

**Cultural Heritage Desktop Assessment:**

**THE PROPOSED ACRUX 1, ACRUX 2 AND ACRUX 3 SOLAR PHOTOVOLTAIC (PV) PROJECTS  
WEST OF BLOEMFONTEIN, FREE STATE PROVINCE**

**Prepared for:**

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**Submission of the report:**

This report is intended for the developer only and is not to be submitted to the South African Heritage Resources Agency (SAHRA) or relevant Provincial Heritage Resources Agency (PHRA).



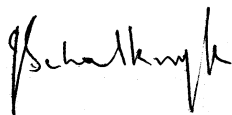
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**Specialist competency:**

Johan A van Schalkwyk, D Litt et Phil, heritage consultant, has been working in the field of heritage management for more than 40 years. Originally based at the National Museum of Cultural History, Pretoria, he has actively done research in the fields of anthropology, archaeology, museology, tourism and impact assessment. This work was done in Limpopo Province, Gauteng, Mpumalanga, North West Province, Eastern Cape Province, Northern Cape Province, Botswana, Zimbabwe, Malawi, Lesotho and Swaziland. Based on this work, he has curated various exhibitions at different museums and has published more than 70 papers, most in scientifically accredited journals. During this period, he has done more than 2000 impact assessments (archaeological, anthropological, historical and social) for various government departments and developers. Projects include environmental management frameworks, roads, pipeline-, and power line developments, dams, mining, water purification works, historical landscapes, refuse dumps and urban developments.



J A van Schalkwyk  
Heritage Consultant  
April 2023



## EXECUTIVE SUMMARY

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<p style="text-align: center;"><b>Cultural Heritage Desktop Assessment:</b> <b>THE PROPOSED ACRUX 1, ACRUX 2 AND ACRUX 3 SOLAR PHOTOVOLTAIC (PV) PROJECTS</b> <b>WEST OF BLOEMFONTEIN, FREE STATE PROVINCE</b></p>
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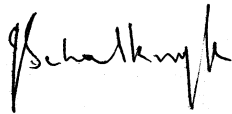
This report describes the methodology used, the limitations encountered, the heritage features that were identified and the recommendations and mitigation measures proposed relevant to this. The investigation consisted of a desktop study (archival sources, database survey, maps and aerial imagery), but no physical survey of the site.

Based on the desktop assessment, the following was determined:

- Material dating to all phases of the Stone Age seems largely to be absent in the larger region. Only one previous heritage impact assessment done in the larger region indicated the presence of two tools dating from the Middle Stone Age.
  - Although current information seems to indicate an absence of material dating to the Stone Age, it is expected that more will be found, especially near outcrops, stream beds and in sheltered valleys.
- Only one reference to Iron Age sites in the larger region have been found. This is on Wolfkop and the eastern foot of the hill near the western portion of the farm. Unfortunately, not much information is given on these sites, although it is attributed to the Late Iron Age, c. 1600 and later.
  - It is possible that more such sites can occur in this region, as well as in other areas where hills and outcrops occur.
- From a study of the available maps and aerial photographs, it seems as if elements of the built environment, i.e. farm houses, stock pens, water points and labourer accommodation and such is lacking in the proposed project area. This contrasts with the situation on other historic significant farms in the larger region: Bains Vlei, settled in 1847 by Andrew Hudson Bain; Onze Rust, which belongs to former president of the Orange Free State, M.T. Steyn; Kwaggafontein that belonged to Sir Cornelis Hermanus Wessels, well-known political leader in the former Orange Free State Republic.
  - At present it is unclear if any built features of significance occur in the project areas and this can only be verified during the site visit.
- Although only a few have been identified during this desktop assessment, burial sites seem to have occurred all over in the larger countryside. They are usually indicated on the 1:50 000 topographic map and can then also be georeferenced in Google Earth. Significantly, the all burial sites indicated on the older versions of map 2926AA, 1949 version, does not appear on the later maps and also cannot be seen on Google Earth.

- It is expected that informal type of burial sites will be identified in the project areas. For this the input of local farm owners and workers would be invaluable as in many cases these sites are not very easy to detect.
- The railway line between Bloemfontein and Kimberley, completed in 1908, passes on the south of the sites, bordering specifically on the southern side of the farm Wolfkop. It is expected that bridges and culverts dating to the original line and still in use will be located at river crossings. Typically, these are rough sandstone ashlar culverts for smaller stream crossings, whereas bridges would have longer spans, with the abutments and piers of sandstone.
  - It is anticipated that these structures would not be impacted upon by the proposed development.

Based on the desktop assessment it is possible, with a large amount of certainty, to indicate that there are no obvious red flag issues that would prevent to the project to proceed to the next level of investigation, i.e. a full heritage impact assessment. However, this statement is subject to review until such time as a full field survey has been conducted.



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Heritage Consultant  
April 2023

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## GLOSSARY OF TERMS AND ABBREVIATIONS

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### TERMS

**Bioturbation:** The burrowing by small mammals, insects and termites that disturb archaeological deposits.

**Cumulative impacts:** In relation to an activity, means the past, current and reasonably foreseeable future impact of an activity, considered together with the impact of activities associated with that activity, that in itself may not be significant, but may become significant when added to existing and reasonably foreseeable impacts eventuating from similar or diverse activities.

**Debitage:** Stone chips discarded during the manufacture of stone tools.

**Factory site:** A specialised archaeological site where a specific set of technological activities has taken place – usually used to describe a place where stone tools were made.

**Historic Period:** Since the arrival of the white settlers - c. AD 1830 - in this part of the country.

**Holocene:** The most recent time period, which commenced c. 10 000 years ago.

**Iron Age** (also referred to as **Early Farming Communities**): Period covering the last 1800 years, when new people brought a new way of life to southern Africa. They established settled villages, cultivated domestic crops such as sorghum, millet and beans, and herded cattle, sheep and goats. As they produced their own iron tools, archaeologists call this the Iron Age.

Early Iron Age	AD 200 - AD 900
Middle Iron Age	AD 900 - AD 1300
Later Iron Age	AD 1300 - AD 1830

**Midden:** The accumulated debris resulting from human occupation of a site.

**Mitigation,** means to anticipate and prevent negative impacts and risks, then to minimise them, rehabilitate or repair impacts to the extent feasible.

**National Estate:** The collective heritage assets of the Nation.

**Pleistocene:** Geological time period of 3 000 000 to 20 000 years ago.

**Stone Age:** The first and longest part of human history is the Stone Age, which began with the appearance of early humans between 3-2 million years ago. Stone Age people were hunters, gatherers and scavengers who did not live in permanently settled communities. Their stone tools preserve well and are found in most places in South Africa and elsewhere.

Early Stone Age	2 500 000 - 250 000 Before Present
Middle Stone Age	250 000 - 40-25 000 BP
Later Stone Age	40-25 000 - until c. AD 200

**Tradition:** As used in archaeology, it is a seriated sequence of artefact assemblages, particularly ceramics.

### ACRONYMS and ABBREVIATIONS

AD	Anno Domini (the year 0)
ASAPA	Association of Southern African Professional Archaeologists

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BC	Before the Birth of Christ (the year 0)
BCE	Before the Common Era (the year 0)
BP	Before Present (calculated from 1950 when radio-carbon dating was established)
CE	Common Era (the year 0)
CRM	Cultural Resources Management
CS-G	Chief Surveyor-General
DMRE	Department of Mineral Resources and Energy
EAP	Environmental Assessment Practitioner
ECO	Environmental Control Officer
EIA	Early Iron Age
EIA	Environmental Impact Assessment
EMPr	Environmental Management Programme
ESA	Early Stone Age
HIA	Heritage Impact Assessment
I & AP's	Interested and Affected Parties
ICOMOS	International Council on Monuments and Sites
LIA	Late Iron Age
LSA	Later Stone Age
MIA	Middle Iron Age
MSA	Middle Stone Age
NASA	National Archives of South Africa
NEMA	National Environmental Management Act 107 of 1998
NGI	National Geospatial Information
NHRA	National Heritage Resources Act
PHRA	Provincial Heritage Resources Agency
SAHRA	South African Heritage Resources Agency
SAHRIS	South African Heritage Resources Information System
WUL	Water Use Licence

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## **1. INTRODUCTION**

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### **1.1 Background**

Acrux Solar PV Project One (Pty) Ltd, Acrux Solar PV Project Two (Pty) Ltd and Acrux Solar PV Project Three (Pty) Ltd propose the development of solar photovoltaic (PV) projects west of Bloemfontein, in the Free State Province. In order to determine the feasibility of these projects, a cultural heritage desktop assessment was done in order to determine if there would be any red flag issues that might prevent the project to proceed to the next level of investigation.

South Africa's heritage resources, also described as the 'national estate', comprise a wide range of sites, features, objects and beliefs. However, according to Section 27(18) of the National Heritage Resources Act, No. 25 of 1999 (NHRA), no person may destroy, damage, deface, excavate, alter, remove from its original position, subdivide or change the planning status of any heritage site without a permit issued by the heritage resources authority responsible for the protection of such site.

### **1.2 Terms and references**

#### *1.2.1 Scope of work*

The aim of this desktop study is to determine, at desktop level, the cultural heritage significance of the areas where the solar power plants and associated infrastructure will be located. This included:

- Conducting a desk-top investigation of the total project area.

The objectives were to:

- Evaluate the potential impacts of construction, operation and maintenance of the proposed development on archaeological, cultural and historical resources;
- Recommend mitigation measures to ameliorate any negative impacts on areas of archaeological, cultural or historical importance; and
- Provide guideline measures to manage any impacts that might occur during the proposed project's construction and implementation phases.

#### *1.2.2 Assumptions and Limitations*

The investigation has been influenced by the following:

- It is assumed that the description of the proposed project, provided by the client, is accurate;
- It is assumed that the information contained in existing databases, reports and publications is correct;
- The unpredictability of buried archaeological remains;

## **2. LEGISLATIVE FRAMEWORK**

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### **2.1 Background**



HIAs are governed by national legislation and standards and International Best Practise. These include:

- South African Legislation
  - National Heritage Resources Act, 1999 (Act No. 25 of 1999) (NHRA);
  - Mineral and Petroleum Resources Development Act, 2002 (Act No. 22 of 2002) (MPRDA);
  - National Environmental Management Act 1998 (Act No. 107 of 1998) (NEMA); and
  - National Water Act, 1998 (Act No. 36 of 1998) (NWA).
- Standards and Regulations
  - South African Heritage Resources Agency (SAHRA) Minimum Standards;
  - Association of Southern African Professional Archaeologists (ASAPA) Constitution and Code of Ethics;
  - Anthropological Association of Southern Africa Constitution and Code of Ethics.
- International Best Practise and Guidelines
  - ICOMOS Standards (Guidance on Heritage Impact Assessments for Cultural World Heritage Properties); and
  - The UNESCO Convention concerning the Protection of the World Cultural and Natural Heritage (1972).

### 3. HERITAGE RESOURCES

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#### 3.1 The National Estate

The NHRA defines the heritage resources of South Africa which are of cultural significance or other special value for the present community and for future generations that must be considered part of the national estate to include:

- places, buildings, structures and equipment of cultural significance;
- places to which oral traditions are attached or which are associated with living heritage;
- historical settlements and townscapes;
- landscapes and natural features of cultural significance;
- geological sites of scientific or cultural importance;
- archaeological and palaeontological sites;
- graves and burial grounds, including-
  - ancestral graves;
  - royal graves and graves of traditional leaders;
  - graves of victims of conflict;
  - graves of individuals designated by the Minister by notice in the Gazette;
  - historical graves and cemeteries; and
  - other human remains which are not covered in terms of the Human Tissue Act, 1983 (Act No. 65 of 1983);
- sites of significance relating to the history of slavery in South Africa;
- movable objects, including-
  - objects recovered from the soil or waters of South Africa, including archaeological and palaeontological objects and material, meteorites and rare geological specimens;
  - objects to which oral traditions are attached or which are associated with living heritage;
  - ethnographic art and objects;
  - military objects;
  - objects of decorative or fine art;
  - objects of scientific or technological interest; and
  - books, records, documents, photographic positives and negatives, graphic, film or video material or sound recordings, excluding those that are public records as defined in section 1(xiv) of the National Archives of South Africa Act, 1996 (Act No. 43 of 1996).

#### 3.2 Cultural significance

In the NHRA, Section 2 (vi), it is stated that “cultural significance” means aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value or significance. This is determined in relation to a site or feature’s uniqueness, condition of preservation and research potential.

According to Section 3(3) of the NHRA, a place or object is to be considered part of the national estate if it has cultural significance or other special value because of

- its importance in the community, or pattern of South Africa's history;
- its possession of uncommon, rare or endangered aspects of South Africa's natural or cultural heritage;
- its potential to yield information that will contribute to an understanding of South Africa's natural or cultural heritage;
- its importance in demonstrating the principal characteristics of a particular class of South Africa's natural or cultural places or objects;
- its importance in exhibiting particular aesthetic characteristics valued by a community or cultural group;
- its importance in demonstrating a high degree of creative or technical achievement at a particular period;
- its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons;
- its strong or special association with the life or work of a person, group or organisation of importance in the history of South Africa; and
- sites of significance relating to the history of slavery in South Africa.

#### **4. PROJECT DESCRIPTION**

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##### **4.1 Site location**

The Projects are located approximately 15km to the west of Bloemfontein’s central business district and falls within the Mangaung Metropolitan Municipality, in the Free State Province. The N8 towards Kimberley runs along the southern boundary of the site (Fig 1).

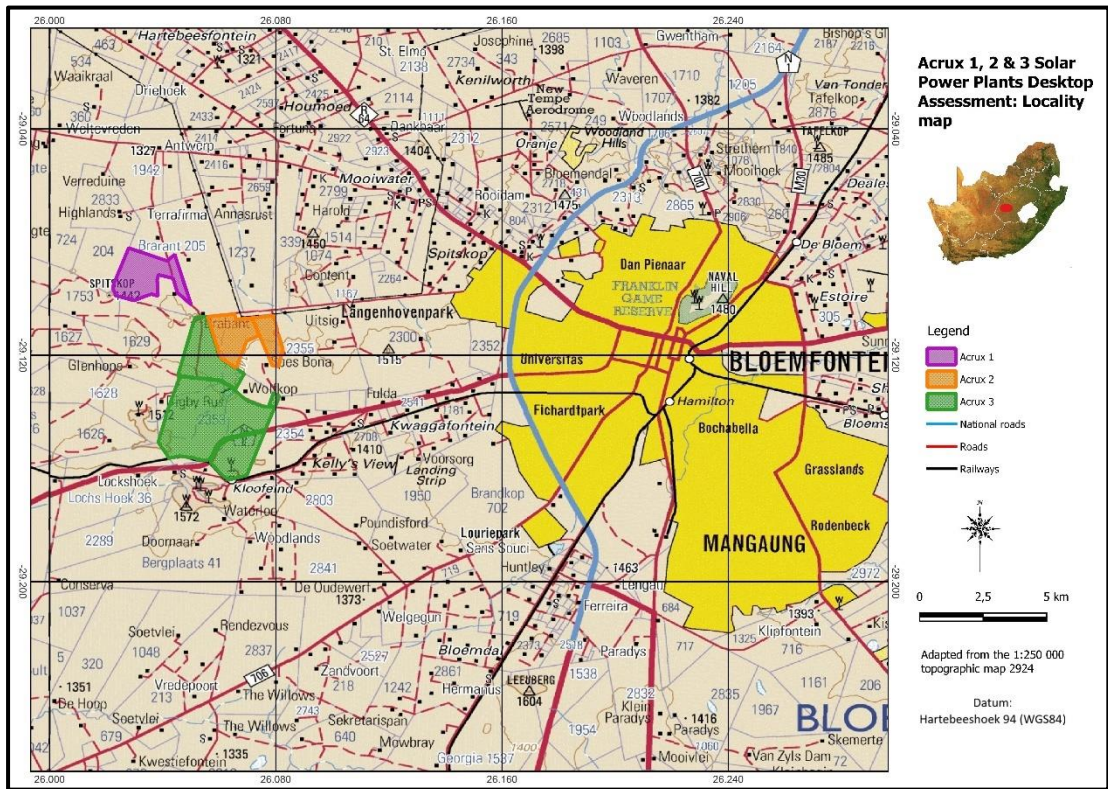


Figure 1. Location of the project area in regional context

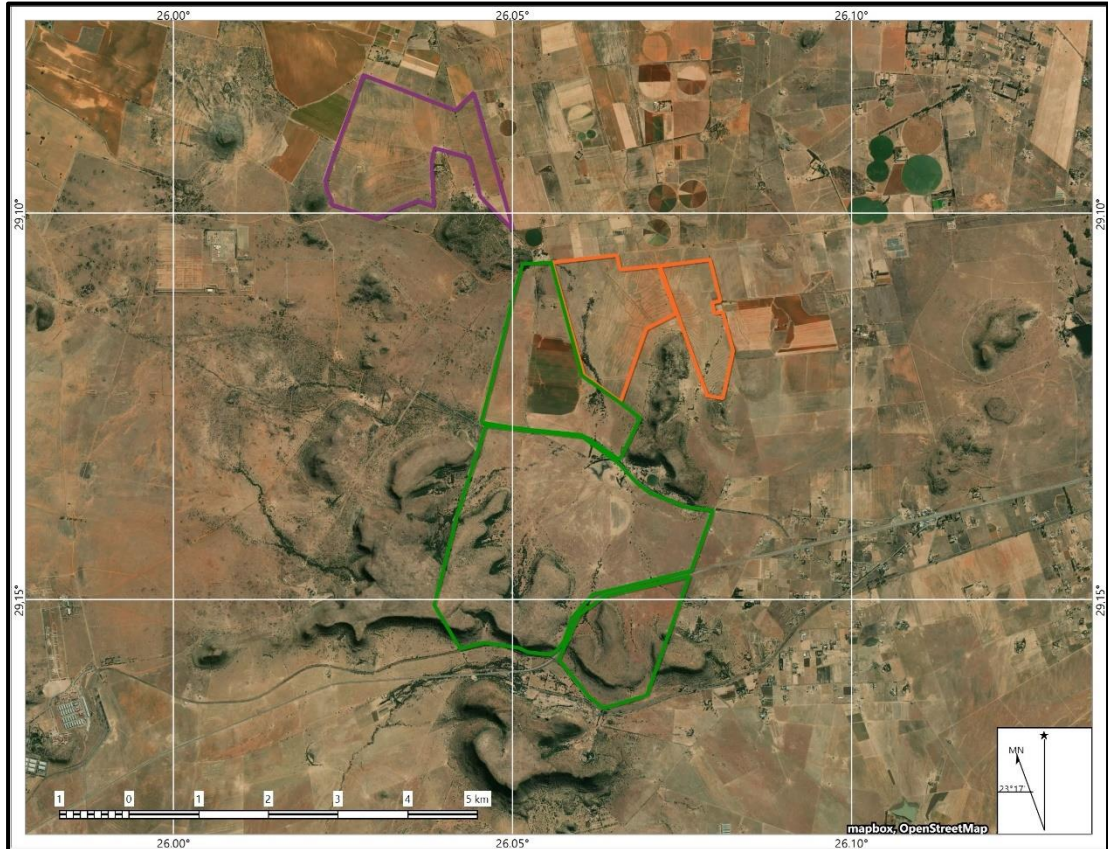


Figure 2. Layout of the three projects, showing the topography and current land use

## 5. STUDY APPROACH AND METHODOLOGY

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### 5.1 Extent of the Study

This survey and impact assessment cover all facets of cultural heritage located in the project area, as presented in Section 4 above and illustrated in Figures 1 - 2.

### 5.2 Methodology

#### 5.2.1 Pre-feasibility assessment

The objectives of this review were to:

- Gain an understanding of the cultural landscape within which the project is located;
- Inform the field survey.

##### 5.2.1.1 Survey of the literature

A survey of the relevant literature was conducted with the aim of reviewing the previous research done and determining the potential of the area. In this regard, various anthropological, archaeological and historical sources were consulted – see list of references in Section 11.

Information on events, sites and features in the larger region were obtained from these sources.

##### 5.2.1.2 Survey of heritage impact assessments (HIAs)

A survey of HIAs done for projects in the region by various heritage consultants was conducted with the aim of determining the heritage potential of the area – see list of references in Section 11.

- Information on sites and features in the larger region were obtained from these sources.

##### 5.2.1.3 Data bases

The *Heritage Atlas Database*, various SAHRA databases, the *Environmental Potential Atlas*, the *Chief Surveyor General* and the *National Archives of South Africa* were consulted.

- Database surveys produced a number of sites located in the larger region of the proposed development.

##### 5.2.1.4 Other sources

Aerial photographs and topocadastral and other maps were also studied - see the list of references below.

- Information of a very general nature were obtained from these sources.

##### 5.2.1.5 Results

The results of the above investigation can be summarised as follows:

- Stone Age tools, dating to the MSA occur as surface scatters on the banks of river, near outcrops and on valley floors in the larger region;
- Sites containing rock art, dating to the Later Stone Age, are known to occur in the larger region to the north;
- Historic structures, inclusive of buildings, fortifications, monuments and bridges, occur mostly in an urban environment (Bloemfontein), although they also occur sporadically on farms;
- Formal burial sites occur in an urban setting, with a number of informal ones occurring sporadically throughout the country side.

Based on the above assessment, the probability of cultural heritage sites, features and objects occurring in the study area is considered to be **possible**

## 6. DESCRIPTION OF THE AFFECTED ENVIRONMENT

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### 6.1 Cultural Landscape

*The aim of this section is to present an overview of the history of the larger region in order to eventually determine the significance of heritage sites identified in the project area, within the context of their historic, aesthetic, scientific and social value, rarity and representivity.*

The cultural landscape qualities of the region are made up of a pre-colonial element consisting of very limited Stone Age and Iron Age occupation, as well as a much later colonial (farmer) component, which eventually gave rise to an urban component.

#### 6.1.1 Stone Age

Little is known about the Stone Age of the Bloemfontein region, as it was all destroyed by the rapid urban development in the region (Henderson 2004). Most sources indicate the presence of low density surface scatters of MSA and LSA stone tools, mostly occurring on hills and outcrops surrounding the city.

#### 6.1.2 Iron Age

Iron Age people started to settle in southern Africa c. AD 300, with one of the oldest known sites at Broederstroom south of Hartebeespoort Dam dating to AD 470. Having only had cereals (sorghum, millet) that need summer rainfall, Early Iron Age (EIA) people did not move outside this rainfall zone, and neither did they occupy the central interior highveld area. Because of their specific technology and economy, Iron Age people preferred to settle on the alluvial soils near rivers for agricultural purposes, but also for firewood and water.

The occupation of the larger geographical area (including the study area) did not start much before the 1500s. By the 16th century things changed, with the climate becoming warmer and wetter, creating conditions that allowed Late Iron Age (LIA) farmers to occupy areas previously unsuitable, for example the Witwatersrand and the treeless plains of the Free State.

Similar to the Stone Age, information on Iron Age settlement in the larger Bloemfontein region is lacking due to the urbanisation process.



Figure 3. Late Iron Age stone walled site located northeast of the project area

### 6.1.3 Historic period

When Major H D Warden was commissioned to serve as British Resident in the region between the Orange and Vaal Rivers, he bought the farm Bloemfontein from J N Brits in 1846 and established himself there. When the British government annexed the territory in 1848, Bloemfontein became the seat of the new administration. When the republic of the Orange Free State was established in 1854, the seat of government was moved from Winburg to Bloemfontein. The rise of Bloemfontein coincided with the discovery of diamonds in the decade 1860-1870 and the later discovery of gold in the ZAR (SESA 1970:366-372).

During the Second South African War (1899-1902), the town housed a large contingent of British troops. Most of their activities centred around what was to become known as Naval Hill. A concentration camp for women and children was set up on the western side of town, at the Tempe military base. Soldiers built long walls across the landscape, probably for defence, but also to keep busy and as a relief of boredom. Numerous lookout posts, also referred to as *sangars*<sup>1</sup> were constructed on hills and outcrops around the area where they kept watch over the landscape, fearing attacks from the Republicans (see Bennyworth 2004; Henderson 2004, 2006).

Two sites identified by SAHRA as of National significance (Grade I) are located in Bloemfontein to the east of the project areas:

- The grave of Mr Thomas Mapikela, a founding father of the ANC and an iconic leader of the liberation struggle, buried in the Hero's Acre in Phahameng Cemetery;

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<sup>1</sup> A term originally used in Persia to refer to a small, temporary fortified position on the perimeter of a base, and mostly used by sentries while on watch. The term was taken over by the British army and used all over the world.

- The Waaihoek Wesleyan Church, seen as the birth place of the South African Native National Congress (SANNC), predecessor of the ANC.

There are approximately 31 sites identified by SAHRA as of Provincial significance (Grade II), located in Bloemfontein:

- These invariably consists of historic buildings and burial sites.

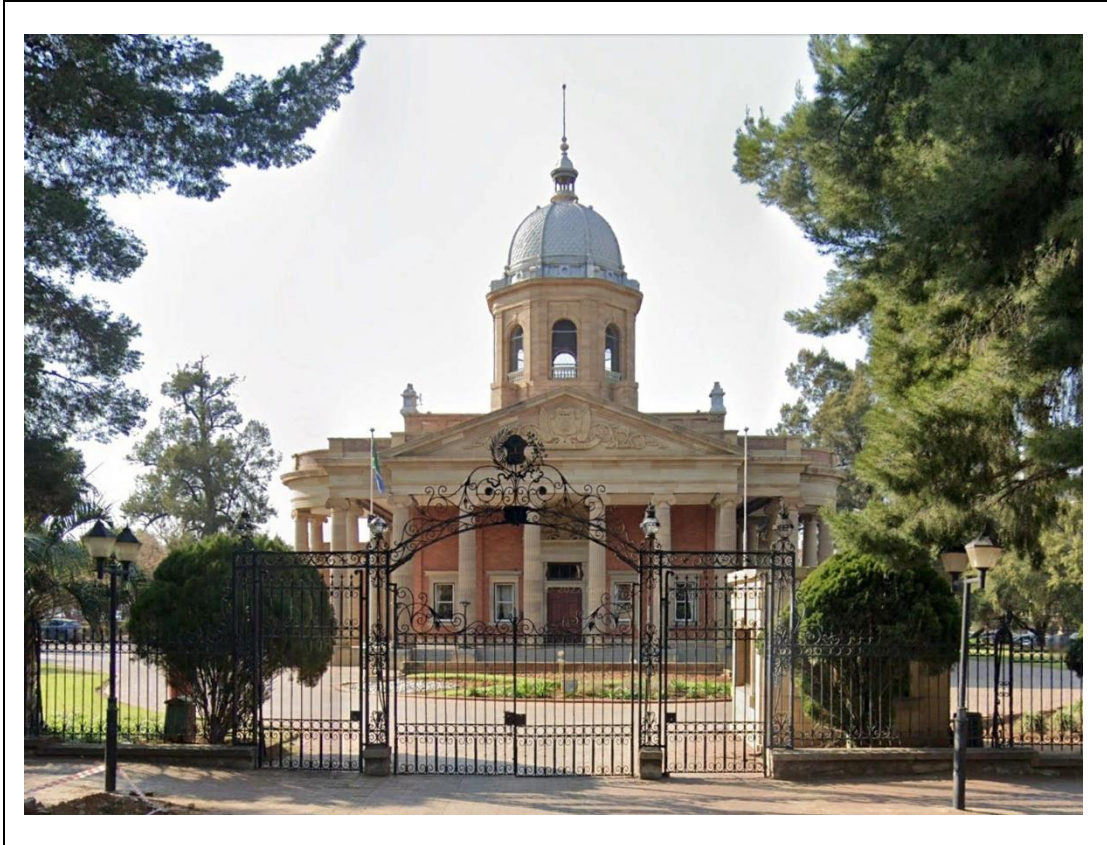


Figure 4. The Fourth Raadsaal in Bloemfontein

## 6.2 Site specific review

*Although landscapes with cultural significance are not explicitly described in the NHRA, they are protected under the broad definition of the National Estate (Section 3): Section 3(2)(c) and (d) list “historical settlements and townscapes” and “landscapes and natural features of cultural significance” as part of the National Estate.*

*The examination of historical maps and aerial photographs help us to reconstruct how the cultural landscape has changed over time as is show how humans have used the land.*

From a review of the available old maps and aerial photographs it can be seen that the project area has always been open space, with the main activity being agricultural fields.

The farm Kwaggafontein originally belonged to Sir Cornelis Hermanus Wessels, a well-known politician in the former Orange Free State Republic and later represented his constituency in the Legislative assesmbly. In 1915 he was appointed as Administrator for the Orange Free State and was knighted in 1920 (SESA 1975).

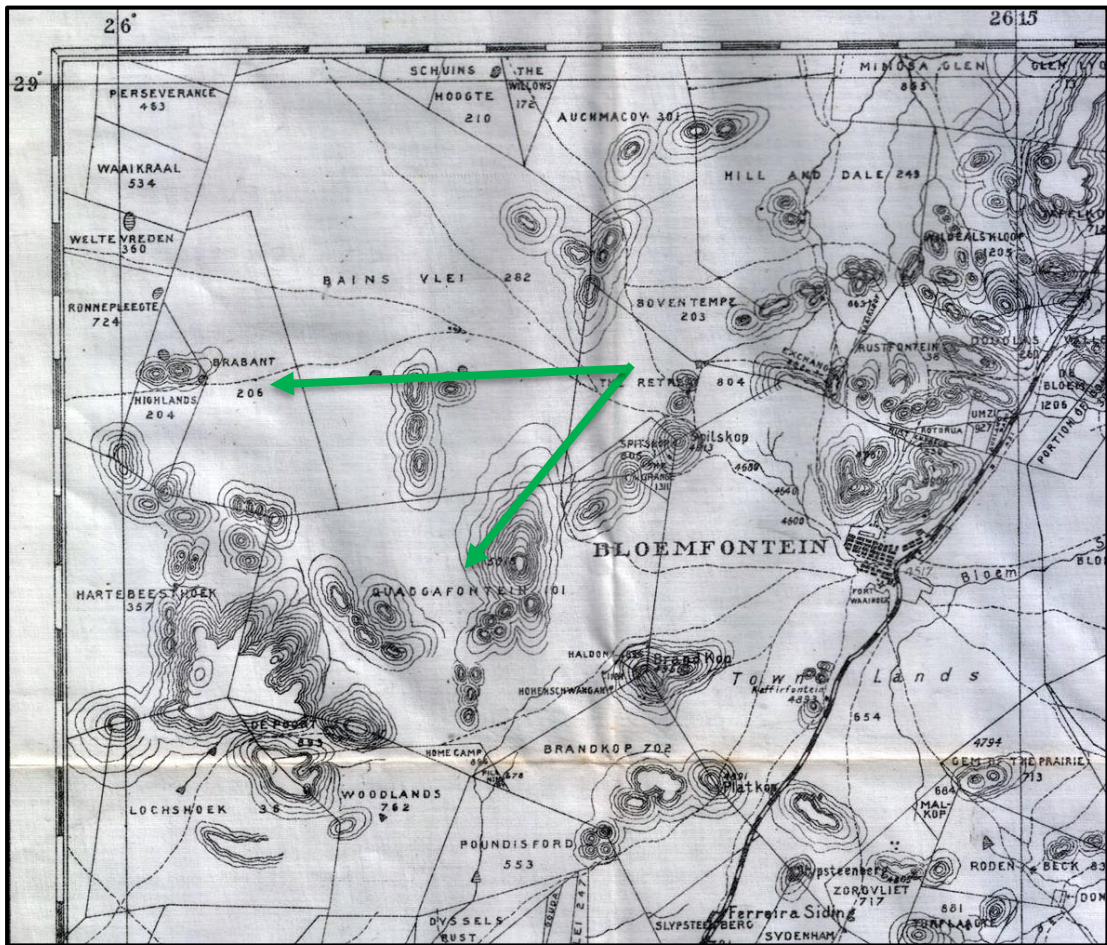


Figure 5. The project area on the Bloemfontein section of the *Field Intelligence Department Map* (Compiled for Field Intelligence Department, Bloemfontein, 1901)



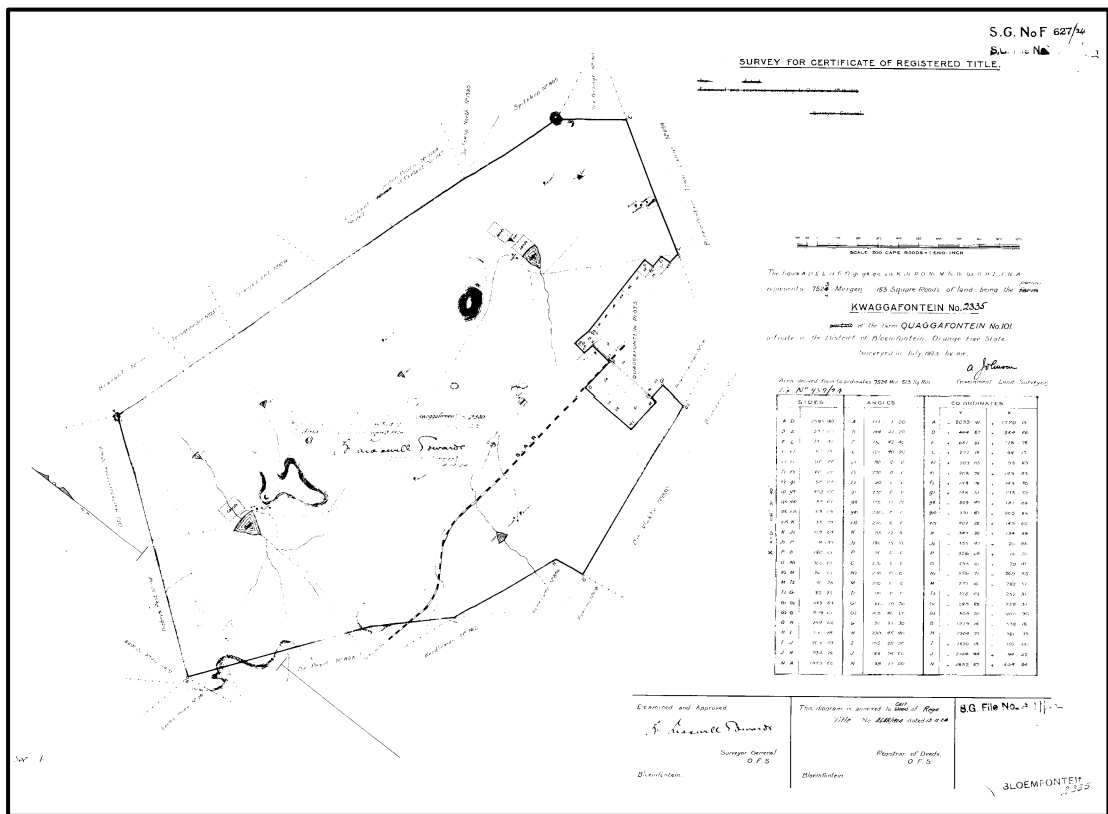


Figure 6. The original extent of the farm Kwaggafontein, originally known as Quaggafontein 101 (Certificate of Registration: 4648/1924; CS-G image: 1016RG02)

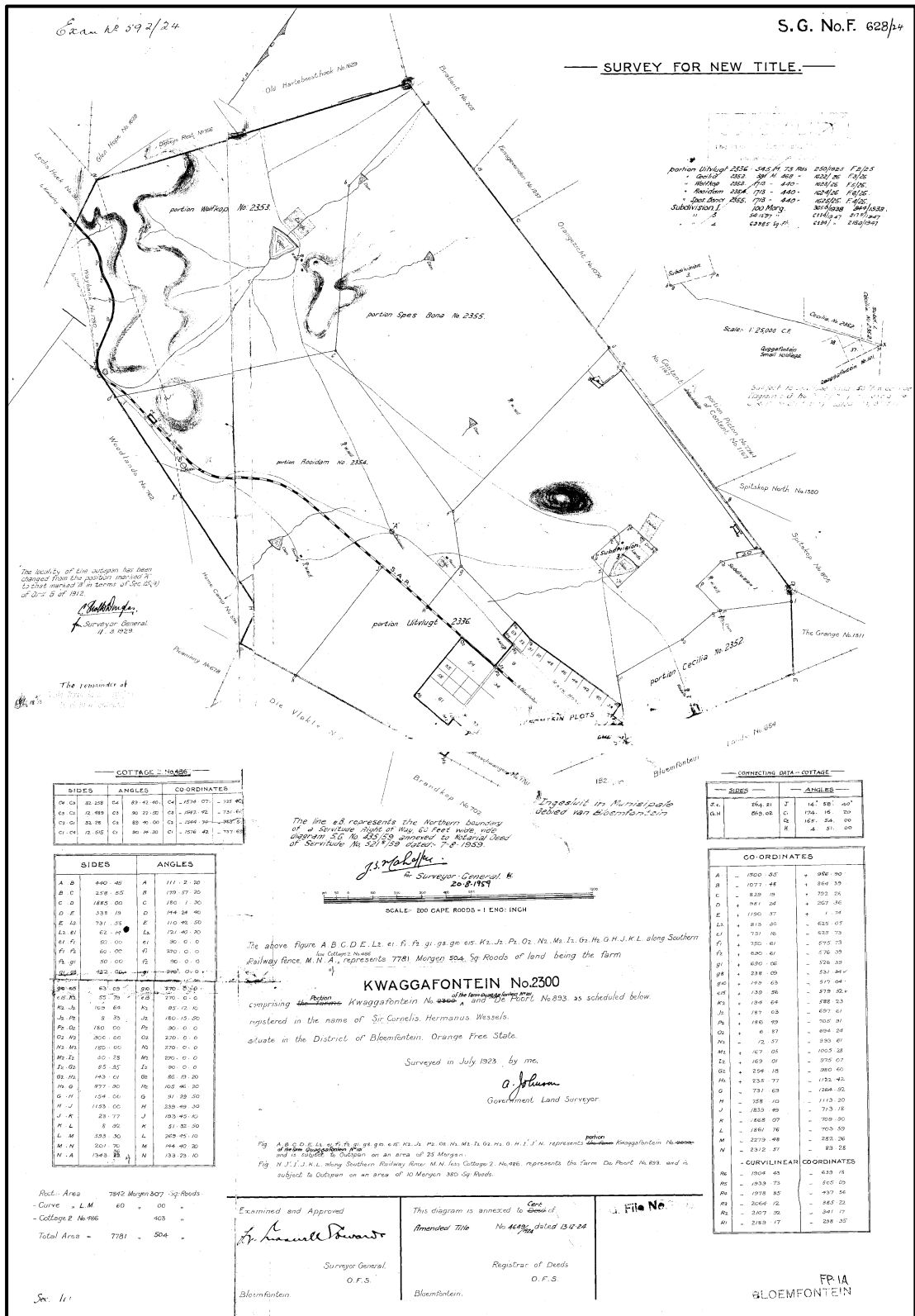


Figure 7. The farm Kwaggafontein, indicated as the property of Sir Cornelis Hermanus Wessels (Certificate of Amended Title: 4649/1924; CS-G image: 1023V101)

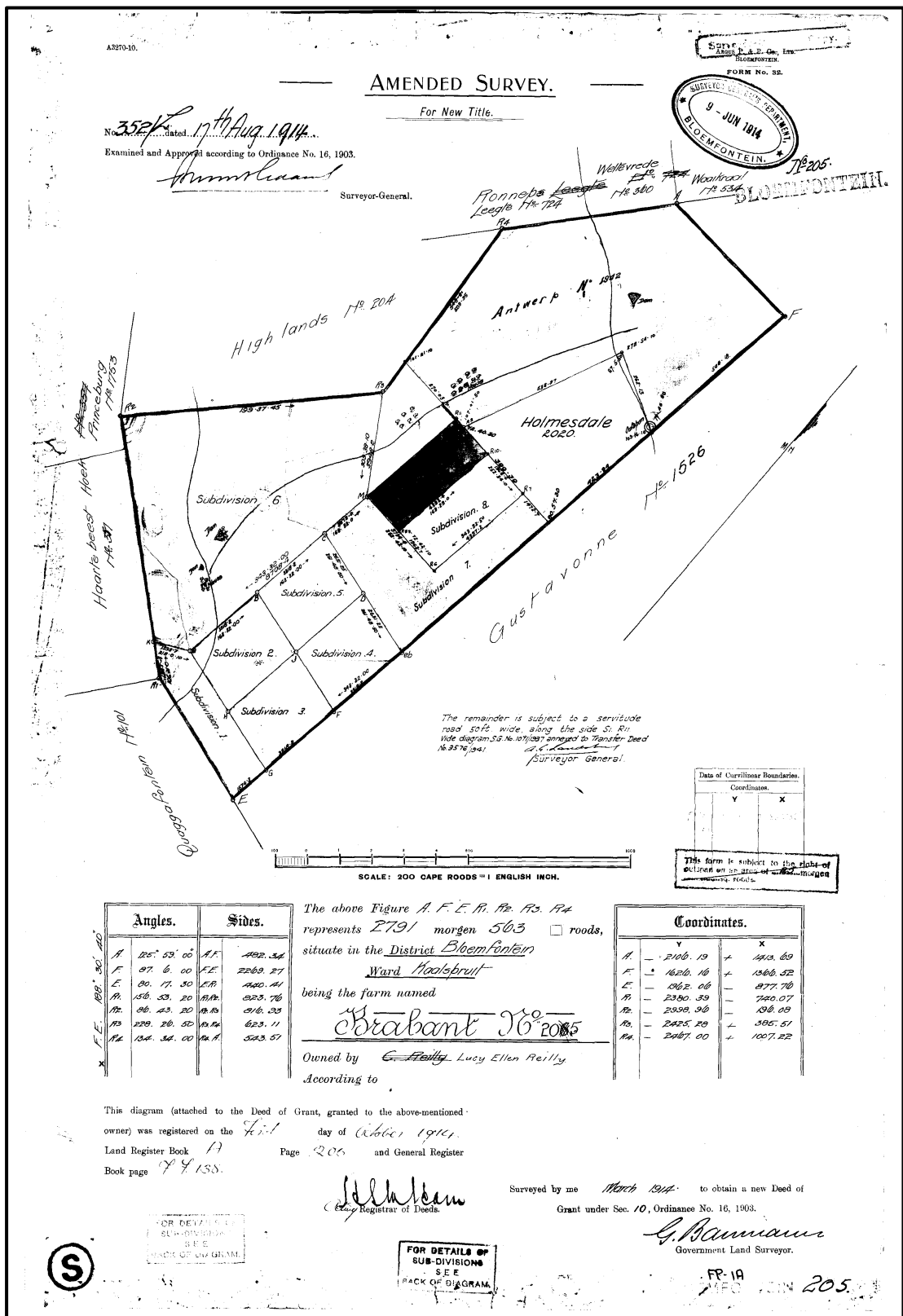


Figure 8. The farm Brabant (Deed of Grant: 352L/1914; CS-G image: 352L191A)

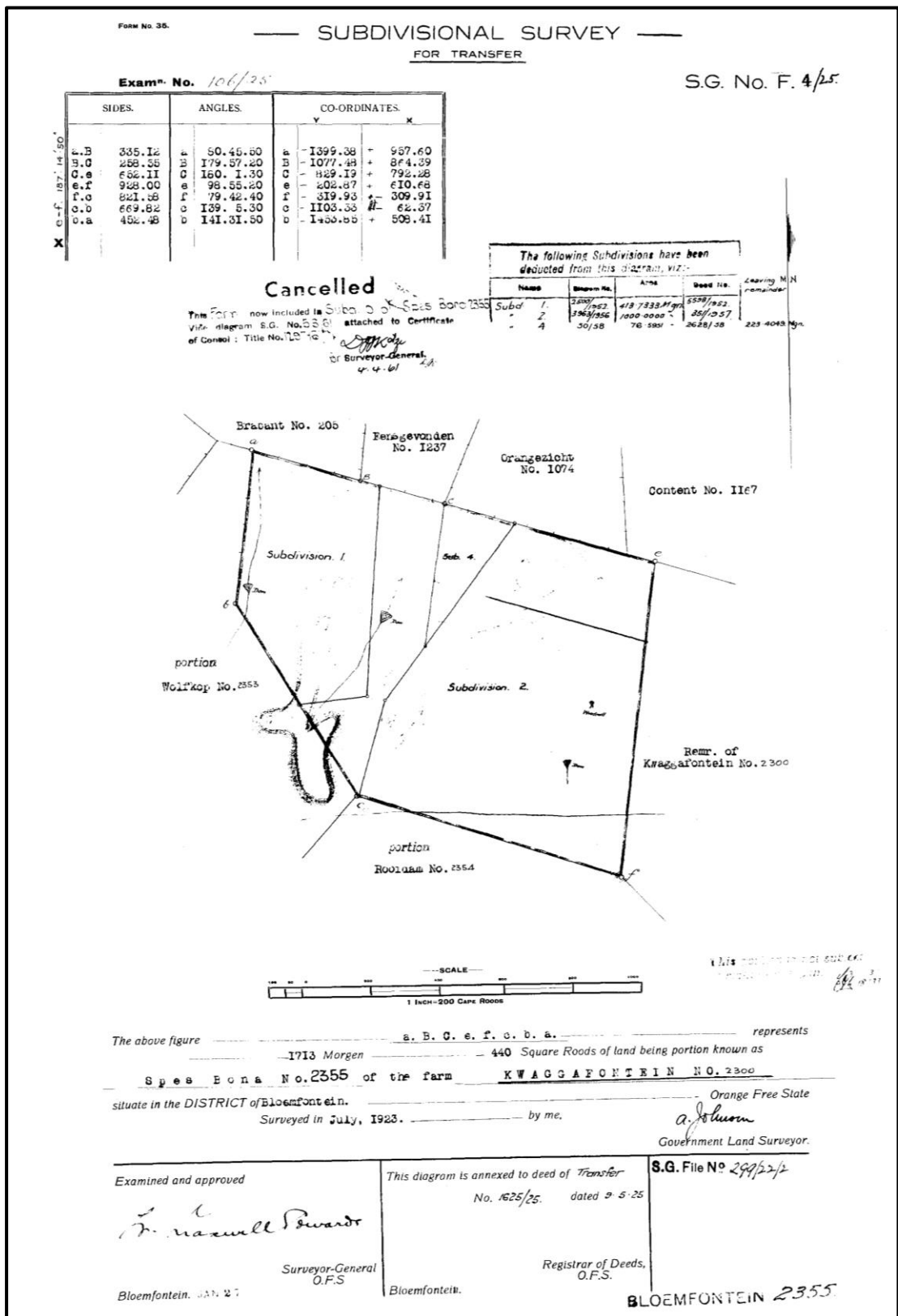


Figure 9. Subdivisional survey for the farm Spes Bona (Deed of Transfer: 1625/1925; CS-G image: 10176A02)

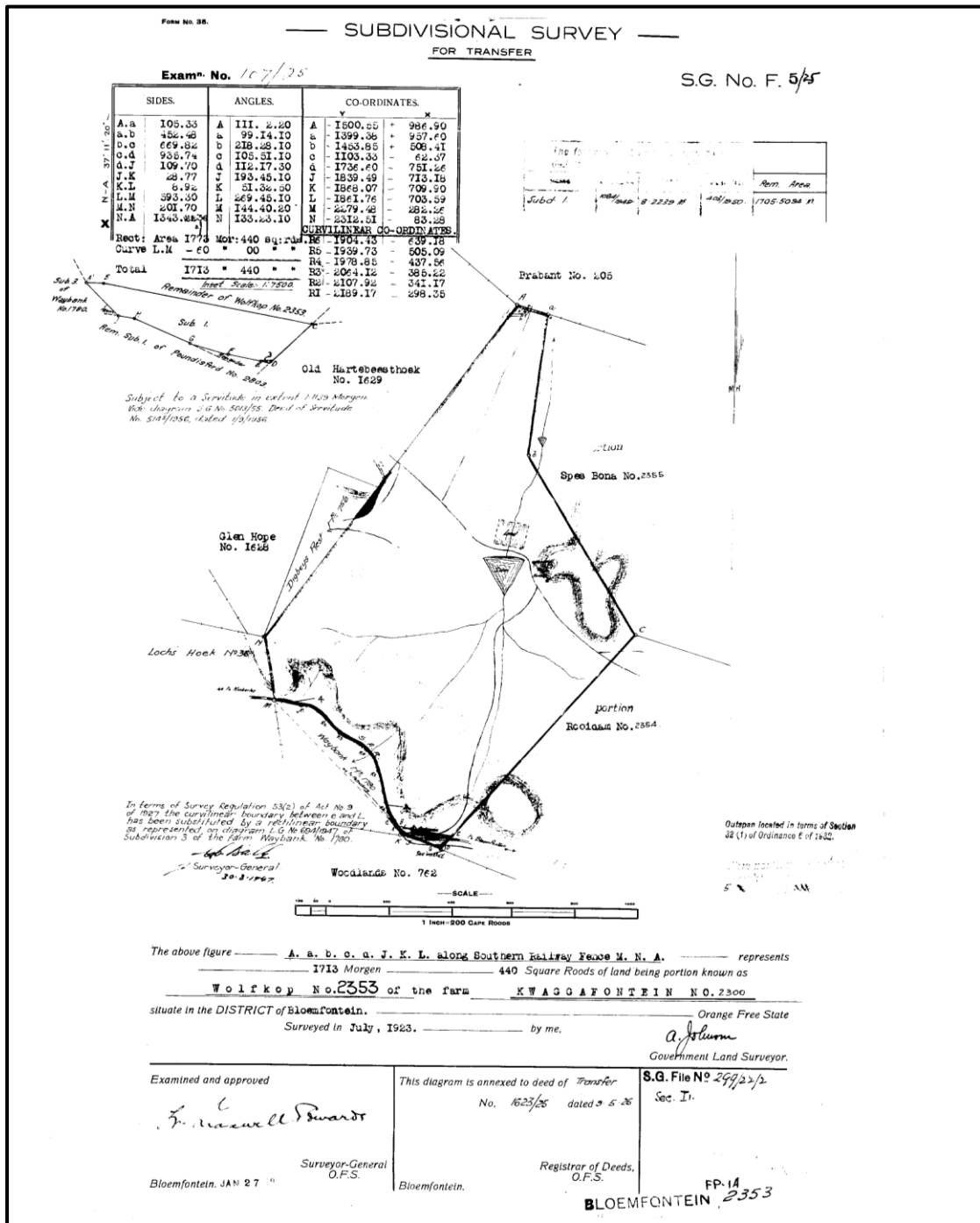


Figure 10. Subdivisional survey for the farm Wolfkop 2353 (Deed of Transfer: 1623/1925; CS-G image: 10162P02)

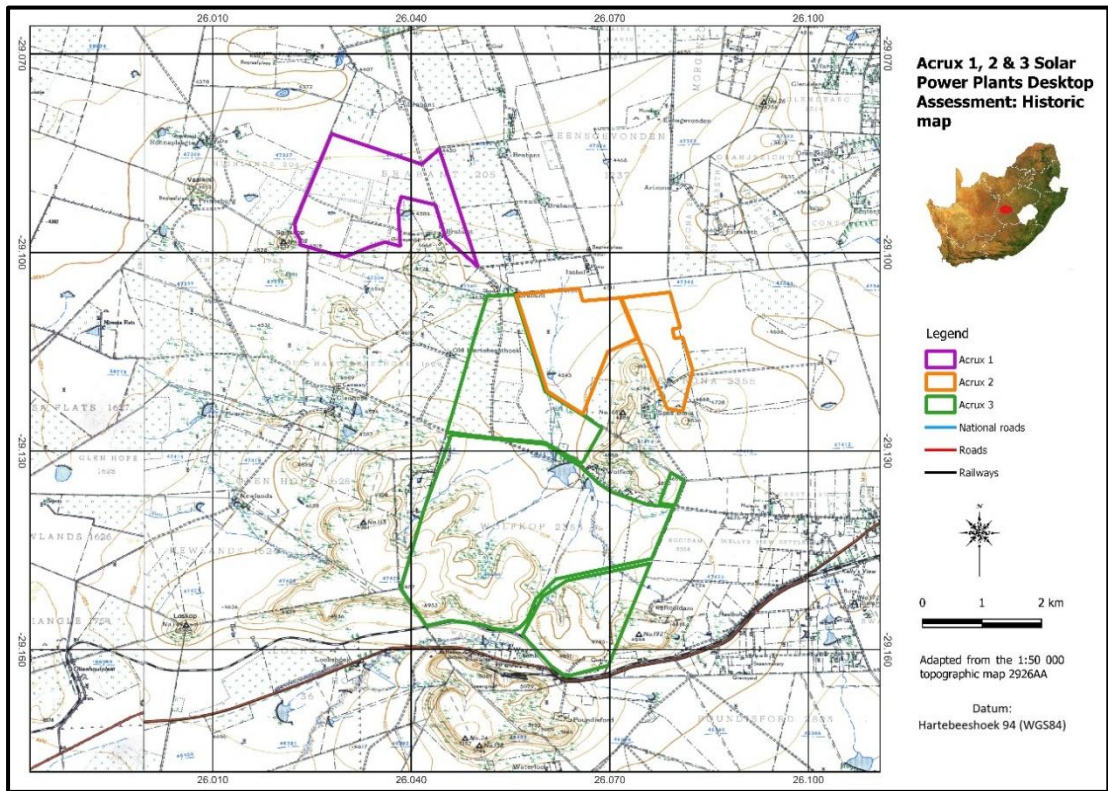


Figure 11. The project area indicated on the 1949 version of the 1:50 000 topographic map

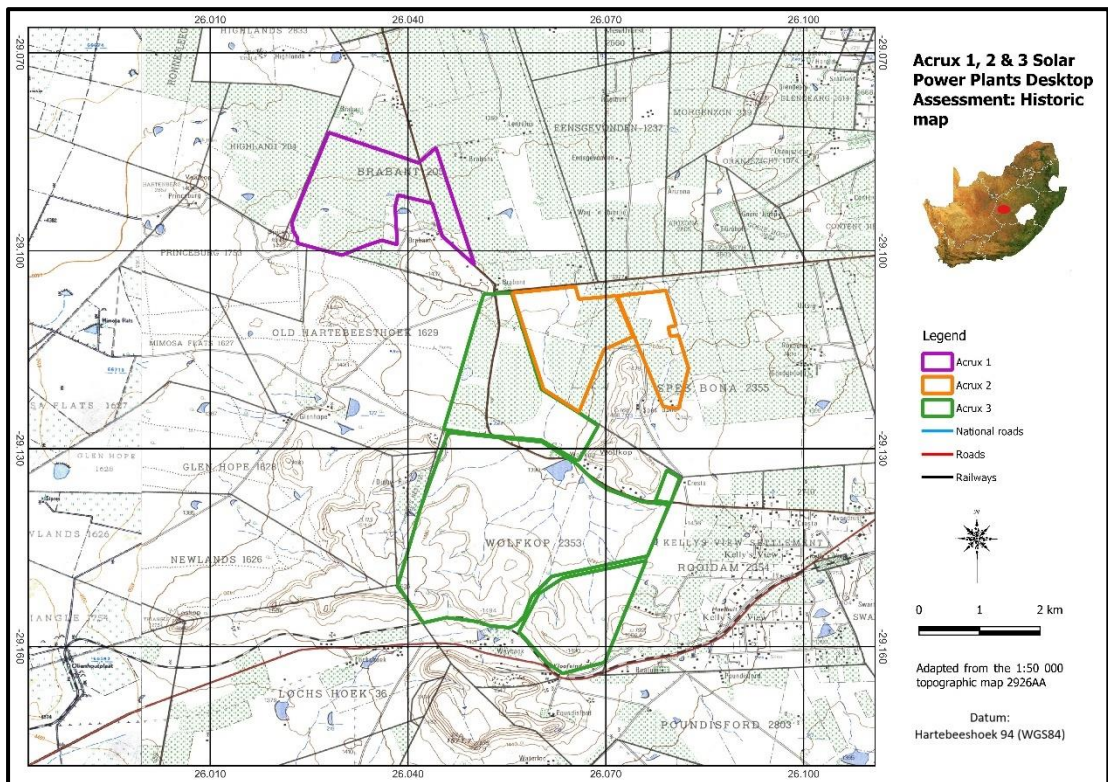


Figure 12. The project area indicated on the 1974 version of the 1:50 000 topographic map

## 7. SITE SENSITIVITY

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### 7.1 Stone Age

- Material dating to all phases of the Stone Age seems largely to be absent in the larger region. Only one previous heritage impact assessment done in the larger region indicated the presence of two tools dating from the Middle Stone Age.
  - Although current information seems to indicate an absence of material dating to the Stone Age, it is expected that more will be found, especially near outcrops, stream beds and in sheltered valleys.

### 7.2 Iron Age

- Only one reference to Iron Age sites in the larger region have been found. This is on Wolfkop and the eastern foot of the hill near the western portion of the farm. Unfortunately, not much information is given on these sites, although it is attributed to the Late Iron Age, c. 1600 and later.
  - It is possible that more such sites can occur in this region, as well as in other areas where hills and outcrops occur.

### 7.3 Historic period

- From a study of the available maps and aerial photographs, it seems as if elements of the built environment, i.e. farm houses, stock pens, water points and labourer accommodation and such is lacking in the proposed project area. This contrasts with the situation on other historic significant farms in the larger region: Bains Vlei, settled in 1847 by Andrew Hudson Bain; Onze Rust, which belongs to former president of the Orange Free State, M.T. Steyn; Kwaggafontein that belonged to Sir Cornelis Hermanus Wessels, well-known political leader in the former Orange Free State Republic.
  - At present it is unclear if any built features of significance occur in the project areas and this can only be verified during the site visit.
- Although only a few have been identified during this desktop assessment, burial sites seem to have occurred all over in the larger countryside. They are usually indicated on the 1:50 000 topographic map and can then also be georeferenced in Google Earth. Significantly, the all burial sites indicated on the older versions of map 2926AA, 1949 version, does not appear on the later maps and also cannot be seen on Google Earth.
  - It is expected that informal type of burial sites will be identified in the project areas. For this the input of local farm owners and workers would be invaluable as in many cases these sites are not very easy to detect.
- The railway line between Bloemfontein and Kimberley, completed in 1908, passes on the south of the sites, bordering specifically on the southern side of the farm Wolfkop. It is expected that bridges and culverts dating to the original line and still in use will be located at river crossings. Typically, these are rough sandstone ashlar culverts for smaller stream crossings, whereas bridges would have longer spans, with the abutments and piers of sandstone.
  - It is anticipated that these structures would not be impacted upon by the proposed development.

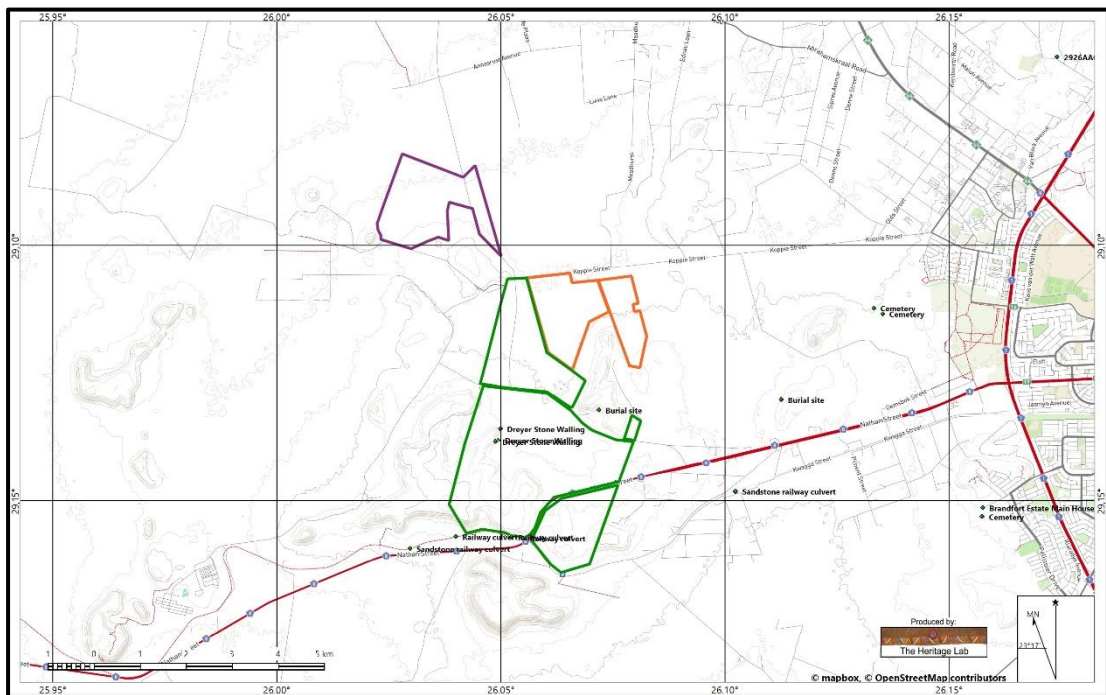


Figure 13. Location of know sites and features of cultural significance in the larger region (Please note, this map is based solely on available information and should not be seen as a final statement on cultural heritage sites in the project area)

## 8. CONCLUSIONS AND RECOMMENDATIONS

This report describes the methodology used, the limitations encountered, the heritage features that were identified and the recommendations and mitigation measures proposed relevant to this. The investigation consisted of a desktop study (archival sources, database survey, maps and aerial imagery), but no physical survey of the site.

Although a significant number of heritage impact assessments were done in the immediate vicinity of the project areas, it is clear that this area has of low presence of cultural heritage sites and features.

- Based on the desktop assessment it is possible, with a large amount of certainty, to indicate that there are no obvious red flag issues that would prevent to the project to proceed to the next level of investigation, i.e. a full heritage impact assessment. However, this statement is subject to review until such time as a full field survey has been conducted.



## 9. REFERENCES

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### 9.1 Data bases

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Environmental Potential Atlas, Department of Environmental Affairs and Tourism.  
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SAHRIS Database

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### **9.3 Archival sources, maps and aerial photographs**

1: 50 000 Topographic maps

Google Earth

Aerial Photographs: Chief Surveyor-General

<http://artefacts.co.za>

<http://vmus.adu.org.za>

<http://www.sahra.org.za/sahris/map/palaeo>

<https://screening.environment.gov.za/screeningtool>

## **10. ADDENDUM**

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### **1. Indemnity and terms of use of this report**

The findings, results, conclusions and recommendations given in this report are based on the author's best scientific and professional knowledge as well as available information. The report is based on survey and assessment techniques which are limited by time and budgetary constraints relevant to the type and level of investigation undertaken and the author reserve the right to modify aspects of the report including the recommendations if and when new information may become available from ongoing research or further work in this field, or pertaining to this investigation.

Although all possible care is taken to identify all sites of cultural importance during the investigation of study areas, it is always possible that hidden or sub-surface sites could be overlooked during the study. The author of this report will not be held liable for such oversights or for costs incurred as a result of such oversights.

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