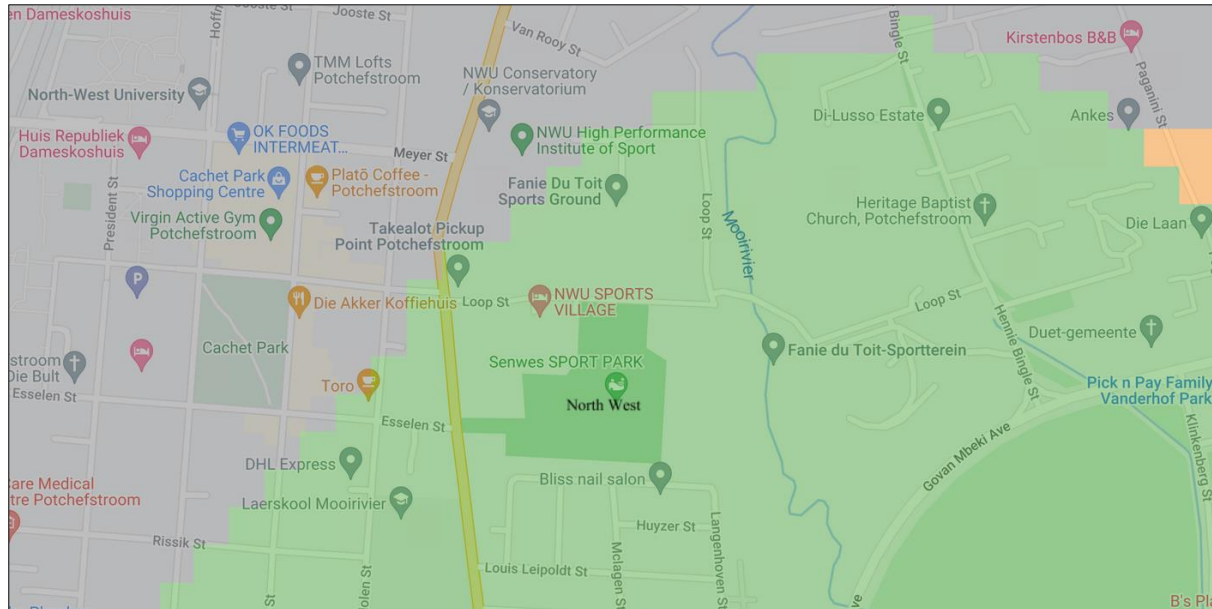


Figure 26: Palaeontological sensitivity zones as indicated (SAHRIS 2023)

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 and indicates a green (Moderate) sensitivity for the farms, especially the eastern sections. As a result a desktop palaeontological study will be required.

6.3 Site visits

The field survey was conducted on 11 June 2023.

6.4 Social interaction and current inhabitants

Local security personnel were consulted during the survey to locate known heritage sites in the region.

6.5 Public Consultation and Stakeholder Engagement

The mandated Public Participation process will be followed during the application of the authorisation of the project.

6.6 Assumptions, restrictions, gaps and limitations

The survey footprint was accessible and no restrictions or limitations were encountered.

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.

Isolated finds were recorded along the north-eastern stone ridges of the survey footprint. These were mostly debitage and some broken formal Middle Stone Age tools. The finds have an average N value of between 1 and 5 per square metre so a very low density was recorded. Note that no accidental finds were recorded during the survey.

7.2 Heritage sites

None

8. Locations and Evaluation of Sites

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 historical or archaeological (both Stone Age and Iron Age) artefacts, assemblages, features, structures or settlements were recorded during the survey of the project footprint.

It is therefore recommended, from a cultural heritage perspective that the proposed development activities may proceed. No 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

Technological characteristics

- Cobble, core or flake tools with little retouch and no flaking to predetermined patterns
- Hammerstones, manuports, cores
- Polished bone fragments/tools

Iron Age Sequence

In the northern regions of South Africa at least three settlement phases have been distinguished for early prehistoric agropastoralist settlements during the **Early Iron Age** (EIA). Diagnostic pottery assemblages can be used to infer group identities and to trace movements across the landscape. The first phase of the Early Iron Age, known as **Happy Rest** (named after the site where the ceramics were first identified), is representative of the Western Stream of migrations, and dates to AD 400 - AD 600. The second phase of **Diamant** is dated to AD 600 - AD 900 and was first recognized at the eponymous site of Diamant in the western Waterberg. The third phase, characterised by herringbone-decorated pottery of the **Eiland** tradition, is regarded as the final expression of the Early Iron Age (EIA) and occurs over large parts of the North West Province, Northern Province, Gauteng and Mpumalanga. This phase has been dated to about AD 900 - AD 1200. These sites are usually located on low-lying spurs close to water.

The Late Iron Age (LIA) settlements are characterised by stone-walled enclosures situated on defensive hilltops c. AD 1640 - AD 1830). This occupation phase has been linked to the arrival of ancestral Northern Sotho, Tswana and Ndebele (Nguni-speakers) in the northern regions of South Africa with associated sites dating between the sixteenth and seventeenth centuries AD. The terminal LIA is represented by late 18th/early 19th century settlements with multichrome Moloko pottery commonly attributed to the Sotho-Tswana. These settlements can in many instances be correlated with oral traditions on population movements during which African farming communities sought refuge in mountainous regions during the processes of disruption in the northern interior of South Africa, resulting from the so-called difaqane (or mfecane).

Ethno-historical Context

Bakwena ba Mogopa

The BaKwena consists of various subgroups of which the Mogopa (totem: crocodile) is only one. The earliest settlement recalled by the baMogopa is Rathateng (at the confluence of the Crocodile and Limpopo Rivers), from where they moved to Lokwadi (Zandriverspoort 747) during the 17th century AD. They later resettled at Phalane mountains. During the 18th century AD they moved to the Mabjanamatswana mountain range to the north-east of Brits. They resettled west of the Pienaars River at Mangwatladi only to return to Mabjanamatswana before the end of the 18th century AD. Here they lived at Gwate (Mamogaleslaagte) at the foot of Thaba ya Morena. During the period known as the Difagane (AD 1830s), Mizilikazi and his armies entered and subdued the region. After the initial conflict the group scattered in various directions with the core moving to Botswana, where they remained until 1868. The baMogopa then returned to Mathare (north-east of Brits), Mantabole (Bethanie) and Makolokwe (Wolwekraal) where they reside until today. The baKwena ba Mogôpa is related to the bakwena ba Modimosana of Rustenburg, having split off from them in the past. While the largest settlement always remained in Rustenburg, there were also other settlements in Jericho, the Brits area, Hebron, the Pretoria district and Ventersdorp. The origins of the Bakwena ba Mogôpa can be traced back to Matlhare near present-day Brits. In approximately 1840-1845 a group associated with the Majakgomo regiment left Matlhare for Thaba Bosigo. After the Seqiti war in 1868 they left Thaba Bosigo and became scattered across the Free State. It is from here that the group moved to Zwartkop in Ventersdorp. In 1905 Matladi Thomas S. More became kgosi of the Bakwena ba Mogôpa group scattered across the Free State. Between 1905 and 1913 he undertook to unify his followers again (Breutz 1954).

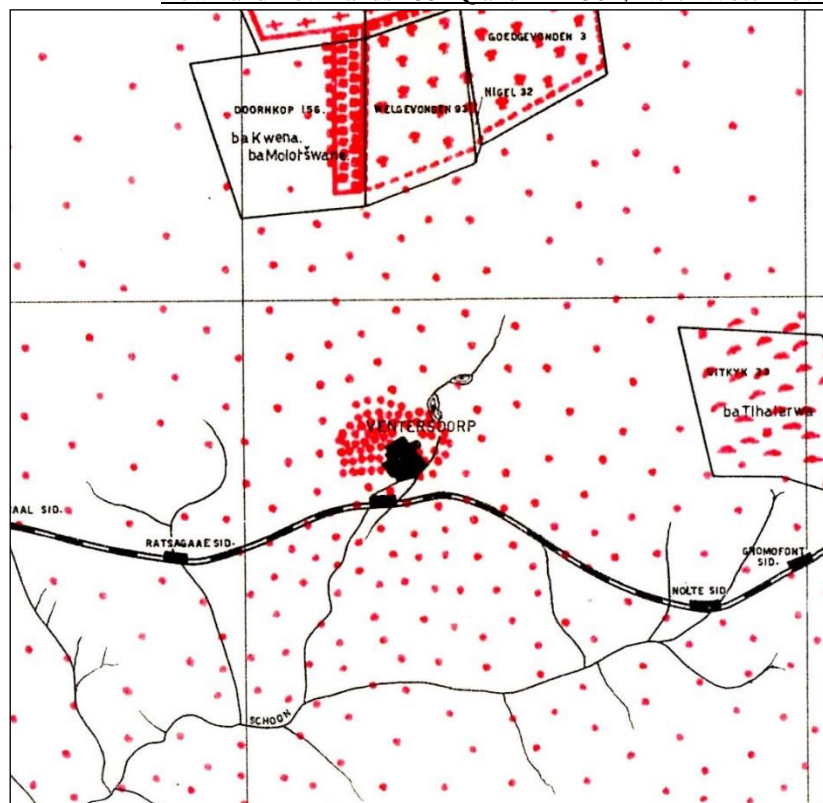


Figure 27: Ethnographic map of the region around Ventersdorp and further south towards Potchefstroom (after Breutz 1954)

Potchefstroom

The town was established in 1838 by a group of Voortrekkers led by Andries Hendrik Potgieter. The name was derived from (POT) Potgieter, the Voortrekker leader, CHEF (the leader, referring to Potgieter), and STROOM (the Mooi River). Until 1960 it was the capital of the old South African Republic of which the first president, Marthinus Wessel Pretorius, was sworn in at Potchefstroom. Potchefstroom is furthermore a historical town as it was the first town north of the Vaal River. The town was originally built on the position of the present "Oude Dorp". After the flood in 1840, it was decided that Potchefstroom would be developed one hour horse ride south from "Oude Dorp" next to the Mooi River. The first Government Gazette was printed and published in Potchefstroom. The Dutch Reformed Church in the Transvaal (at that time) was founded in Potchefstroom in 1842 and since 1905 the town has been the theological seminary of the Gereformeerde Kerk. The city, which has 24 declared national monuments, has a rich history. The first shots of the war of Independence were fired in Potchefstroom in 1880 and the town also played a prominent role during the guerrilla phase of the Anglo Boer War (1899-1902) (<http://www.potchefstroom.co.za>). Potchefstroom also housed a large concentration camp. The Potchefstroom camp was the first of sixteen in the Transvaal (former ZAR) (www.theheritageportal.co.za).

The early history of Potchefstroom is well documented owing to it being the focal point of settlement in the early Transvaal, its healthy climate away from the malaria ridden Lowveld and Bushveld, and it to a large extent being the seat of government of the ZAR for several decades before its transition to Pretoria. It is important to note that the present day Potchefstroom is then also several kilometres to the south of the first settlement known only as 'Oudedorp' (old or first town). The pioneers of Potchefstroom had to

first ‘outspan’ (temporarily settle) on a location while the ‘new town’ was surveyed and serviced with a water furrow system.

During the South African War (1899-1902) Potchefstroom was occupied three times by the British forces. Later during the war the largest Concentration Camp of the old Transvaal was established in Potchefstroom.



Figure 28: Jacob Swart the first concentration camp manager in Potchefstroom (c. 1900)

Historical Timeline of Potchefstroom

ca 1400 – 1820	Stone ruins in region of Vaal & Mooi River. Cattle and horticultural farmers - Ancestors of the present Sotho Tswana people (Bakwena, Bafokeng, Barolong, Batlokwa)
After 1820	Wars and migrations (Difaqana; Great Trek) Delagoa Bay based slave trade Penetration of mercantile and later industrial capitalism
1820's – 1830's	Large parts of Free State, North West Province depopulated, also the Potchefstroom vicinity
Nov 1837	“Seven Days Battle” – White and Barolong fighters vanquished Mzilikazi's forces, resettlement of Sotho-Tswana speakers and settlement of white Afrikaans speakers now possible
1838	“Oudedorp” settlement. First town of Potchefstroom
1841	-Town moved to current stand. Premises are being laid out and water furrow is built -First town council founded under magistrate's rule
1846	First school
1847	First prison
1850	-Postal service founded between Potchefstroom and Lydenburg -Market is established
1851	First Church building - (Dutch Reformed Church / Hervormde Kerk)
1852	First execution
1853	-First powder house -Gold is discovered in Potchefstroom region
1857	-First Noordbrug erected -First newspaper (De Staats Courant)
1859	First postmaster appointed
1861	-New water furrow is built

	-New cemetery is set out (Recent “Park Gedenktuin”)
1862	Civil War
1863	-Swedish Settlement at “Skandinawië Drift” -First Cricket Club in Transvaal founded -Second prison built
1864	-First Mail Coach Service between Potchefstroom and Pretoria -Ordinance of November 1864-Creation of guidelines on labour, a pass system, taxation and the carrying of guns by blacks
1866	First mill built
1867	-First agricultural show -Streets are being gravelled for first time -Bridges built for water furrows that crossed streets -First Reformed (Gereformeerde) Church is built -First Dutch Reformed (NG) Church built -First Anglican Church built
1868	First Municipal election and management
1872	-First Methodist Church built -First school for ‘coloureds’ by Pastor B Köhler (Berlin Missionary Society)
1875	Berlin Missionary Church put into service
1876	Third prison put into service (Lombard Street)
1877	-Proclamation of black residential area - ZAR created a ‘location’ for ‘coloureds’; freed slaves, Xhosa speakers and other Afrikaans-speaking servants toward the south of town later known as Willem Klopperville. Sotho-Tswana resettling in this area. -British annexation of the ZAR - Carnarvon: “ Boer policy...not unworthy...” -First commercial bank (Standard Bank)
1878	-First library service -First museum movement
1880	First War of Independence broke out in Potchefstroom
1884	First Asians settle in Potchefstroom
1887	First private post boxes
1888	-Telegraph services connected to Natal and Pretoria -Separate residential area laid out for Indians - Establishment of the ‘native location’ of Potchefstroom
1889	-Town management changed back to State (Magistrate) -Potchefstroom Stock Exchange founded -Monginoux & eight Dominican sisters bought land and established the first Catholic Church in Peter Mokaba Street (previously known as Van Riebeeck St) in Potchefstroom
1890	-Second Noordbrug -First rugby club in Transvaal founded
1892	Park with sports grounds laid out next to cemetery (also known as Kenneth McArthur Ovaal & Olën Park)
1893	First tennis club in Transvaal founded
1896	Magistrate’s Post & Telegraph offices put into service
1897	Railroad opened between Potchefstroom & Johannesburg
1898	Fourth jail (Wolmarans Street)

1899	Anglo Boer War broke out
1900	-British troops annexed Potchefstroom -Military hospital erected
1902	-First post war local government (Health committee) -Church Street changed to King Edward Street and other name changes at Experimental farm
1903	-British Garrison set up military camp with 1 000 troops -Potchefstroom gets Municipal status again -New cemetery laid out -Electricity put into service (private businesses) -Golf course is laid out
1904	New location gets a “headman” (1904-1914)
1905	Theological School (Reformed Church) put into service
1906	Railroad opened between Potchefstroom & Klerksdorp
1908	-First forty telephones installed -Building of the dam began -Golf course officially opened -Potchefstroom Herald Newspaper is founded
1909	-City hall put into service -Dam is completed -Experimental farm became a Agriculture School
1910	-New post office (south of Magistrate’s, Post en Telegraph offices) -Oak lane is planted -Potchefstroom became No. 7 Military district
1911	Municipality took over electricity supply
1912	-New electricity power supply is opened (Kock Street) -City Council Status -Kenneth McArthur from Potchefstroom won South Africa’s first gold medal at the -Olympic Games in Stockholm with a marathon event
1914	-Potchefstroom Hospital opened -Carnegie library and Municipal offices open -British troops withdraw -Potchefstroom got Military Training Centre -A non-statutory Native Advisory Council was instituted in Ikageng on request of the residents – consisted of 12 representatives of 7 churches -Native Advisory Council on request of residents demanded the dismissal of F van der Hoff (location superintendent)
1919	-New railroad station -Potchefstroom University College founded -Normal College (later Teacher’s College) founded -500 People in Potchefstroom en district die of flue
1920	Synagogue put into service
1923	-New artillery school open -Witrand Care and Rehabilitation Centre opened
1924	First Catholic School open for children from ‘location’ - St Louis Bertrand’s Mission School (15 pupils)
1926	-Water purification plant open -First streets are tarred

	-No.7 Military district included at No. 5 (Pretoria)
1928	Railroad opens between Potchefstroom & Fochville. Town Council introduced a permit and a tax for every location family that housed lodgers – all children over the age of eighteen were considered as lodgers (CALLINICOS, 1987: 190)
1929	On 16 December the Communist Party held a well-attended meeting as part of its anti-pass campaign. The meeting was disrupted by white bystanders, some of whom were carrying guns. An argument developed, people were pushed around, and five blacks were shot. One of them was later to die (CALLINICOS, 1987: 190)
1930	Municipal swimming pool put into service
1931	Council of Europeans & Natives founded in Potchefstroom
1938	Centenary festival
1939	-First police station built -Agricultural School became Agricultural College
1941	Normal School became Potchefstroom Teachers College
1945	*Native Urban Area Act no. 25/1945. Separated residential areas for blacks
1949	King Edward Street change to Church Street and other street name changes
1950	- *Racial classification (1950-1981) - *Group Areas Act for removal of ‘coloureds’ and ‘Asians’, [Act 30/1950]
1951	-Potchefstroom again became the district’s military headquarters -College got University status -Regional office of the Commissioner of Coloured Affairs was opened in Potchefstroom
1952	-Agricultural College became headquarters of Highveld region - Black women in Willem Klopperville (also) refuse to carry passes
1954	Ikageng started to develop
1955	Main road between Potchefstroom & Klerksdorp tarred
1956	Industrial area developed
1958	-Boskop dam is built -Black people removed from Makweteng (1958-1963)
1959	Proclamation of Promosa
1960	Built in 1960/61 this was the first Church in Ikageng that was erected by the initiatives of the black community. It was, and still is, a symbol of moral, social and spiritual unity in Ikageng. Unlike the other churches, it didn’t receive any financial support from the white community or European countries. Mr Siba Sebakwane designed the floor plan and structure and it was built by the members of the congregation.
1961	-Museum open - Inauguration of AME Church in Ikageng on 3 September -Twelve people in Potchefstroom died in rain and hail storm
1962	Automatic telephone service put into service
1963	Third (current) Noordbrug
1965	‘Coloureds’ removed from Makweteng (1965-1969)
1966	-New (current) post office -Military District is renamed to North Western Commando -Louis le Grange (National Party) (later Speaker of the “Volksraad”) is

	elected as Member of the Parliament for Potchefstroom
1971	-Proclamation of Mohadin -New Fire Station (Newmarket Street)
1973	Tragedy: 20 People died in a Ammoniac tank explosion at “Triomf” Fertiliser Plant
1975	-Double lane road (Potgieter Street now Nelson Mandela Road) is opened -Asian Shopping Centre open
1976	Management Committee of Promosa elected
1977	New prison at Wilgeboom
1982	New library – Museum and library building open
1983	New Town Management for Ikageng elected
1984	Management Committee for Mohadin elected
1986	PicknPay Centre (West Acres) open
1988	-Town festival 150 years -Andries Hendrik Potgieter Banquet Halls (now Madiba Banquet Halls) open
1989	Medi City (now Medi-Clinic) opened
1990	Uprising in Ikageng
1991	New Police offices opened (“Wespol-Plein”)
1992	Air Force basis closed down
1994	-First National Democratic Election – ANC won in Potchefstroom with 59, 08 % votes -Potchefstroom received City Status -Transitional Council elected
1995	-New Fire Station (Potchindustria) open -Part of Church Street (Walter Sisulu Avenue) between Lombard Street (James Moroka Avenue) en Potgieter Street (Nelson Mandela Avenue) changed into a Pedestrian Mall
1996	-Church Street Pedestrian Mall opened -Cachet Park Shopping Centre and Health & Racquet Club (now Virgin Active) opened in -Tom Street (now Steve Biko Street) -R84 milliard Development Scheme outside Potchefstroom fails
1997	Old Checkers Centre upgraded and new River Walk Shopping Centre open
1998	-Aardklop National Arts Festival took place in Potchefstroom for first time -University started with the restructuring process – Faculties are divided into focus groups and Schools
1999	Centenary Festival of Anglo Boer War
2003	-Potchefstroom University for Christian Higher Education (PU for CHE) changed to North West University, Potchefstroom Campus, after the amalgamation with the University of Bophuthatswana -Three students died during Meningitis outbreak
2004	Street name changes took place
2006	Potchefstroom City Council changed to Tlokwe City Council
2007	Kynoch Fertiliser Plant (formerly known as Triomf) closed down
2008	-Centenary Festival of Potchefstroom Herald Newspaper -Mooirivier Mall open

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.

Sample of data form

A. GENERAL SITE DESCRIPTION			
Site type			
Site Period			
Physical description			
Integrity of deposits or structures			
Site extent			
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.			
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.			
It has significance relating to the history of slavery in South Africa.			
Aesthetic Value			
It has importance in exhibiting particular aesthetic characteristics valued by a particular community or cultural group.			
Scientific Value			
It has potential to yield information that will contribute to an understanding of South Africa's natural and cultural heritage.			
It has importance in demonstrating a high degree of creative or technical achievement at a particular period.			
It has importance to the wider understanding of the temporal change of cultural landscapes, settlement patterns and human occupation.			
Social Value			
It has strong or special association with a particular community or cultural group for social, cultural or spiritual reasons (sense of place).			
Tourism Value			
It has significance through its contribution towards the promotion of a local sociocultural identity and can be developed as tourist destination.			
Rarity Value			
It possesses unique, uncommon, rare or endangered aspects of South Africa's natural or cultural heritage.			
Representative Value			
It is importance in demonstrating the principle characteristics of a particular class of South Africa's natural or cultural places or objects.			
B2. REGIONAL CONTEXT			
Other similar sites in the regional landscape.			
C. SPHERE OF SIGNIFICANCE	High	Medium	Low
International			
National			
Provincial			
Local			
Specific community			
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]	
E. GENERAL STATEMENT OF SITE SIGNIFICANCE	
Low	
Medium	
High	
F. RATING OF POTENTIAL IMPACT OF DEVELOPMENT	
None	
Peripheral	
Destruction	
Uncertain	
G. RECOMMENDED MITIGATION	
H. APPLICABLE LEGISLATION AND LEGAL REQUIREMENTS	
I. PHOTOGRAPHS	

Addendum 3: Surveyor General Farm Diagram



Figure 29: Surveyor General's sketch of the farm Town and Townlands of Potchefstroom first surveyed in 1906

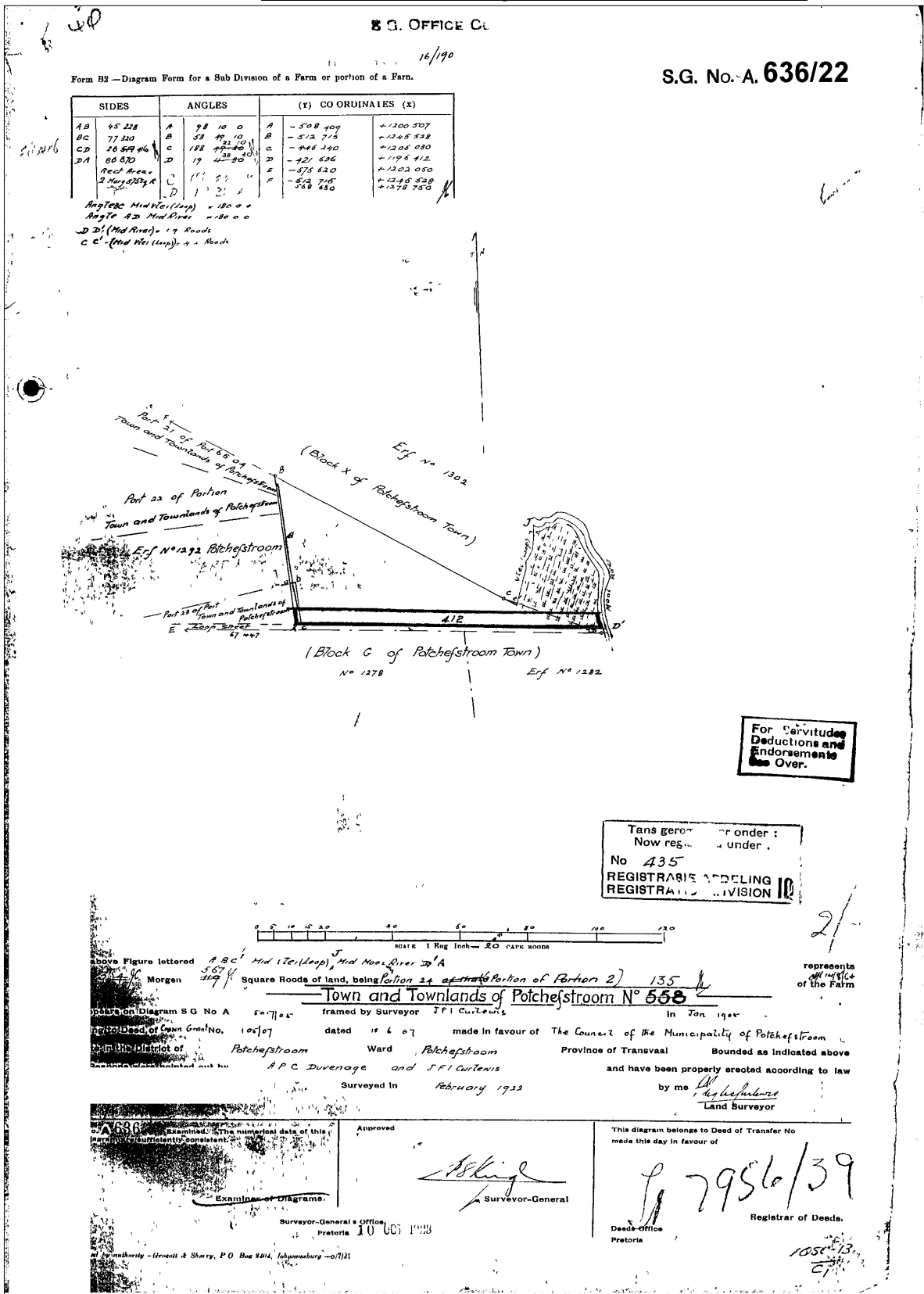


Figure 30: Surveyor General's sketch of the ERF 1302 which was already surveyed in 1922

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.