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**HERITAGE IMPACT ASSESSMENT REPORT:  
PROPOSED BELFAST MINING PROJECT LOCATED  
ON PORTIONS OF THE FARMS LEEUWBANK 427 JS,  
BLIJVOORUITZICHT 383 JT, ZOEKOP 426 JS, SOUTH  
OF WONDERFONTEIN AND BELFAST, MPUMALANGA**



**PREPARED FOR**

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**DATE: 31 December 2009**

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**HERITAGE IMPACT ASSESSMENT REPORT: PROPOSED BELFAST MINING PROJECT LOCATED ON PORTIONS OF THE FARMS LEEUWBANK 427 JS, BLIJVOORUITZICHT 383 JT, ZOEKOP 426 JS, BETWEEN WONDERFONTEIN AND BELFAST, MPUMALANGA**

**PREPARED FOR: Charles Linström, Exxaro Resources Limited  
DATE OF SUBMISSION: 31 December 2009**

**EXECUTIVE SUMMARY**

This report fulfils the requirements for a Heritage Impact Assessment Report as provided for in Section 38 of the National Heritage Resources Act (NHRA) (Act 25 of 1999). This report also fulfils the requirements of a Specialist Study in accordance with the EIA Regulations and procedures.

The investigation was carried out by an independent generalist heritage practitioner, Dr RC de Jong (Cultmatrix cc).

The site for the proposed development consist of portions of three farms, located north and south of the N 4 between Wonderfontein and Belfast. The heritage context is typical of that of the Eastern Highveld, characterised by a rolling landscape on which farmsteads, homesteads, graves, old roads and tracks, pastures, clumps of mainly exotic trees, planted fields, streams and rocky sandstone outcrops occur. Most of the area has been under cultivation since the advent of commercial crop farming, an intervention that would have obliterated any possible traces of pre-colonial and early colonial settlement. Although mining will only be done in the central portion of the study area, it was felt that potential buffer zones also had to be investigated for any heritage resources.

The aim of the investigation was to identify heritage resources and to analyse and recommend heritage management mitigation measures and monitoring programmes.

The objectives were to identify, verify and assess heritage resources, to analyse heritage issues, to research the chronology of the site and its role in the broader context, to undertake a comprehensive assessment of heritage significance, to analyse the nature and scale of the proposed development, to establish the compatibility of the proposed development with heritage and other statutory frameworks and to assess alternatives in order to promote heritage conservation issues.

The result of this investigation is a heritage impact assessment, based on the available pre-feasibility study block plan, the mining area boundaries, the proposed plant position and other information. Final reports must to be submitted to SAHRA for authorising the project.

A large number of tangible and intangible heritage resources of cultural significance were identified and plotted, consisting mainly of farmsteads, homesteads and graves. These are very common regarding many parts of the Eastern Highveld.

This report complies as follows with the provisions of Section 38 (3) of the *National Heritage Resources Act* (Act 25 of 1999):

- (a) Identification and mapping of heritage resources**
- (b) Significance**
- (c) Impact**
- (f) Mitigation before construction**

See below summarising table that classifies identified heritage resources in terms of the NHRA.

S 3(2) NHRA heritage resource	(a)	(b)		(c)	(d)		
		Tangible	Intangible		Issues	Responses	Status
Buildings, structures, places and equipment of	Farmsteads and homesteads with historic	Low to high	Medium to high	Possible alteration and demolition	Combination of buildings older than 60 years and younger	Avoidance and preservation of most significant	-

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S 3(2) NHRA heritage resource	(a)	(b)		(c)	(d)		
		Tangible	Intangible		Issues	Responses	Status
cultural significance	buildings			by open pits and proposed plant positions	than 60 years. Many of the older buildings are in a poor condition and have been altered.	farmsteads. Documentation of buildings older than 60 years before demolition. Photo documentation of younger buildings before demolition.	
Areas to which oral traditions are attached or which are associated with intangible heritage	Entire area	Medium	Medium	Possible alteration and demolition by open pits and proposed plant positions	Applies to established farming families and their workers; also to male initiation rites of Ndebele farm workers	Consult with affected communities about alternative places	-
Objects to which oral traditions are attached or which are associated with intangible heritage	None	-	-	-	-	-	-
Areas of significance related to labour history	Homesteads (kraals)	Low	Medium	Possible alteration and demolition by open pits and proposed plant positions	Typical homesteads occupied by farm workers	Compensate workers in case of relocation. Map and document one representative homestead before demolition.	-
Historical settlements and townscapes	None	-	-	-	-	-	-
Landscapes and natural features of cultural significance	Water courses and sandstone outcrops	High	Medium	Possible alteration and destruction by open pits and proposed plant positions	Water courses and outcrops sometimes contain isolated Stone Age and Iron Age finds	To be guided by EIA mitigation measures	-
Geological sites of scientific or cultural importance	None	-	-	-	-	-	-
Archaeological and palaeontological sites	Grave sites	High	High	Possible alteration and destruction by open pits and proposed plant positions	Associated with farmers and workers. No pre-colonial features could be identified.	Avoid if possible, otherwise relocate graves (SAHRA S 36 permit)	-

The below detailed list summarises in detail significant heritage resources that have been identified and complies with the requirements of Sections 3(3)(a), 3(3)(b) and 3(3)(f) of the *National Heritage Resources Act* (Act 25 of 1999), which deal with mapping, significance assessment and pre-construction mitigation measures. The other sections that deal with impact assessment, public participation and post-construction conservation management have not been addressed since they are somewhat beyond the scope of this report.

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The colour code reflects the overall sensitivity of individual heritage features in terms of high (red), medium (blue) and low (green). The management action intends to minimise any risks associated with possible negative impacts.

The site numbers refer to the farm portion on which the heritage resource occurs:

BV = Blijvooruitzicht, L = Leeuwbank, Z = Zoekop, numbers refer to farm portions, G = grave, F = farmstead, H = homestead, N = natural feature, S = structure

SITE	RESOURCE	COORDINATES	SIGNIFICANCE (1)	CONDITION (2)	SENSITIVITY (1 X 2)	MANAGEMENT ACTION
BV6G	Farm worker's grave	25°49'16.58"S 29°58'36.93"E	3	2	6	Avoid if possible, restore, protect and interpret, otherwise relocate
BV8F	Modern farmstead	25°48'34.91"S 29°59'33.82"E	1	3	3	Photo document before demolition
BV8G	Mtsweni graves (5)	25°48'53.23"S 29°59'38.78"E	3	3	9	Avoid if possible, restore, protect and interpret, otherwise relocate
BV9G1	Farmer's grave	25°50'15.73"S 29°58'58.72"E	3	2	6	Avoid if possible, restore, protect and interpret, otherwise relocate
BV9G2	Farm workers graves	25°49'43.49"S 29°58'53.12"E	3	2	6	Avoid if possible, restore, protect and interpret, otherwise relocate
BV9H	Farm workers homestead	25°50'11.43"S 29°58'59.62"E	1	2	2	Photo document before demolition
BV13G	Farm workers graves	25°50'11.10"S 30°0'12.45"E	3	2	6	Avoid if possible, restore, protect and interpret, otherwise relocate
BV13S	Remains of kraal and homestead	25°49'51.23"S 30°0'26.38"E	1	1	2	None
BV18G	Coetzer graves	25°48'9.10"S 30°0'15.50"E	3	2	6	Avoid if possible, restore, protect and interpret, otherwise relocate
BV18F	Farmstead	25°48'9.80"S 30°0'14.70"E	1	2	2	Photo document before demolition
L3G	Farm workers graves (20)	25°50'15.80"S 29°56'6.40"E	3	2	6	Avoid if possible, restore, protect and interpret, otherwise relocate

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SITE	RESOURCE	COORDINATES	SIGNIFICANCE (1)	CONDITION (2)	SENSITIVITY (1 X 2)	MANAGEMENT ACTION
L3H	Mtsweni homestead	25°50'13.36"S 29°56'7.83"E	1	2	2	Photo document before demolition
L5F	Farmstead	25°46'47.86"S 29°57'6.33"E	2	2	4	Record to monitor for damage caused by blasting etc
L5H	Homestead	25°46'56.78"S 29°57'8.80"E	1	2	2	Photo document before demolition
L5G	Cemetery	25°47'0.90"S 29°57'10.80"E	3	2	6	Avoid if possible, restore, protect and interpret, otherwise relocate
L7F	Modern farmstead with some historic buildings	25°48'24.11"S 29°57'10.67"E	1	3	3	Photo document before demolition
L7G	Graves	25°48'14.22"S 29°57'13.25"E	3	2	6	Avoid if possible, restore, protect and interpret, otherwise relocate
L8G1	Farmers' graves	25°48'39.55"S 29°57'16.78"E	3	2	6	Avoid if possible, restore, protect and interpret, otherwise relocate
L8G2	Farm workers graves	25°49'6.34"S 29°56'37.92"E	3	2	6	Avoid if possible, restore, protect and interpret, otherwise relocate
L10G1	Swart and other farmers' graves	25°48'38.60"S 29°58'40.50"E	3	2	6	Avoid if possible, restore, protect and interpret, otherwise relocate
L10G2	Single black grave	25°48'59.85"S 29°58'22.89"E	3	2	6	Avoid if possible, restore, protect and interpret, otherwise relocate
L10G3	Single worker's grave	25°48'51.57"S 29°58'9.50"E	3	2	6	Avoid if possible, restore, protect and interpret, otherwise relocate
L10F	Historic farmstead	25°48'42.80"S 29°58'39.40"E	3	3	9	Avoid and preserve
L10H	Homesteads	25°49'7.51"S 29°58'19.19"E	1	2	2	None
L11G	Farm workers graves	25°47'50.55"S 29°58'28.81"E	3	2	6	Avoid if possible,



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SITE	RESOURCE	COORDINATES	SIGNIFICANCE (1)	CONDITION (2)	SENSITIVITY (1 X 2)	MANAGEMENT ACTION
						restore, protect and interpret, otherwise relocate
L15G	Roy Coetzer grave	25°49'17.24"S 29°57'16.53"E	3	2	6	Avoid if possible, restore, protect and interpret, otherwise relocate
L16G	Farm workers graves	25°49'20.01"S 29°56'6.87"E	3	2	6	Avoid if possible, restore, protect and interpret, otherwise relocate
LREF	Modern farmstead	25°46'57.78"S 29°57'40.19"E	1	3	3	Photo document before demolition
Z1F	Modern farmstead	25°48'29.20"S 29°58'58.50"E	1	2	2	Photo document before any demolition
Z1G1	Farm workers graves	25°48'22.10"S 29°58'53.50"E	3	1	3	Avoid if possible, restore, protect and interpret, otherwise relocate
Z1G2	Farm workers graves	25°48'27.44"S 29°59'8.81"E	3	1	3	Avoid if possible, restore, protect and interpret, otherwise relocate
Z1G3	Farm workers graves	25°48'26.83"S 29°59'13.61"E	3	2	6	Avoid if possible, restore, protect and interpret, otherwise relocate
Z2G	Single farmer's grave	25°47'45.48"S 30°0'2.35"E	3	2	6	Avoid if possible, restore, protect and interpret, otherwise relocate
Z2F	Old farmstead with sandstone ruins	25°47'42.57"S 29°59'59.36"E	1	1	1	Photo document before any demolition
Z4F	Modern farmstead with sandstone outbuildings	25°45'34.70"S 29°59'56.60"E	1	2	2	Photo document before any demolition
Z4G1	Farmer's grave	25°45'29.10"S 30°0'4.20"E	3	1	3	Avoid if possible, restore, protect and interpret, otherwise relocate
Z4G2	Farm workers graves	25°45'59.90"S 30°0'4.30"E	3	2	6	Avoid if possible, restore, protect and interpret,

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SITE	RESOURCE	COORDINATES	SIGNIFICANCE (1)	CONDITION (2)	SENSITIVITY (1 X 2)	MANAGEMENT ACTION
						otherwise relocate
Z4N	Sandstone outcrops	25°45'37.75"S 30°0'4.82"E	2	2	4	Avoid
Z7G	Farm workers graves	25°47'32.07"S 29°59'2.63"E	3	2	6	Avoid if possible, restore, protect and interpret, otherwise relocate
Z8F	Modern farmstead	25°46'57.30"S 29°59'32.40"E	1	2	2	Photo document before any demolition
Z8G	Farm workers graves	25°47'11.70"S 29°59'27.80"E	3	1	3	Avoid if possible, restore, protect and interpret, otherwise relocate
Z11F	Farmstead with sandstone buildings (local landmark)	25°45'4.40"S 29°59'53.10"E	3	2	6	Avoid and preserve at all costs
Z11G	Farm workers graves	25°45'0.60"S 29°59'44.10"E	3	2	6	Avoid if possible, restore, protect and interpret, otherwise relocate
Z14B	Mission station complex(Victory Fellowship)	25°45'45.54"S 29°58'18.56"E	2	2	4	Avoid if possible, otherwise photo document and relocate
Z15F	Modern farmstead	25°47'14.60"S 29°58'46.90"E	1	2	2	Photo document before any demolition
Z5H	Old farm house	25°47'36.00"S 29°58'33.00"E	2	1	2	Document before demolition

## Findings

Significant heritage resources that have been identified and assessed encompass:

- Farmsteads (both modern and historic)
- Farm homesteads (both modern and historic)
- Graves and burial grounds
- Farm structures (ruins and foundations)
- Planted crops
- Grazing
- Farm dams
- Furrows
- Farm roads and tracks
- Exotic tree lanes and plantations

There will be direct and indirect impacts from the following development sources:

- Open pit
- Proposed plant site
- Construction of infrastructure (haulage roads, roads, power lines, pipe lines, conveyor belts etc)
- Relocation of District Road 1770

Direct impacts comprise alteration, destruction and demolition, whilst indirect impacts comprise gradual deterioration in the long term due to noise, vibrations, dust, vandalism etc.

Regarding the open pit locations and boundaries, there are no real alternative locations and boundaries. Even if heritage resources located just outside the boundaries would be preserved, there would be long-term adverse indirect impacts.

Regarding the proposed plant locations, three possible sites were considered initially.

PROPOSAL	LOCATION	MITIGATIONS TO MINIMISE ADVERSE IMPACTS ON HERITAGE RESOURCES	PREFERENCE RATING
1	Leeuwbank 2, 7, 16, 8	Relocate graves (2 burial sites)	2
2	Blijvooruitzicht 10	-	1
3	Zoekop 8, RE	Photograph modern homestead before destruction Impacts from relocation of District Road 1770	3

After considering the three alternatives, Exxaro Coal has selected plant site No 2, which will have the least impact on heritage and environmental resources:

- No heritage resources of significance
- Close to existing district road
- Close to existing plant from neighbouring colliery (already adverse visual impact implications)

### Recommendations

Based on what was found and its evaluation, Cultmatrix will support the proposed mining development in the area with the client's agreement about the following recommendations:

1. That the mitigation and management measures as set out in this report are applied for both the entire area and for each identified site prior to development taking place, namely:
  - If possible, avoidance, retention and conservation of highly significant farmsteads and homesteads;
  - Where farmsteads cannot be preserved, those with buildings older than 60 years should be documented in terms of Section 34 of the NHRA, implying mapping of the farmstead, plans and elevations of the old buildings and a photo record of the remaining buildings;
  - Applications (Section 34) must be made to the Mpumalanga Provincial Heritage Resources Authority for obtaining demolition permits;
  - Site clearing and detailed mapping of all affected grave sites to determine exact number and age of graves;
  - Avoidance and preservation of all grave sites if possible;
  - Where grave sites cannot be avoided, they should be relocated in terms of Section 36 of the NHRA;
  - Other farmsteads should be documented (photos) before demolition, should it not be possible to avoid them;
  - Photo documentation of one representative homestead before demolition;
  - Sites associated with the initiation of male farm workers should be avoided (a site occurs on Blijvooruitzicht 12);
2. Should any unknown human remains be disturbed, exposed or uncovered during preparations for the proposed project, these should immediately be reported to Cultmatrix. Burial remains should not be disturbed or removed until inspected by an archaeologist.
3. Site clearing and preparation activities must be monitored for the occurrence of any other archaeological material (Stone Age tools, Iron Age artefacts, historic waste disposal sites etc) and

similar chance finds and an archaeologist should be asked to inspect the area when this has reached an advanced stage in order to verify the presence or absence of any such material.

4. An archaeologist should be requested to check the final plant site for any archaeological artefacts.
5. A desktop study for the entire mining area by an accredited palaeontologist is advisable.
6. All preserved farmsteads and homesteads, whether under the control of Exxaro or whether in private ownership, should be monitored for damage (e.g. cracking of walls) caused by blasting work at the operating mine;
7. The above recommendations must be included in the Environment Management Plan for the proposed project;
8. A Heritage Conservation Management Plan should be drafted for ensuring that preserved sites (farmsteads, homesteads, graves) under the control of Exxaro will be maintained.
9. The relocation of District Road 1770 should be subject to a separate HIA study.

The final HIA report that may be submitted to SAHRA that should include the EIAs public participation report as well.



**R C DE JONG**  
**Public Officer and Principal Investigator: Cultmatrix cc**

## PART 1: DEVELOPMENT OVERVIEW

The structure of this report is based on:

- SOUTH AFRICAN HERITAGE RESOURCES AGENCY, Heritage Impact Assessment: Notification of intent to develop (form)
- DEPARTMENT OF ENVIRONMENTAL AFFAIRS AND DEVELOPMENT PLANNING, PROVINCIAL GOVERNMENT OF THE WESTERN CAPE, 2005, Guideline for involving heritage specialists in EIA processes (document)
- DEPARTMENT OF ENVIRONMENT AFFAIRS AND TOURISM, Integrated Environmental Management Guidelines
- SOUTH AFRICAN HERITAGE RESOURCES AGENCY, 2006, *Minimum standards: Archaeological and palaeontological components of impact assessment reports* (unpublished).
- WORLD BANK, *Environmental Assessment Sourcebook Update No 8, September 1994: Cultural Heritage in Environmental Assessment*.
- Best-practice HIA reports submitted by Cultmatrix and other heritage consultants

### 1.1 Background

#### 1.1.1 General

This heritage scoping report is part of the Environmental Impact Assessment (EIA) for the mining development of portions of the farms Leeuwbank 427 JS, Blijvooruitzicht 383 JT and Zoekop 426 JS, located north and south of the N4 between Wonderfontein and Belfast. The proposed development comprises open-cast coal-mining by Exxaro and is known as the Belfast project.

The Belfast area has a long history of human use and occupation, initiated by Stone and Iron Age communities and culminating in permanent colonial settlement in the 1850s. It includes a range of heritage resources as defined in the *National Heritage Resources Act (Act 25 of 1999)*:

- Places, buildings and structures and equipment of cultural significance;
- Places to which oral traditions are attached or that are associated with intangible heritage (ceremonies, memories, festivals, economic use etc);
- Historical settlements and townscapes;
- Landscapes and natural features of cultural significance;
- Graves and burial grounds;
- Archaeological sites;
- Sites related to the history of farm labour.

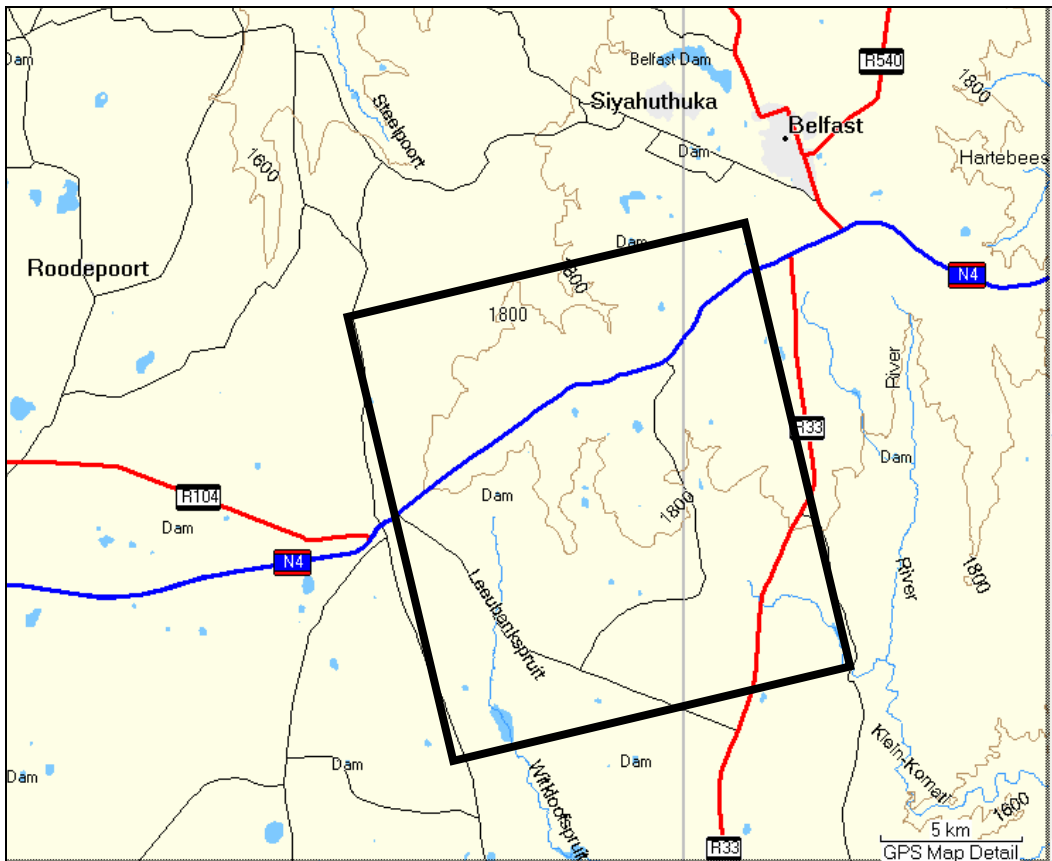
Exxaro appointed Cultmatrix cc as an independent heritage consultant to conduct a heritage assessment of places, buildings, objects and structures of cultural significance found within the boundaries of the area that is to be impacted upon directly and indirectly by the layout of the proposed development in order to identify sensitive and less sensitive features that will in the end inform the location of the mine and its associated infrastructure.

#### 1.1.2 Terms of reference

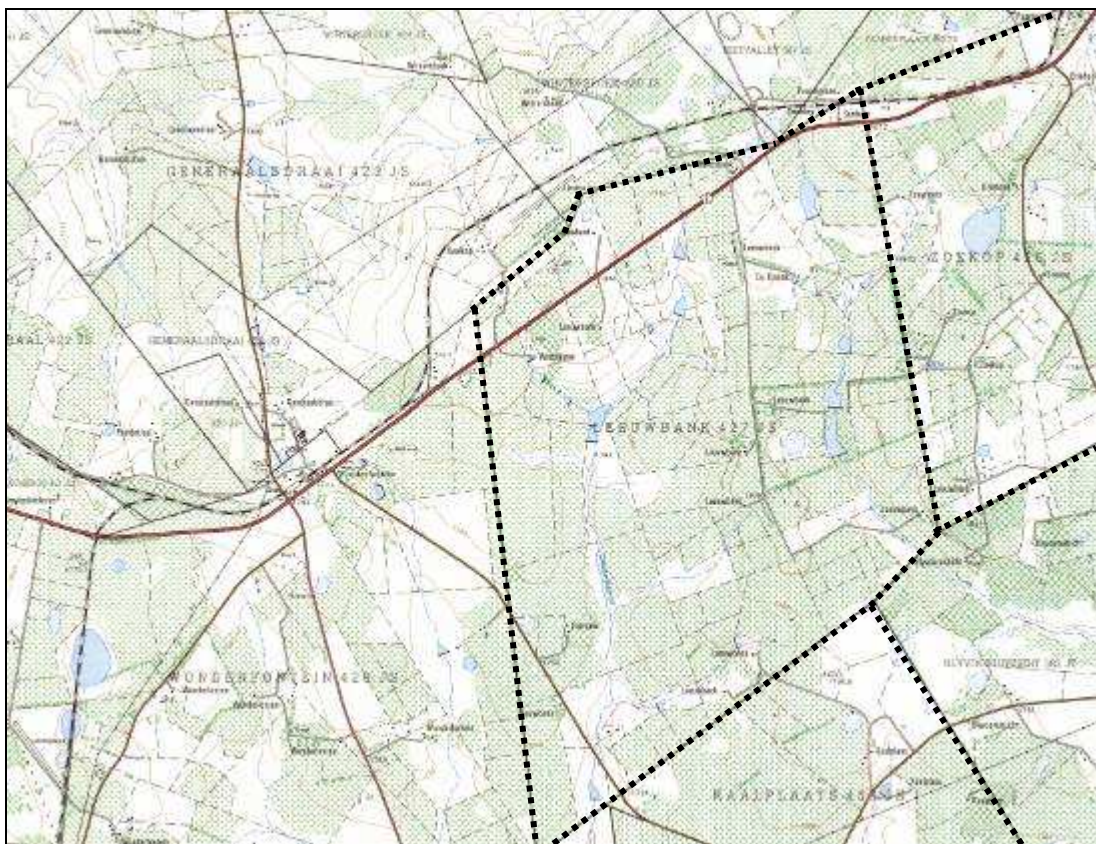
This investigation is a heritage impact assessment concerning the proposed development in accordance with the requirements of Section 38 of the National Heritage Resources Act (Act 25 of 1999).

The general aim of the study was to identify heritage resources and to recommend heritage management mitigation measures and monitoring programmes.

The general objectives were to analyse heritage issues, to research the chronology of the site and its role in the broader context, to undertake a comprehensive assessment of heritage significance, to analyse the nature and scale of the proposed development, to establish the compatibility of the proposed development with heritage and other statutory frameworks and to assess alternatives in order to promote heritage conservation issues.

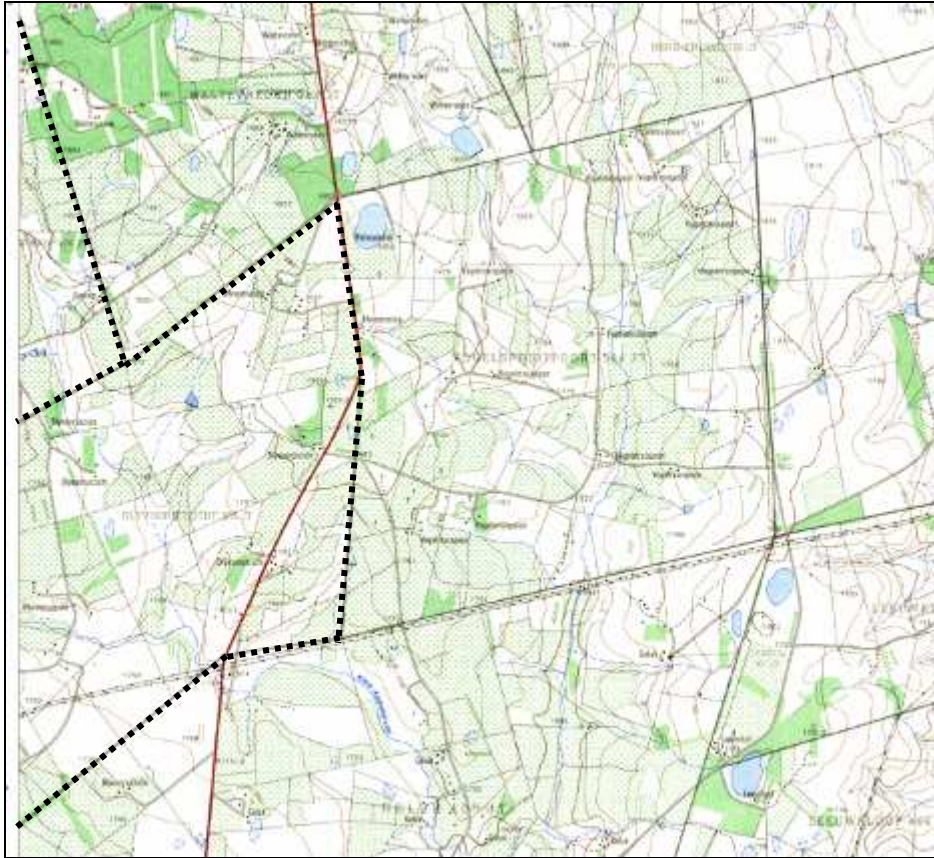


**FIGURE 1: Map indicating location of the proposed development area. North is at the top.**

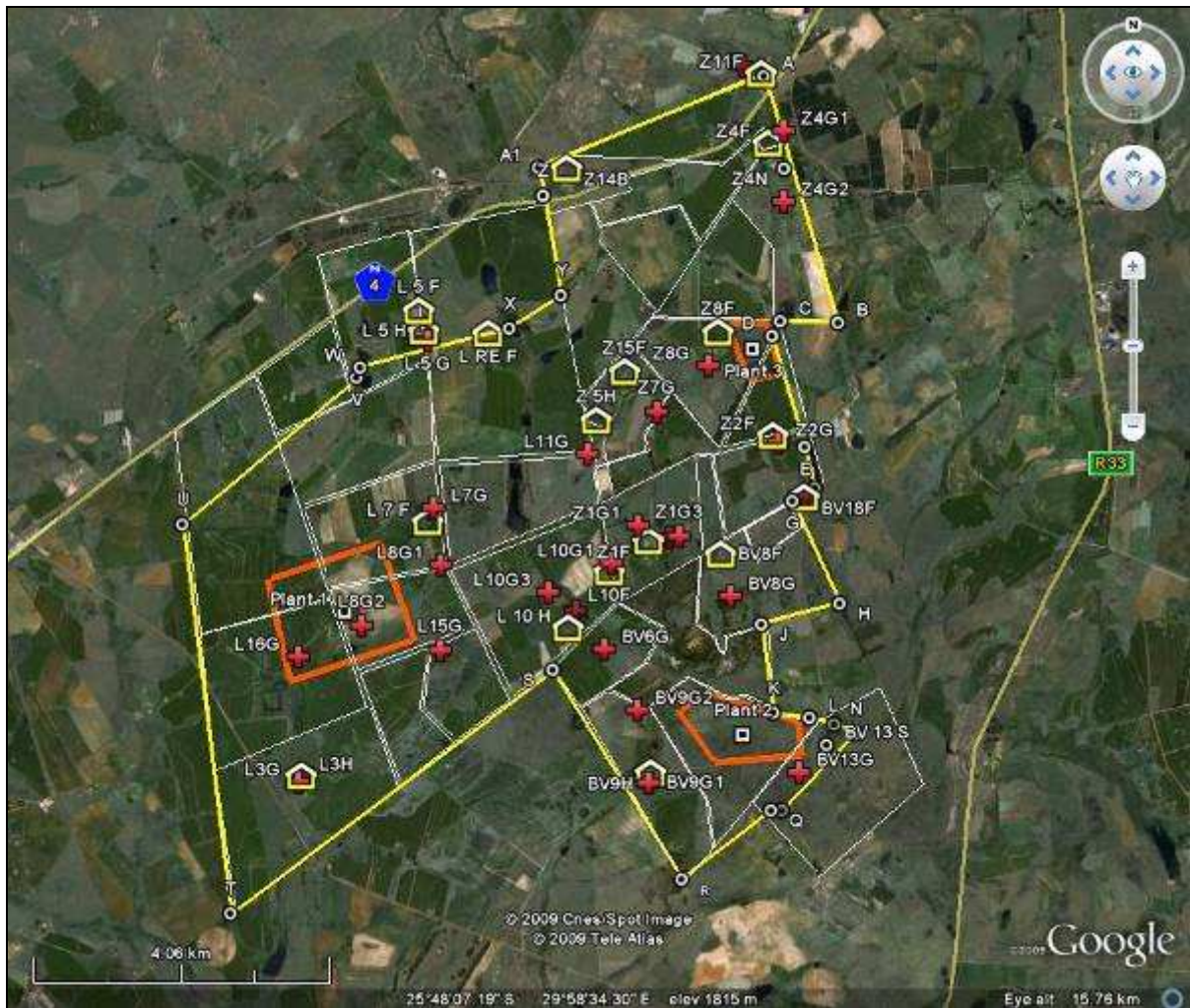


**FIGURE 2: Portion of 2529 DD Wonderfontein (1986) indicating the farms Leeuwbank (left), Zoekop (top right) and Blijvooruitzicht (bottom right)**





**FIGURE 3: Portion of 2530 CC Moedig (1988) indicating the farms Zoekop (top left) and Blijvooruitzicht (left)**



**FIGURE 4: Google Earth image indicating the (yellow) mining boundaries, (orange) alternative plant sites and places of heritage significance**

## 1.2 Study approach

### 1.2.1 Definitions and assumptions

The following aspects have a direct bearing on the investigation and the resulting report:

- *Cultural (heritage) resources* are all non-physical and physical human-made occurrences, as well as natural occurrences that are associated with human activity. These include all sites, structures and artefacts of importance, either individually or in groups, in the history, architecture and archaeology of human (cultural) development.
- The *significance* of the sites and artefacts is determined by means of their historical, social, aesthetic, technological and scientific value in relation to their uniqueness, condition of preservation and research potential. It must be kept in mind that the various aspects are not mutually exclusive, and that the evaluation of any site is done with reference to any number of these.
- The *value* is related to concepts such as *worth*, *merit*, *attraction* or *appeal*, concepts that are associated with the (current) usefulness and condition of a place or an object. Hence, in the development area, there are instances where elements of the place have a high level of significance but a lower level of value.
- It must be kept in mind that significance and value are not mutually exclusive, and that the evaluation of any feature is based on a combination or balance between the two.



- Isolated occurrences: findings of artefacts or other remains located apart from archaeological sites. Although these are noted and samples are collected, it is not used in impact assessment and therefore do not feature in the report.
- Traditional cultural use: resources which are culturally important to people.
- All archaeological remains, artificial features and structures 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). No archaeological artefact, assemblage or settlement (site) and no historical building or structure older than 60 years may be altered, moved or destroyed without the necessary authorisation from the South African Heritage Resources Agency (SAHRA) or a provincial heritage resources authority. Full cognisance is taken of this Act in making recommendations in this report.
- 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 Charter (also known as the Burra Charter) are used when determining the cultural significance or other special value of archaeological or historical sites.
- It should be kept in mind that archaeological deposits usually occur below ground level. Should artefacts or skeletal material be revealed at the site during construction, such activities should be halted, and it would be required that the heritage consultants would be required to be 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)).

### **1.2.2 Limiting/Restricting factors**

The investigation has been influenced by the following factors related to the overall HIA:

- Availability and reliability of baseline information about the affected area;
- Unpredictability of buried archaeological/palaeontological remains (absence of evidence does not mean evidence of absence);
- Difficulty in establishing any intangible heritage issues;
- Owners of some farm portions did not give permission of access;
- Dense vegetation that may have obscured heritage features

### **1.2.3 Field work**

The approach used in the study entailed a foot survey of the entire area. The assessment took place in October 2008 and November 2009.

### **1.2.4 Desktop study**

Published literature was sourced, an assessment of archival information was done and cadastral information was obtained from the Chief Surveyor-General's website. The Belfast municipal library yielded some historical information. The library of the Council for Geoscience (Pretoria) contained historic Memoirs and Coal Memoirs dealing with early coal-mining. The oldest 1:50 000 maps yielded a small amount of information but historic aerial images did not reveal much of heritage significance.

### **1.2.5 Interviews**

Most farmers that were visited and interviewed knew a bit of the history of the area in general and the history of their family in particular. Some of the farm workers were aware of graves and who are buried there. A local headman (Mr Mahlangu), who resides on Blijvooruitzicht 12, provided information about male initiation ceremonies for farm workers. Nobody was aware of any stone kraals and other ruins associated with Iron Age settlement.

### 1.3 Legal context (“trigger”) of the HIA

#### 1.3.1 Section 38 of the NHRA

This study constitutes a heritage impact assessment linked to the environmental impact scoping and impact assessment required for the development. The proposed development is a listed activity in terms of Section 38 (1) of the NHRA. Section 38 (2)(a) of the National Heritage Resources Act (Act 25 of 1999) requires the submission of a heritage impact assessment report for authorisation purposes to the responsible heritage resources agency, SAHRA.

Heritage conservation and management in South Africa (excluding KwaZulu Natal on a provincial level) is governed by the *National Heritage Resources Act* (Act 25 of 1999) (NHRA) and falls under the overall jurisdiction of the *South African Heritage Resources Agency* (SAHRA) and its provincial offices and counterparts.

Section 38 of the NHRA requires a Heritage Impact Assessment (HIA), to be conducted by an independent heritage management consultant, for the following development categories:

- Construction of a road, wall, power line, pipeline, canal or other linear form of development or barrier exceeding 300m in length
- Construction of bridge or similar structure exceeding 50m in length
- Development or other activity that will change the character of a site -
  - Exceeding 5000 sq m
  - Involving three or more existing erven or subdivisions
  - Involving three or more erven or divisions that have been consolidated within past five years
  - Rezoning of site exceeding 10 000 sq m
  - The costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority
- Any other development category, public open space, squares, parks, recreation grounds

The proposed development covers an area larger than 5000 sq m and is therefore a listed activity in terms of the NHRA.

In addition, the new EIA Regulations promulgated in terms of NEMA determine that any environmental reports will include cultural (heritage) issues.

The end purpose of this report (in its final form) is to alert the developer, the environmental consultant, MDALA, DME and SAHRA about existing heritage resources that may be affected by the proposed development, and to recommend mitigatory measures aimed at reducing the risks of any adverse impacts on these heritage resources. Such measures could include the recording of any heritage buildings and structures older than 60 years prior to demolition, in terms of Section 34 of the NHRA and also other Sections of this act dealing with archaeological sites, buildings and graves. The implementation of these interventions constitutes separate, follow-up projects with separate permits.

Because of the size of the development, authorisation will be given or facilitated by SAHRA. Final reports should therefore be submitted by the client (or, if agreed to, by Cultmatrix) to the Cape Town and Nelspruit offices for authorisation, as well as to the SAHRA Burial Sites Unit in Johannesburg.

In terms of the ECA, Section 38(1) of the NHRA is also applicable – thus any person undertaking any development in the categories of Section 38 (1) a-e, must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development. In the case of an EIA, comments from the responsible heritage resources agency based on a heritage scoping report are required.

The NHRA Section 2 (xvi) states that a “heritage resource” means any place or object of cultural significance, and in Section 2 (vi) that “cultural significance” means aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value or significance.

This HIA forms part of an EIA and EMP for the project.

Based on the HIA report, SAHRA will be able to comment on the report and approve the proposed development in principle, or delay any final decision until a full HIA for the actual development has been submitted.

Apart from a heritage report assisting a client to make informed development decisions, it also serves to provide the relevant heritage resources authority with the necessary data to perform their statutory duties under the NHRA. After evaluating the heritage scoping report, the relevant heritage resources authority will decide on the status of the resource, whether the development may proceed as proposed or whether mitigation is acceptable, and whether the heritage resources require formal protection, i.e. as a Grade I, II or III resource, with relevant parties having to comply with all aspects pertaining to such Grading.

### 1.3.2 Section 35 of the NHRA

Section 35 (4) of the NHRA stipulates that no person may, without a permit issued by SAHRA to destroy, damage, excavate, alter or remove from its original position, or collect, any archaeological material or object. This section applies to all potential archaeological sites.

### 1.3.3 Section 36 of the NHRA

Section 36 (3) of the NHRA stipulates that no person may, without a permit issued by the South African Heritage Resources Agency (SAHRA), destroy, damage, alter, exhume or remove from its original position or otherwise disturb any grave or burial ground older than 60 years, which is situated outside a formal cemetery administered by a local authority. This section applies to all graves.

### 1.3.4 Section 34 of the NHRA

Section 34 of the NHRA stipulates that no person may alter, damage, destroy, relocate etc any building or structure older than 60 years, without a permit issued by SAHRA or a provincial heritage resources authority. This section applies to historic homesteads and farmsteads.

### 1.3.5 EIA

In addition, the new EIA Regulations promulgated in terms of NEMA determine that any environmental reports will include cultural (heritage) issues.

## 1.4 Development criteria in terms of Section 38(1)

1.4	Development criteria in terms of Section 38(1)	Yes/No details
1.4.1	Construction of road, wall, power line, pipeline, canal or other linear form of development or barrier exceeding 300m in length	Yes
1.4.2	Construction of bridge or similar structure exceeding 50m in length	No
1.4.3	Development exceeding 5000 sq m	Yes
1.4.4	Development involving three or more existing erven or subdivisions	Yes
1.4.5	Development involving three or more erven or divisions that have been consolidated within past five years	No
1.4.6	Rezoning of site exceeding 10 000 sq m	Not available
1.4.7	Any other development category, public open space, squares, parks, recreation grounds	No

## 1.5 Property ownership

See below list

FARM	PORTION	OWNER
Blyvooruitzicht 383 JT	2	WP and JP Pretorius Trust
Blyvooruitzicht 383 JT	6	CJ Burger
Blyvooruitzicht 383 JT	7	WP and JP Pretorius Trust
Blyvooruitzicht 383 JT	8	WP and JP Pretorius Trust
Blyvooruitzicht 383 JT	9	WP Pretorius

CULTMATRIX CC

FARM	PORTION	OWNER
Blyvooruitsicht 383 JT	10	WP Pretorius
Blyvooruitsicht 383 JT	13	WP Pretorius
Blyvooruitsicht 383 JT	15	WP Pretorius
Blyvooruitsicht 383 JT	16	-
Leeuwbank 427 JS	RE	GL Roos
Leeuwbank 427 JS	2	PC van Wyk
Leeuwbank 427 JS	3	BCE Viljoen
Leeuwbank 427 JS	4	GL Roos
Leeuwbank 427 JS	5	LG Roos
Leeuwbank 427 JS	6	GL Roos
Leeuwbank 427 JS	7	CJ Burger
Leeuwbank 427 JS	8	CJ Burger
Leeuwbank 427 JS	9	Hooggenoeg Boerdery
Leeuwbank 427 JS	10	CJ Burger
Leeuwbank 427 JS	11	CJ Botha
Leeuwbank 427 JS	15	Hooggenoeg Boerdery
Leeuwbank 427 JS	16	Beestepan Boerdery
Leeuwbank 427 JS	19	JA Burger
Zoekop 426 JS	RE	JW Pretorius-Heuchert
Zoekop 426 JS	1	WP Pretorius
Zoekop 426 JS	2	WP Pretorius
Zoekop 426 JS	2RE	JW Pretorius-Heuchert
Zoekop 426 JS	3	AC Roos
Zoekop 426 JS	4RE	A Viljoen
Zoekop 426 JS	5	EC Botha (deceased)
Zoekop 426 JS	6	GL Roos
Zoekop 426 JS	7	WP Pretorius
Zoekop 426 JS	8	JH Gerrits
Zoekop 426 JS	9	GL Roos
Zoekop 426 JS	11	WP Pretorius
Zoekop 426 JS	11RE	Zoekop Farmers Trust
Zoekop 426 JS	12	WP Pretorius
Zoekop 426 JS	13	Eyesizwe Coal
Zoekop 426 JS	13RE	Soekop Trust
Zoekop 426 JS	14	Victory Fellowship World Outreach Churches
Zoekop 426 JS	15	CJ Botha
Zoekop 426 JS	16	Soekop Trust

### 1.6 Developer

1.6	Developer	
1.6.1	Name and contact address	Mr C Linström. Exxaro Coal, Box 9229, Pretoria 0001
1.6.2	Telephone number	(012) 307-5000
1.6.3	Fax	(012) 323-3400
1.6.4	E-mail	

### 1.7 Heritage impact assessment specialists

1.7	Specialist (1)	
1.7.1	Name and contact address	Dr RC de Jong (Principal Member: Cultmatrix cc), PO Box 12013, Queenswood 0121, Pretoria
1.7.2	Qualifications and field of expertise	PhD (Cultural History) UP (1990), Post-Graduate Museology Diploma UP (1979), generalist heritage management specialist
1.7.3	Relevant experience in study area	Railway history research, heritage survey for Nkangala District Municipality (2003-2004)
1.7.4	Telephone number	(082) 577-4741
1.7.5	Fax number	(086) 612-7383

1.7.6	E-mail	<a href="mailto:cultmat@iafrica.com">cultmat@iafrica.com</a>
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An archaeologist did not take part in the field survey because the area has been changed by grazing, crop-growing and other farming activities, road-making etc. In this type of environment typical archaeological resources are burial sites and scattered Middle Stone Age artefacts along water courses.

### 1.8 Property details

1.8	Property details	
1.8.1	Name and location of property	Belfast Project
1.8.2	Erf or farm numbers	See list under 1.5 (above)
1.8.3	Magisterial district	Belfast
1.8.4	Closest town	Belfast
1.8.5	Local authority	Emakhazeni
1.8.5	Current use	Agricultural
1.8.5	Current zoning	Agricultural
1.8.5	Predominant land use of surrounding properties	Agricultural, railways, coal-mining
1.8.9	Total extent of property	Not available

### 1.9 Development description

1.9	Development description	
1.9.1	Nature of proposed development	Open-cast colliery with plant sites and infrastructure
1.9.2	Possible impacts on heritage value of site and contents	Low to high negative
1.9.3	Structures older than 60 years affected by proposed development	Yes
1.9.4	Rezoning or change of land use	Yes
1.9.5	Construction work	Yes: parking, buildings, roads, etc
1.9.6	Total floor area of proposed development	Not available
1.9.7	Extent of land coverage of development	Not available
1.9.8	Earth moving and excavation	Yes: for foundations, levelling, landscaping
1.9.9	Number of storeys	Not available
1.9.10	Maximum height above ground level	Not available
1.9.11	Monetary value development	Not available
1.9.12	Time frames	Not available

### 1.10 Acknowledgements

- Mr PC van Wyk
- Mr P Kane-Berman
- Mr WP Pretorius
- Mr B Kotze
- Mr PJ van Duyn Doyer and his worker Temba
- Mr CJ Burger and his mother
- Mr A Viljoen
- Mr CJ Botha and his worker Phineas
- Mr JH Gerrits
- Mr Mahlangu (local headman)
- Mtsweni family
- Belfast library staff
- Mr E Woodhouse (Exxaro Estates Manager)

## PART 2: HERITAGE ASPECTS OF THE AFFECTED AREA

### 2.1 General issues of site and context

<b>2.1.1 Context</b>		
	<i>(check box of all relevant categories)</i>	<i>Brief description/explanation</i>
	Urban environmental context	Farm portions with dwellings, roads, fields, graves etc.
x	Rural environmental context	
	Natural environmental context	
<b>Formal protection (NHRA)</b>		
	Is the property part of a protected area (S. 28)?	No
	Is the property part of a heritage area (S. 31)?	No
<b>Other</b>		
	Is the property near to or visible from any protected heritage sites?	No
	Is the property part of a conservation area or special area in terms of the Zoning Scheme?	No
	Does the site form part of a historical settlement or townscape?	No
x	Does the site form part of a rural cultural landscape?	Yes: Farms
	Does the site form part of a natural landscape of cultural significance?	No
	Is the site within or adjacent to a scenic route?	No
	Is the property within or adjacent to any other area which has special environmental or heritage protection?	No
x	Does the general context or any adjoining properties have cultural significance?	Yes: Wonderfontein blockhouse, Belfast town, railway line, historic farms, Kwasmkulu Ndebele site, etc

<b>2.1.2 Property features and characteristics</b>		
	<i>(check box if YES)</i>	<i>Brief description</i>
x	Has the site been previously cultivated or developed?	Grazing, plantations, fields, dwellings, tracks, power lines, farmstead
x	Are there any significant landscape features on the property?	Stands of exotic trees, water courses
	Are there any sites or features of geological significance on the property?	No
	Does the property have any rocky outcrops on it?	No
x	Does the property have any fresh water sources (springs, streams, rivers) on or alongside it?	Yes: Water courses
	Does the property have any sea frontage?	No
	Does the property form part of a coastal dune system?	No
	Are there any marine shell heaps or scatters on the property?	No
	Is the property or part thereof on land reclaimed from the sea?	No

<b>2.1.3 Heritage resources on the property</b>		
	<i>(check box if present on the property)</i>	<i>Name / List / Brief description</i>
<b>Formal protections (NHRA)</b>		
	National heritage site (S. 27)	No
	Provincial heritage site (S. 27)	No
	Provisional protection (s.29)	No
	Place listed in heritage register (S. 30)	No
<b>General protections (NHRA)</b>		
x	structures older than 60 years (S. 34)	Yes: Homesteads, farmsteads
	archaeological site or material (S. 35)	No
	palaeontological site or material (S. 35)	No
x	graves or burial grounds (S. 36)	Yes: Farm cemeteries
	public monuments or memorials (S. 37)	No
<b>Other</b>		
	Any heritage resource identified in a heritage survey (state author and date of survey and survey grading/s)	None
	Any other heritage resources (describe)	No

<b>2.1.4 Property history and associations</b>		
	<i>(check box if YES)</i>	<i>Brief description/explanation</i>
x	Provide a brief history of the property (e.g. when granted, previous owners and uses).	See 2.3 below
x	Is the property associated with any important persons or groups?	Boer farmers and workers
	Is the property associated with any important events, activities or public memory?	No
	Does the property have any direct association with the history of slavery?	No
x	Is the property associated with or used for living heritage?	Yes: Farming and initiations
x	Are there any oral traditions attached to the property?	Yes: Farming, land settlement, initiations etc

**2.2 General description of environmental and heritage context of affected area**

The site for the proposed development consist of portions of three farms, located north and south of the N 4 between Wonderfontein and Belfast. The heritage context is typical of that of the Eastern Highveld, characterised by a rolling landscape on which farmsteads, homesteads, graves, old roads and tracks, pastures, clumps of mainly exotic trees, planted fields, streams and rocky sandstone outcrops occur. Most of the area has been under cultivation since the advent of commercial farming, an intervention that would have obliterated any possible traces of pre-colonial and early colonial settlement.

**2.3 General history of the development area**

**2.3.1 Early Stone Age**

*In South Africa the ESA dates from about 2 million to 250 000 years ago, from the early to middle Pleistocene. Over this time, the archaeological evidence shows, as our early ancestors advanced physically, mentally and socially they invented stone and bone tools and learned to control fire and*

*exploit natural resources effectively. The earliest tools clearly manufactured by our ancestors and their relatives (early hominids) date to 2,5 million years ago, from the site of Gona in Ethiopia. These tools showed that early hominids were able to select a suitable raw material and flake it for a specific purpose. As many of the bones found in association with early tools bear cut marks, scientists have inferred that early hominids were chipping flakes off cobbles in order to create a sharp edge with which to cut meat from animal carcasses. It would seem that these early stone tools helped early hominids to access a high-protein food source in sufficient quantity to develop their brains – the brain being metabolically the most expensive organ in the body.*

*This earliest stone tool industry is called the Oldowan, after Olduvai Gorge in Tanzania where the tools and their importance to hominid development were first recognised by Mary Leakey in the 1960s.*

*To date Oldowan tools have only been found in Africa. This early technology is fairly consistent across Africa, in that the tools are mainly simple flakes struck from cobbles, a technology that appears to have been sufficient to meet the needs of early hominids as it persisted for a long time. At sites like Olduvai Gorge and Koobi Fora in Kenya, Oldowan tools remained unchanged until about 1,5 million years ago. Oldowan technology thus represents a long period of successful adaptation, which lasted for almost a million years. In South Africa the Oldowan Industry dates from about 2 million years ago. There is still some debate about which hominid made the Oldowan tools as there were at least two hominids in South Africa at that time which were capable of doing so. The first was an early form of Homo, and the second was Paranthropus robustus, which went extinct approximately one million years ago. Because the technology did not disappear when Paranthropus went extinct, it is often assumed that Homo was the toolmaker.*

*About 1,7 million years ago more specialised tools appeared, developing first in Africa then spreading to Asia and Europe through the movement of hominids out of Africa. These core tools, which are known as Acheulean tools after the French site, Saint Acheul, where they were first discovered in the 1800s, were intentionally designed to have sharper and straighter edges and studies suggest they were used to carry out a range of activities including butchering animals, chopping wood, digging up roots and cracking bone. Interestingly, even though the tools were named after a French site, they only appeared in Europe about 500 000 years ago.*

*The hominid species Homo ergaster has been credited with the manufacture of the Acheulean tools in South Africa. Compared with earlier hominids, Homo ergaster was physically almost like us; it had a larger brain, and was relatively modern in face, body proportion and height. In fact, it had a body very much like our own. Homo ergaster ranged over vast areas of territory, and occupied a variety of habitats, including drier, more open grassland settings. Most importantly, Homo ergaster became more dependent on tools; it became a habitual tool user.*

*Oldowan and Acheulean tools are widely distributed across South Africa, where they are most commonly found in association with water sources such as lakes and rivers. Unfortunately, because of this there are very few sites where the tools are found in a primary context, that is, exactly where the user left them. Most of the tools have either been washed into caves or eroded out of riverbanks and washed down rivers.*

(Source: Peter Delius (ed), 2006, Mpumalanga – Reclaiming the Past, Defining the Future)

There are only a few places in Mpumalanga where Early Stone Age tools have been found and the Belfast area is not known as a site.

### **2.3.2 Middle Stone Age**

*By 250 000 the large hand axes and cleavers of the Earlier Stone Age had begun to diminish in numbers, and our ancestors started to employ a different technique in order to produce a greater variety of tools of diverse shapes and sizes. This change in technology marks the beginning of the Middle Stone Age (MSA). MSA tools are generally smaller, and, unlike ESA tools, which were produced by removing flakes, MSA tools were the flakes. These flakes were of a predetermined size and shape and were produced by preparing the core and striking the flake off. Long, parallel-sided blades, as well as triangular flakes, were commonly produced. The hafting of stone tools onto bone or wood to produce spears, knives or axes also became popular during the MSA, which reflected a shift from scavenging to spear hunting. During the MSA early humans still settled along or near water sources, but also took shelter in caves. Importantly, the MSA marks the transition from a more archaic*



*Homo to anatomically modern humans, Homo sapiens. With this physical development the first signs of art, decoration and symbolism began to emerge.*

*Although the MSA has not been extensively studied in Mpumalanga, evidence for this period has been excavated from Bushman Rock Shelter, a well-known site situated on the farm Klipfonteinhoek in the Ohrigstad District.*

(Source: Peter Delius (ed), 2006, *Mpumalanga – Reclaiming the Past, Defining the Future*)

Middle Stone Age sites often occur near rivers and rocky outcrops. Great care was taken in checking those that were easily accessible but no artefacts were found.

### **2.3.3 Late Stone Age**

*The Later Stone Age (LSA), which occurred from about 20 000 years ago, is signalled by a series of technological innovations and social transformations within these early hunter-gatherer societies. The hunting apparatus now included two important innovations, the bow and the link-shaft arrow. Link-shaft arrows were constructed with a poisoned bone tip, a link and shaft that fell away on impact, leaving the poison tip imbedded in the animal. Other innovations included bored stones, used as digging-stick weights to aid in uprooting tubers and roots; small stone tools, often less than 25 mm in length, used for cutting meat and scraping hides; polished bone tools such as needles; twine made from plant fibre or leather; tortoiseshell bowls; fishing equipment, including hooks and sinkers; bone tools with decoration; high frequencies of ostrich eggshell beads and an increase in ornaments and artwork.*

*There appears to be a gap in the Mpumalanga LSA record between 9 000 BP and 5 000 BP. This may have to do with the general dearth of Stone Age research in the province, but it also encompasses a period of rapid warming and major climate fluctuation, which may have forced people to seek out more protected and viable environments in this area.*

*We pick up the Mpumalanga Stone Age record again in the mid-Holocene at the farm Honingklip (HKLP) near Badplaas in the Carolina District. Here two LSA sites were found on opposite sides of a bend in the Nhlazatshe River, about 1km west of its confluence with the Teespruit. The HKLP sites are in the foothills of the Drakensberg, where the climate is warmer than the Highveld but cooler than the lowveld.*

(Source: Peter Delius (ed), 2006, *Mpumalanga – Reclaiming the Past, Defining the Future*)

No artefacts associated with the Later Stone Age were identified in the study area.

### **2.3.4 Early Iron Age occupation**

*The expansion of early farmers, who, among other things, cultivated crops, raised livestock, mined ore and smelted metals, occurred in this area between AD 400 and AD 1100. Dates from Early Iron Age sites indicated that by the beginning of the 5th century AD Bantu-speaking farmers had migrated down the eastern lowlands and settled in the Mpumalanga lowveld. Subsequently, farmers continued to move into and between the lowveld and Highveld of Mpumalanga until the 12th century. These Early Iron Age sites tend to be found in similar locations. Sites were found within 100m of water, either on a riverbank or at the confluence of streams. The close proximity to streams meant that the sites were often located on alluvial fans. The nutrient rich alluvial soils would have been favoured for agriculture. The availability of floodplains and naturally wetter soils would have been important for the practice of dryland farming. This may have been particularly so during the Early Iron Age when climate reconstruction for the interior of South Africa suggests decreased rainfall between AD 900 and AD 1100 and again after AD 1450.*

*Burned daga and plaster with pole impressions found at these early lowveld sites indicated that early farmers lived in fairly permanent agricultural villages. Grindstones and an imprint of millet or domestic Pennisetum in a piece of pottery from an AD 400 site on the northern border of Mpumalanga provided the first evidence of the cultivation of millet in South Africa. Remains of iron tools indicated that metalworking was also practised. Iron was an important commodity, and ores in the form of haematite and magnetite were either picked up off the surface or mined from shafts dug into the ground. Large cattle byres with pits were also significant features of EIA Highveld sites dating from AD 600.*

(Source: Peter Delius (ed), 2006, *Mpumalanga – Reclaiming the Past, Defining the Future*)

Mining and farming activities have transformed the farms and therefore no traces of Early Iron Age settlements were found.

### **2.3.5 Late Iron Age occupation**

*While there is some evidence that the EIA continued into the 15th century in the lowveld, on the escarpment it had ended by AD1100. The Highveld, particularly around Lydenburg, Badfontein, Sekhukhuneland, Roossenekal, and Steelpoort, became active again from the 15th century onwards. This later phase, termed the Late Iron Age (LIA), was accompanied by extensive stonewalled settlements.*

*Trade no doubt played an important role in the economy of these early societies. Goods were traded both locally and further afield. Control of resources such as metal provided a solid economic base that was fairly impervious to changes in the environment. Traditional sources of wealth were easily bolstered as metals were used in place of cattle to encourage key marriage alliances, and at the same time used to purchase livestock and other trade items from outside the country.*

*Local trade consisted of metal, salt, thatch, poles, cattle and grain. Salt was produced from alkaline springs. This valuable commodity could be obtained by paying a tithe to the chief on whose land the salt was located. However, there were examples of mass production where salt was 'balled' for transport and sold for huge profit in salt scarce areas. By the 1700s, with growing trade wealth, economically driven centres of control began to emerge and, following the establishment of Portuguese trade posts, the Mpumalanga landscape became an important thoroughfare for both local and foreign traders.*

(Source: Peter Delius (ed), 2006, *Mpumalanga – Reclaiming the Past, Defining the Future*)

Typical late Iron Age features such as stone-walled settlements, potsherds, hut floors, middens and iron artefacts were not found in the study area due to disturbance by farming and mining activities.

### **2.3.6 Pre-colonial settlement**

*Mpumalanga was populated by multiple and ethnically diverse but interrelated communities. It was inhabited by the San (Hunter-Gatherer, Basarwa or Bathwa) groupings prior to the settlement of various Late Iron Age (LIA) farming communities, the ancestors of modern Sotho-Tswana and Nguni societies. The north-western and southern portions of the region came to be broadly occupied by the Kgatla (Bakgatla), Rolong (Barolong), Ntwane (Bantwane), Koni (Bakone), Kopa (Bakopa) and Southern Ndebele mixed farming communities.*

*Despite their general association with LSA and their assumed disappearance, it is clear that San groups continued to interact with farmers in the Eastern Transvaal, as was the case elsewhere, and the evidence of a range of forms of coexistence warns us against drawing rigid distinctions between the two cultures. Material assemblages from excavated sites, San rock paintings and engravings and cultural and linguistic evidence point to some forms of peaceful contacts between these diverse communities.*

*According to other recorded oral traditions ancestors of Bakone groupings occupied parts of the low country (Phalaborwa and Bokgaga near Leydsdorp) at an uncertain date. The main body of the Bakone appears to have been under the Matlala ruling lineage at the time of their fragmentation into a multiplicity of groups and subsequent chiefdoms around the 15th to 16th centuries. While some groups remained in the low country others ventured further west and southwards and Koni groups came to settle in the areas later called Ohrigstad, Lydenburg and Middelburg.*

*Either before or at the start of the 17th century an early Nguni-speaking community entered the orbit of the Sotho-Tswana communities in the Transvaal and in particular the north-eastern Highveld. The Sotho-Tswana people commonly called this early Nguni offshoot Matebele, denoting Pursuers. According to P. Lekgoathi these Nguni groups accepted the appellation Matebele but pronounced it as Amandebele. Anthropologists and historians later rendered both Sotho-Tswana and Nguni terms as Ndebele.*

*In due course relations between other royal contenders degenerated into open confrontation. The Manala (Mabena) and Mhwaduba sections remained independently in and around Pretoria areas while the Ndzundza and Mthombeni groups moved north-eastward into the environs of the Steelpoort (Tubatse) River valley and the slopes of Bothasberg in Middelburg.*

*There is evidence that Mzilikazi's Ndebele invaded the south-eastern and central Transvaal areas. Accounts of the Southern Ndebele, the Koni, the Kgatla, the Rolong and the Ntwane attest to Mzilikazi's sporadic plunder and their own counter raids of Mzilikazi's frequent raids. The Koni, Kopa and some Eastern Sotho fortified settlements in the Middelburg, Nelspruit (Waterval Boven, Sudwala Caves) and Lydenburg areas were attacked by intruding armies.*

(Source: Peter Delius (ed), 2006, *Mpumalanga – Reclaiming the Past, Defining the Future*)

### **2.3.7 Colonial settlement**

*In 1845 the establishment of a Boer settlement at Ohrigstad marked the beginning of a new phase in the history of the Eastern Transvaal. The first Trekkers to settle in the area were the followers of A H Potgieter, who moved from Mooi River in the south-western Transvaal. Trekkers from Natal led by J J Burger joined them. Tensions between the two groups soon surfaced and the difficulties facing the community were compounded by malaria, which decimated the population, and stock disease, which ravaged their herds. In 1848, partly to escape this disease and conflict-ridden community, Potgieter and his followers moved north and founded the town of Schoemansdal. Most of those who remained behind moved to higher-lying lands to the south. The town of Lydenburg became the new centre of the community and white settlers slowly established themselves in the wider region. The Trekkers' political fractiousness did not, however, diminish. In 1856 the Lydenburg community seceded from the Zuid Afrikaansche Republiek (ZAR) – a development that was symptomatic of the fragility of the wider state. Political instability and racial exclusivity – blacks were infamously denied any equality in church or state – however, co-existed with strong traditions of popular democracy. It was not until 1864 that political unity was achieved among the main Trekker communities in the Transvaal and even thereafter the state remained both rudimentary and cash strapped.*

*Once the Trekkers had established what they saw as their right to the land they set about distributing it among themselves. The land was demarcated into large farms and title deeds were issued. The initial policy was that all burghers (citizens) were entitled to two farms of 3 000 morgen each (about 6 330 acres or 2 564 hectares) from the state. White newcomers to the Transvaal were quickly granted citizenship and the land that went with it. Farms, which were not distributed, remained government property and the ZAR, which battled to raise revenue, increasingly fell back on its principal asset – land.*

*This profligate distribution of land could not be sustained. From 1860 land grants to burghers were reduced to one 3 000 morgen farm each. After 1866 newcomers no longer received any grant of land and from 1871 this prohibition applied even to the sons of burghers.*

*The most consistent supply of labour for those farmers able to enforce their claim to ownership of the land came from African families living on their property. The practice that developed in the area was that five families of a group were expected to render unpaid labour service to the landowner but were then spared from further demands on their labour or their produce by officials or neighbouring farmers. Elements of a patriarchal pact underpinned these arrangements as male elders within African communities used their authority over both women and youths to meet the farmers' appetite for workers. Over the subsequent decades the amount of labour that could be extracted from resident workers would be a source of recurring strife. Communities settled on land owned by absentee landlords were often able to secure their tenure through payments of rent in cash or kind, to the considerable irritation of their white neighbours, who believed they should be forced to work for them.*

(Source: Peter Delius (ed), 2006, *Mpumalanga – Reclaiming the Past, Defining the Future*)

Burial sites are associated with farmers and their workers.

White settlement of the Belfast area started from the direction of Lydenburg in 1847 when farmers were looking for healthier environments. At first the farms were uninhabited and used to graze cattle.

The farms in the study area were named after the natural environment (Leeuwbank), farming practices (Paardeplaats) and the mental state of some of the early farmers (Blijvooruitzicht). The name of the farm Zoekop is an oddity since it means *looking up* or *searching*.

The first owners of the farms could be traced through cadastral diagrams:

- Leeuwbank: GP Pretorius (1868)
- Blijvooruitzicht: JG Kilian
- Zoekop: GJ Korf (1868)

At first, roads were irregular and informal. In 1878-1894 a stage-coach route was operated between Pretoria and the Lowveld and the present N 4 broadly follows this route between Wonderfontein and Belfast. The Pretoria-Maputo railway line became operational in 1894. No major military engagements took place in the study area during the Anglo-Boer War (1899-1902). The British established a Boer concentration camp at Belfast and erected a series of blockhouses along the railway line. Except for the remains of a blockhouse on a farm near Wonderfontein, none of them have survived.

### **2.3.8 Coal mining**

*Though gold mining has a longer history, coal mining is Mpumalanga's most important industrial activity. Today the province produces 80 per cent of South Africa's coal. Coal mining had already begun in Mpumalanga in 1868 when Thomas Baines recorded that farmers in the Middelburg district were extracting outcropped coal for their own use. However, it was only after the discovery of gold on the Witwatersrand in 1886 that large-scale coal mining was undertaken in the vicinity of the town of Witbank. This initial venture was very short lived. Once coal was discovered around Brakpan and Springs in 1887, the Witbank coalmines closed down. There was no rail link between Witbank and the Rand, which made the cost of using Witbank's coal much higher than that of the closer coal of Springs and Brakpan. Viable commercial coal mining in Mpumalanga, therefore, had to wait until a cost-effective railway link had been established.*

*Once that had happened and freight rates had dropped to a reasonable level, the Witbank coalfields came on stream. The coal deposits are concentrated around Witbank and run eastwards for about 48 km past the town of Middelburg to the town of Belfast. The coalfields are approximately 40 km wide. The first coalmines – the Douglas, Transvaal and Delagoa Bay, Witbank, and Landau collieries – were all located around Witbank and the quality of coal they produced was higher than that produced on the East Rand and found a ready market on the gold mines, as well as being used for domestic heating. In the 1890s some of the coal was already being exported via Delagoa Bay. The coal was also relatively easy to mine as it lay close to the surface, at a depth of 100 m or less*

*By 1946 a modern coal industry was emerging in Witbank and Middelburg. In the Transvaal 34 large collieries produced 99,7 per cent of the province's coal. Of these 23 were in the Witbank-Middelburg coalfield. An additional coal producing area was emerging around the town of Ermelo, where six collieries had been established, though these were small compared with those in Witbank. The coal commission of 1946 reported that Transvaal and Orange Free State collieries had sold more than 20 million tons of coal in that year. Capital invested totalled £11,5 million, yielding an after tax profit of £1,6 million. The commission also established that there were sufficient reserves of high-grade steam coal in the Witbank-Middelburg area to last for well over 100 years. Problems were, however, beginning to emerge with the way the industry was organised, with some of the smaller collieries in Witbank expressing dissatisfaction with the restrictive practices imposed by the Transvaal Coal Owners Association. They complained that the association, 'raised standards of quality unnecessarily high for the purpose of stifling competition, was inflexible towards competing producers and slow to welcome new members'. Thus we see the problems that emerge when institutional power is used to entrench the position of established businesses.*

*Between 1940 and 1960 Mpumalanga's coal output increased from 13 million to 25 million tons. But, while the industrialisation of South Africa expanded rapidly in the 1950s and 1960s, which, to an extent, created an expanding internal market for coal, the demand for coal both locally and internationally was being adversely affected by the switch to oil as the dominant form of energy. In South Africa this trend was offset a little by the government's decision to convert coal into oil, but there was nevertheless significant cause for concern. In response, the Anglo American Corporation, the largest company in South Africa and the largest coalmining company in Mpumalanga, undertook initiatives to locate new markets for South Africa's coal. In the mid-1960s three research programmes were initiated within the company: a technical programme to probe the nature and potential of South*

*African coals, a marketing programme in the West European energy market, and, arising from this, a transportation study. As a result of these efforts and additional forms of government support, Mpumalanga's coalmines became increasingly oriented to the international export market. This trend continued through the 1980s despite the imposition of sanctions against South Africa.*

*The shift to exports created an environment conducive to coal expansion and some major developments took place on the coalfields in the 1970s and 1980s. For example, in the 1970s, Rand Mines developed the Rietspruit opencast mine and the Duvha Colliery. Together these mines had the capacity to produce 15,4 million tons of coal annually. Two massive projects were undertaken in Kriel and Arnot to supply Eskom's power stations in those areas. In Kriel an estimated R111-million was allocated to bring the colliery to full production. In Ermelo, the Matla underground mine was planned to produce 9,6 million tons for power generation and 3,75 million tons for export.*

*Technological changes requiring huge investments led to rapid improvements in the efficiency of production. In open cast mining massive machines called walking draglines (costing more than R5-million each) were introduced to strip the overburden from the coal. The exposed seams were drilled and blasted loose, then hauled out of a pit by a fleet of heavy-duty trucks. In order to bring one such dragline from Maputo harbour to the Witbank mines, bridges on the route first had to be strengthened. The use of this technology, therefore, required a huge investment and the ability to obtain government support.*

(Source: Peter Delius (ed), 2006, *Mpumalanga – Reclaiming the Past, Defining the Future*)

Exploratory studies of the coal deposits in the Belfast area in 1928 found that between the Klein Olifants and Komati rivers and north of the Ermelo coal-field, coal seams extended unbroken as far north as the railway line. The only coal mined in the Belfast area during that period was a small colliery west of Belfast on the farm Paardeplaats, opened in the 1890s. By 1928 this colliery had been abandoned. Another colliery, O'Neills Colliery, operated north of Belfast at Palmer Station.

It is of interest to note that in 1928 the following estimates were made regarding the viability of mining the Belfast coal-field:

- Proven reserves: 46-million tons (Imperial)
- Estimated: 86-million tons (Imperial)
- Undetermined: 1 468-million tons (Imperial)

### PART 3: FINDINGS AND RECOMMENDATIONS

Part 3 is based on the requirements for heritage scoping reports and HIAs in accordance with Section 38(3) of the NHRA.

#### 3.1 Identification of heritage resources inside the study area (see Appendix 1 for more details)

The colour code reflects the overall sensitivity of individual heritage features in terms of high (red), medium (blue) and low (green). The management action intends to minimise any risks associated with possible negative impacts.

The site numbers refer to the farm portion on which the heritage resource occurs:

BV = Blijvooruitzicht, L = Leeuwbank, Z = Zoekop, numbers refer to farm portions, G = grave, F = farmstead, H = homestead, N = natural feature

SITE	RESOURCE	COORDINATES	SIGNIFICANCE (1)	CONDITION (2)	SENSITIVITY (1 X 2)	MANAGEMENT ACTION
BV6G	Farm worker's grave	25°49'16.58"S 29°58'36.93"E	3	2	6	Avoid if possible, restore, protect and interpret, otherwise relocate
BV8F	Modern farmstead	25°48'34.91"S 29°59'33.82"E	1	3	3	Photo document before demolition
BV8G	Mtsweni graves (5)	25°48'53.23"S 29°59'38.78"E	3	3	9	Avoid if possible, restore, protect and interpret, otherwise relocate
BV9G1	Farmer's grave	25°50'15.73"S 29°58'58.72"E	3	2	6	Avoid if possible, restore, protect and interpret, otherwise relocate
BV9G2	Farm workers graves	25°49'43.49"S 29°58'53.12"E	3	2	6	Avoid if possible, restore, protect and interpret, otherwise relocate
BV9H	Farm workers homestead	25°50'11.43"S 29°58'59.62"E	1	2	2	Photo document before demolition
BV13G	Farm workers graves	25°50'11.10"S 30°0'12.45"E	3	2	6	Avoid if possible, restore, protect and interpret, otherwise relocate
BV13S	Remains of kraal and homestead	25°49'51.23"S 30°0'26.38"E	1	1	2	None
BV18G	Coetzer graves	25°48'9.10"S 30°0'15.50"E	3	2	6	Avoid if possible, restore, protect and interpret, otherwise relocate
BV18F	Farmstead	25°48'9.80"S 30°0'14.70"E	1	2	2	Photo document

CULTMATRIX CC

SITE	RESOURCE	COORDINATES	SIGNIFICANCE (1)	CONDITION (2)	SENSITIVITY (1 X 2)	MANAGEMENT ACTION
						before demolition
L3G	Farm workers graves (20)	25°50'15.80"S 29°56'6.40"E	3	2	6	Avoid if possible, restore, protect and interpret, otherwise relocate
L3H	Mtsweni homestead	25°50'13.36"S 29°56'7.83"E	1	2	2	Photo document before demolition
L5F	Farmstead	25°46'47.86"S 29°57'6.33"E	2	2	4	Record to monitor for damage caused by blasting etc
L5H	Homestead	25°46'56.78"S 29°57'8.80"E	1	2	2	Photo document before demolition
L5G	Cemetery	25°47'0.90"S 29°57'10.80"E	3	2	6	Avoid if possible, restore, protect and interpret, otherwise relocate
L7F	Modern farmstead with some historic buildings	25°48'24.11"S 29°57'10.67"E	1	3	3	Photo document before demolition
L7G	Graves	25°48'14.22"S 29°57'13.25"E	3	2	6	Avoid if possible, restore, protect and interpret, otherwise relocate
L8G1	Farmers' graves	25°48'39.55"S 29°57'16.78"E	3	2	6	Avoid if possible, restore, protect and interpret, otherwise relocate
L8G2	Farm workers graves	25°49'6.34"S 29°56'37.92"E	3	2	6	Avoid if possible, restore, protect and interpret, otherwise relocate
L10G1	Swart and other farmers' graves	25°48'38.60"S 29°58'40.50"E	3	2	6	Avoid if possible, restore, protect and interpret, otherwise relocate
L10G2	Single black grave	25°48'59.85"S 29°58'22.89"E	3	2	6	Avoid if possible, restore, protect and interpret, otherwise relocate
L10G3	Single worker's grave	25°48'51.57"S 29°58'9.50"E	3	2	6	Avoid if possible, restore, protect and interpret,

CULTMATRIX CC

SITE	RESOURCE	COORDINATES	SIGNIFICANCE (1)	CONDITION (2)	SENSITIVITY (1 X 2)	MANAGEMENT ACTION
						otherwise relocate
L10F	Historic farmstead	25°48'42.80"S 29°58'39.40"E	3	3	9	Avoid and preserve
L10H	Homesteads	25°49'7.51"S 29°58'19.19"E	1	2	2	None
L11G	Farm workers graves	25°47'50.55"S 29°58'28.81"E	3	2	6	Avoid if possible, restore, protect and interpret, otherwise relocate
L15G	Roy Coetzer grave	25°49'17.24"S 29°57'16.53"E	3	2	6	Avoid if possible, restore, protect and interpret, otherwise relocate
L16G	Farm workers graves	25°49'20.01"S 29°56'6.87"E	3	2	6	Avoid if possible, restore, protect and interpret, otherwise relocate
LREF	Modern farmstead	25°46'57.78"S 29°57'40.19"E	1	3	3	Photo document before demolition
Z1F	Modern farmstead	25°48'29.20"S 29°58'58.50"E	1	2	2	Photo document before any demolition
Z1G1	Farm workers graves	25°48'22.10"S 29°58'53.50"E	3	1	3	Avoid if possible, restore, protect and interpret, otherwise relocate
Z1G2	Farm workers graves	25°48'27.44"S 29°59'8.81"E	3	1	3	Avoid if possible, restore, protect and interpret, otherwise relocate
Z1G3	Farm workers graves	25°48'26.83"S 29°59'13.61"E	3	2	6	Avoid if possible, restore, protect and interpret, otherwise relocate
Z2G	Single farmer's grave	25°47'45.48"S 30°0'2.35"E	3	2	6	Avoid if possible, restore, protect and interpret, otherwise relocate
Z2F	Old farmstead with sandstone ruins	25°47'42.57"S 29°59'59.36"E	1	1	1	Photo document before any demolition
Z4F	Modern farmstead with sandstone outbuildings	25°45'34.70"S 29°59'56.60"E	1	2	2	Photo document before any demolition
Z4G1	Farmer's grave	25°45'29.10"S 30°0'4.20"E	3	1	3	Avoid if possible,



CULTMATRIX CC

SITE	RESOURCE	COORDINATES	SIGNIFICANCE (1)	CONDITION (2)	SENSITIVITY (1 X 2)	MANAGEMENT ACTION
						restore, protect and interpret, otherwise relocate
Z4G2	Farm workers graves	25°45'59.90"S 30°0'4.30"E	3	2	6	Avoid if possible, restore, protect and interpret, otherwise relocate
Z4N	Sandstone outcrops	25°45'37.75"S 30°0'4.82"E	2	2	4	Avoid
Z7G	Farm workers graves	25°47'32.07"S 29°59'2.63"E	3	2	6	Avoid if possible, restore, protect and interpret, otherwise relocate
Z8F	Modern farmstead	25°46'57.30"S 29°59'32.40"E	1	2	2	Photo document before any demolition
Z8G	Farm workers graves	25°47'11.70"S 29°59'27.80"E	3	1	3	Avoid if possible, restore, protect and interpret, otherwise relocate
Z11F	Farmstead with sandstone buildings (local landmark)	25°45'4.40"S 29°59'53.10"E	3	2	6	Avoid and preserve at all costs
Z11G	Farm workers graves	25°45'0.60"S 29°59'44.10"E	3	2	6	Avoid if possible, restore, protect and interpret, otherwise relocate
Z14B	Mission station complex (Victory Fellowship)	25°45'45.54"S 29°58'18.56"E	2	2	4	Avoid if possible, otherwise photo document and relocate
Z15F	Modern farmstead	25°47'14.60"S 29°58'46.90"E	1	2	2	Photo document before any demolition
Z5H	Old farm house	25°47'36.00"S 29°58'33.00"E	2	1	2	Document before demolition

### 3.2 Heritage value (Section 3(3))

#### 3.2.1 Description of the site

The site for the proposed development consist of portions of three farms, located north and south of the N 4 between Wonderfontein and Belfast. The heritage context is typical of that of the Eastern Highveld, characterised by a rolling landscape on which farmsteads, homesteads, graves, old roads and tracks, pastures, clumps of mainly exotic trees, planted fields, streams and rocky sandstone outcrops occur. Most of the area has been under cultivation since the advent of commercial farming, an intervention that would have obliterated any possible traces of pre-colonial and early colonial

settlement. Although mining will only be done in the central portion of the study area, it was felt that potential buffer zones also had to be investigated for any heritage resources.

### 3.2.2 Criteria of heritage value

	<i>(check box of all relevant categories)</i>	<i>Brief description/explanation</i>
	Important in the community or <b>pattern of South Africa's history.</b>	No
	Associated with the life or work of a <b>person, group or organisation</b> of importance in history.	No
	Associated with the history of <b>slavery.</b>	No
x	Strong or special association with a particular community or cultural group for <b>social, cultural or spiritual</b> reasons	Farming community Significance: Medium
x	Exhibits particular <b>aesthetic</b> characteristics valued by a community or cultural group	Natural scenery, farmsteads Significance: Medium
	Demonstrates a high degree of <b>creative or technical achievement</b> at a particular period	No
x	Has <b>potential to yield information</b> that will contribute to an understanding of natural or cultural heritage	Chance finds (hidden archaeological elements) Significance: Low
x	<b>Typical:</b> Demonstrates the principal characteristics of a particular class of natural or cultural places	Eastern Highveld farmsteads, homesteads, farm graves Significance: High
	<b>Rare:</b> Possesses uncommon, rare or endangered aspects of natural or cultural heritage	No

### 3.2.3 Statement of significance

Heritage resources that were identified in the study area, comprising mainly colonial farmsteads, homesteads and graves, are representative of the Eastern Highveld farming regions and are as such significant. However, there are numerous similar features outside the study area that are not necessarily affected by mining. Hence, the general significance is medium.

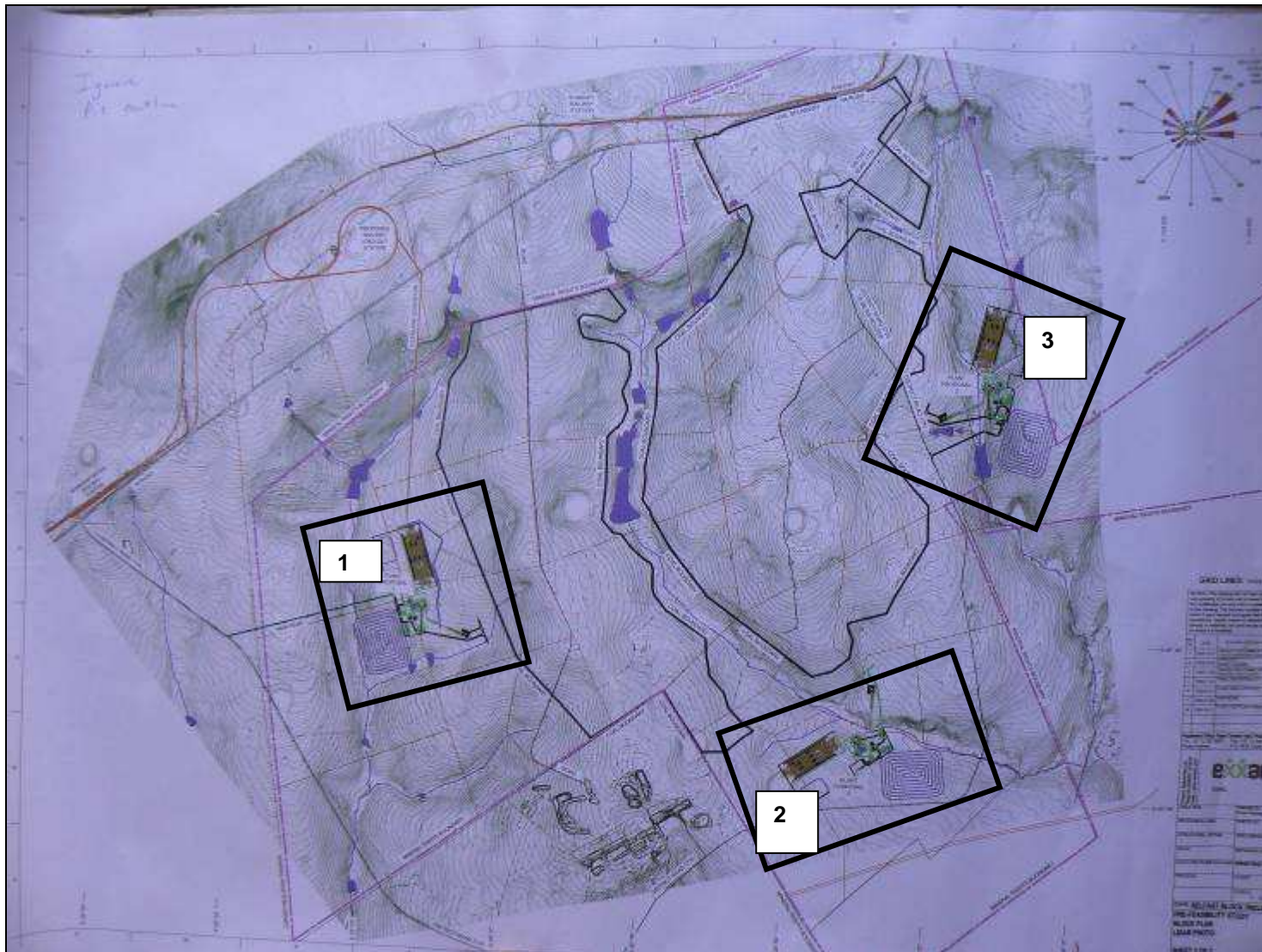
The most significant individual heritage resources (determined by a combination of age, condition and historical importance) are:

- L10F: Jan Burger farmstead: Avoid and preserve if possible
- Z11F: Farmstead next to N 4 (local landmark): Avoid and preserve if possible
- All graves and graveyards: Avoid if possible, preserve, protect and interpret, otherwise relocate to Belfast

It is of interest to note that the farmsteads represent three different farms.

### 3.2.4 Character-defining features

- Stands of trees (exotic)
- Tree lanes
- Outcrops
- Ridges
- Rivers and wetlands
- Homesteads
- Farmsteads
- Graves

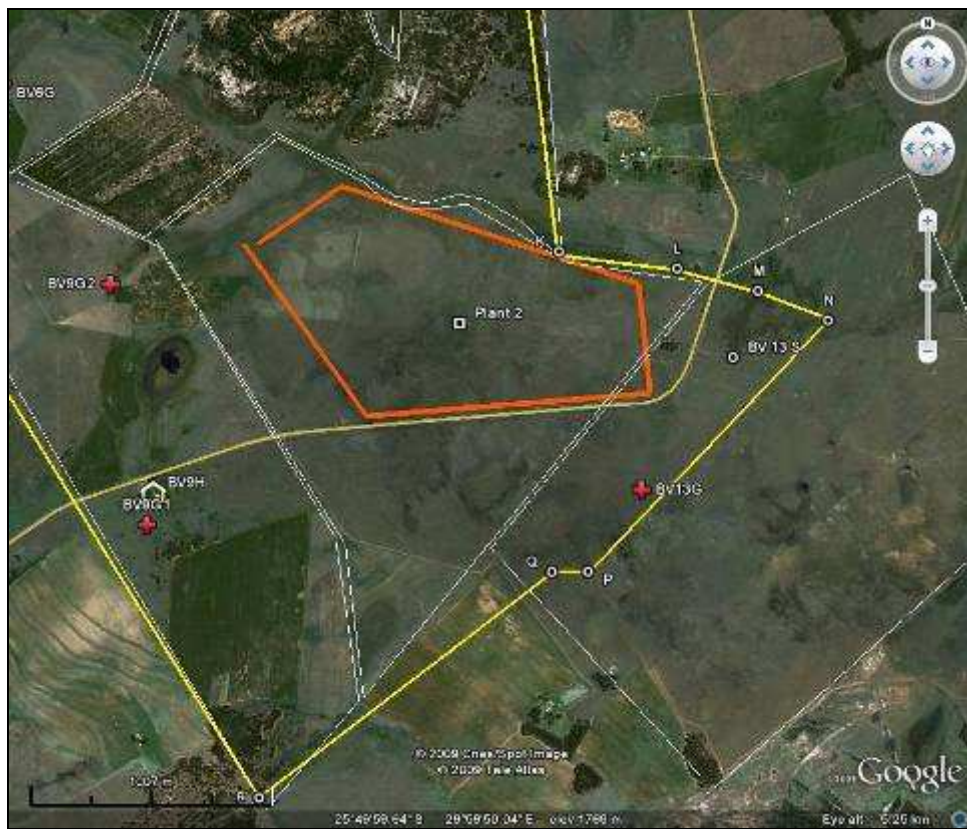


**FIGURE 5: Pre-feasibility study block plan indicating farms and farm portions and the three alternative plant sites (rectangles)**





**FIGURE 6: Proposed No 1 alternative of the plant**



**FIGURE 7: Proposed No 2 alternative of the plant**



**FIGURE 8: Proposed No 3 alternative of the plant**

### 3.3 Concept impact assessment

#### 3.3.1 General remarks

The physical impact of the development may vary from low to high negative depending on the sensitivity (significance and condition) of the heritage resources that have been identified and the actual location of the mine and associated facilities (to be determined following the results of scoping studies). Therefore the exact impact cannot be qualified until the location and extent of the mining area and its buffer zone is known.

#### 3.3.2 Nature of impact

The direct impact nature may imply **exposure and destruction** of any known and unknown (hidden) heritage resources during the construction phases. The **indirect** (accumulative) nature during the construction phases may be the possible uncovering of other heritage features (chance finds) and encroachment on known sites in buffer areas, as well as damage through blasting.

#### 3.3.3 Extent of impact

In all cases the impact extent may be **localised** affecting only heritage resources in the study area.

#### 3.3.4 Duration of impact

The impact duration on the identified heritage features may be irreversible and **permanent** if they cannot be accommodated in the proposed development.

#### 3.3.5 Intensity of impact

In all cases the impact intensity may be **high**.

### **3.3.6 Probability of occurrence of impact**

In all cases the probability/risk of an impact on any heritage resources may be **likely** since the identified heritage resources may not be accommodated within the proposed layout.

### **3.3.7 Status of impact**

In all cases the impact status may be **negative**.

### **3.3.8 Accumulative impact**

The indirect (accumulative) nature during the operational phases implies that preserved heritage features inside the mining areas could be damaged, neglected and eventually destroyed, whilst heritage features in the buffer areas could be damaged through ongoing blasting and pollution.

### **3.3.9 Degree of confidence in predictions of impacts**

In all cases the degree of confidence is **high**.

### **3.3.10 Impact significance**

The impact significance will be **medium to high negative**.

## **3.4 Social and economic benefits**

It is assumed that the proposed development will create temporary (construction) and permanent jobs in the area.

## **3.5 Consultation with affected communities**

This process has been part of the EIA as a whole.

## **3.6 Identification of risk sources**

The following project actions may very likely impact negatively on any potential historical and archaeological sites and remains.

- Bulk earthworks and excavations may expose or uncover foundations, ruins, objects and artefacts and unmarked human burials.
- Mining may attract curious visitors who could vandalise or destroy heritage sites.
- The relocation of graves may be made difficult when the exact number of graves is not known (therefore all graveyards and graves should be properly documented)

## **3.7 Possible key mitigation measures before mining**

- Relocation of graves and graveyards where unavoidable
- Photo documentation of all homesteads and farmsteads if they will be destroyed
- Mapping and detailed documentation (measured plans and elevations) of all buildings older than 60 years
- Photo documentation of all farmsteads, homesteads and graves/graveyards in buffer areas in order to create a basis for monitoring any direct or indirect impacts

## **3.8 Possible key mitigation measures during mining**

- Regular monitoring of heritage resources in terms of possible damage due to blasting etc (applies to heritage resources under the control of Exxaro and in private hands as well)
- Implementation of Conservation Management Plan for managing preserved heritage resources under the control of Exxaro



### 3.9 Consideration of possible alternatives

Except for the treatment plants (3 initial alternatives), no site alternatives apply to the location of the colliery pit.

Regarding the proposed plant locations, three possible sites were considered initially.

PROPOSAL	LOCATION	MITIGATIONS TO MINIMISE ADVERSE IMPACTS ON HERITAGE RESOURCES	PREFERENCE RATING
1	Leeuwbank 2, 7, 16, 8	Relocate graves (2 burial sites)	2
2	Blijvooruitzicht 10	-	1
3	Zoekop 8, RE	Photograph modern homestead before destruction Impacts from relocation of District Road 1770	3

After considering the three alternatives, Exxaro Coal has selected plant site No 2, which will have the least impact on heritage and environmental resources:

- No heritage resources of significance
- Close to existing district road
- Close to existing plant from neighbouring colliery (already adverse visual impact implications)

See Figure 9 (below) for the final infrastructure layout based on site No 2.

### 3.10 Possible key uncertainties and risks that may influence accuracy and confidence of impact assessment

It is possible that new information, which could change the recommendations, will be generated through the following research activities:

- Archaeological and historical sites and objects that are hidden or are buried
- Further public participation may yield new information

The survey concentrated on heritage features that are visible on the surface. It sometimes happens that archaeological deposits (Stone Age and Iron Age artefacts), historical deposits (old waste disposal sites) and burial sites, previously hidden by tall grass or by soil, are only exposed through construction work or veld fires. From a heritage perspective the existence of movable and immovable heritage features can never be predicted with 100% accuracy.

### 3.11 Findings and recommendations

#### Findings

Significant heritage resources that have been identified and assessed encompass:

- Farmsteads (both modern and historic)
- Farm homesteads (both modern and historic)
- Graves and burial grounds
- Farm structures (ruins and foundations)
- Planted crops
- Grazing
- Farm dams
- Furrows
- Farm roads and tracks
- Exotic tree lanes and plantations

There will be direct and indirect impacts from the following development sources:

- Open pit
- Proposed plant sites
- Construction of infrastructure (haulage roads, roads, power lines, pipe lines, conveyor belts etc)

- Relocation of District Road 1770

Direct impacts comprise alteration, destruction and demolition, whilst indirect impacts comprise gradual deterioration in the long term due to noise, vibrations, dust, vandalism etc.

Regarding the open pit locations and boundaries, there are no real alternative locations and boundaries. Even if heritage resources located just outside the boundaries would be preserved, there would be long-term adverse indirect impacts.

### **Recommendations**

Based on what was found and its evaluation, Cultmatrix will support the proposed mining development in the area with the client's agreement about the following recommendations:

1. That the mitigation and management measures as set out in this report are applied for both the entire area and for each identified site prior to development taking place, namely:
  - Avoidance, retention and conservation of highly significant farmsteads and homesteads;
  - Where farmsteads cannot be preserved, those with buildings older than 60 years should be documented in terms of Section 34 of the NHRA, implying mapping of the farmstead, plans and elevations of the old buildings and a photo record of the remaining buildings;
  - Applications (Section 34) must be made to the Mpumalanga Provincial Heritage Resources Authority for obtaining demolition permits;
  - Site clearing and detailed mapping of all affected grave sites to determine exact number and age of graves;
  - Avoidance and preservation of all grave sites if possible;
  - Where grave sites cannot be avoided, they should be relocated in terms of Section 36 of the NHRA;
  - Other farmsteads should be documented (photos) before demolition, should it not be possible to avoid them;
  - Photo documentation of one representative homestead before demolition;
  - Sites associated with the initiation of male farm workers should be avoided (a site occurs on Blijvooruitzicht 12);
2. Should any unknown human remains be disturbed, exposed or uncovered during preparations for the proposed project, these should immediately be reported to Cultmatrix. Burial remains should not be disturbed or removed until inspected by an archaeologist.
3. Site clearing and preparation activities must be monitored for the occurrence of any other archaeological material (Stone Age tools, Iron Age artefacts, historic waste disposal sites etc) and similar chance finds and an archaeologist should be asked to inspect the area when this has reached an advanced stage in order to verify the presence or absence of any such material.
4. An archaeologist should be requested to verify the selected plant site for any archaeological artefacts.
5. A desktop study for the entire mining area by a palaeontologist is advisable.
6. All preserved farmsteads and homesteads, whether under the control of Exxaro or whether in private ownership, should be monitored for damage (e.g. cracking of walls) caused by blasting work at the operating mine;
7. The above recommendations must be included in the Environment Management Plan for the proposed project;
8. A Heritage Conservation Management Plan should be drafted for ensuring that preserved sites (farmsteads, homesteads, graves) under the control of Exxaro will be maintained.
9. The relocation of District Road 1770 should be subject to a separate HIA study.

The final HIA report that may be submitted to SAHRA that should include the EIAs public participation report as well.



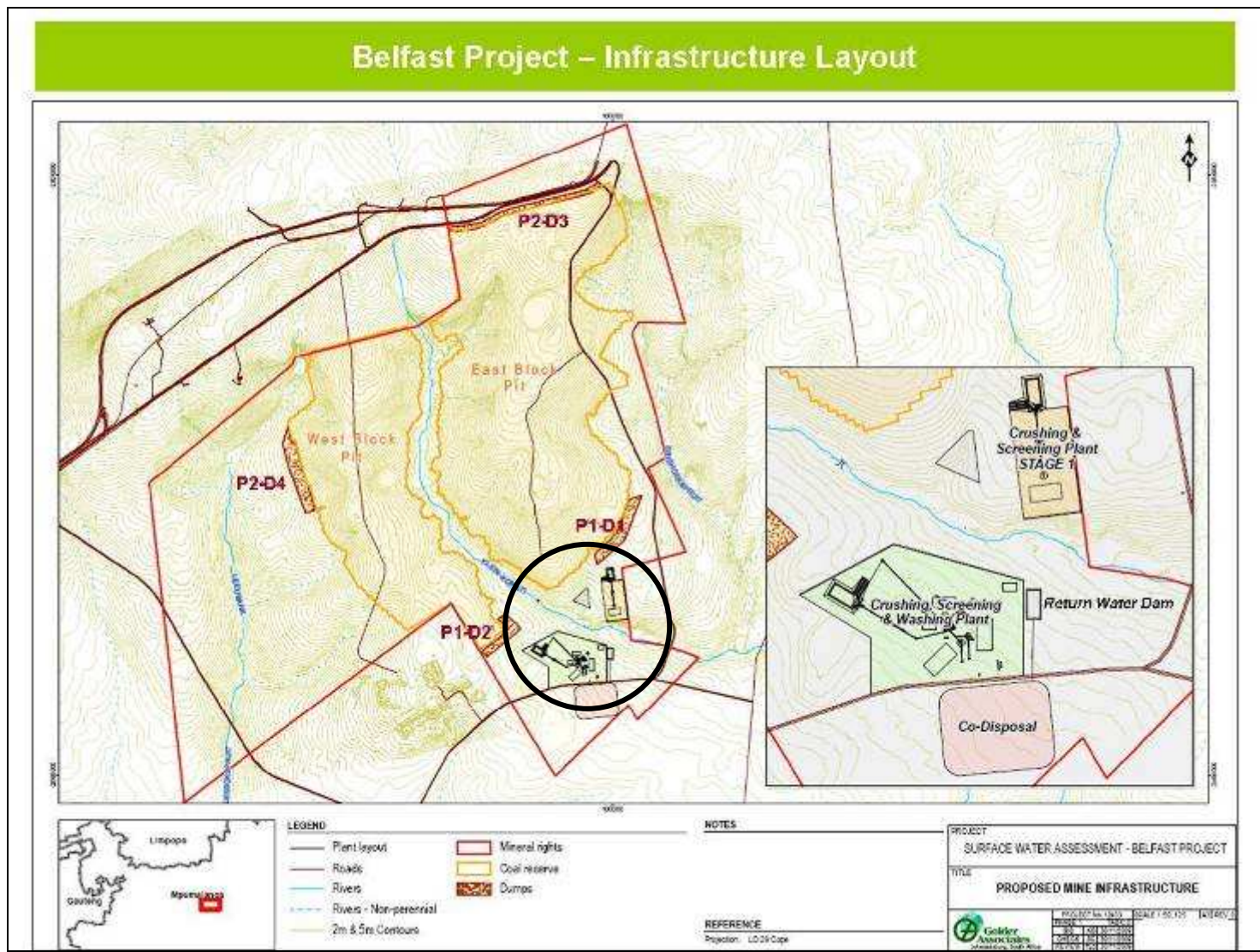


FIGURE 9: Final infrastructure layout centred on the No 2 alternative plant site (circled)

## PART 4: INFORMATION SOURCES USED IN THIS REPORT

### 4.1 Databases

Environmental Potential Atlas, Department of Environmental Affairs and Tourism.  
Heritage Sites Database, Pretoria

### 4.2 Literature

BERGH, JS (ed), 1999, *Geskiedenisatlas van Suid-Afrika. Die vier noordelike provinsies*. Pretoria: JL van Schaik.

DELIUS, P (ed), 2007, *Mpumalanga – Reclaiming the Past, Defining the Future*. Scottsville: University of KwaZulu-Natal Press

ICOMOS Australia. 1999. *The Australia ICOMOS Burra Charter for the conservation of places of cultural significance*.

*Living with the land. A manual for documenting cultural landscapes in the Northwest Territories*. Yellowknife (Canada), 2007.

MASON, R, *Prehistory of the Transvaal*.

*National Heritage Resources Act (Act 25 of 1999)*

*Standard Encyclopedia of Southern Africa*.

UNION OF SOUTH AFRICA, DEPARTMENT OF MINES AND INDUSTRIES, 1928, *The coalfields of the Eastern and South-Eastern Transvaal, Springbok Flats, Waterberg, Zoutpansberg and the Cape Province*. Geological Survey Memoir No 19, Vol 3. Pretoria: Government Printer.

VAN DER MERWE, AP, 1952, *Belfast Jaarboek*. Belfast: Town Council.

### 4.3 Maps

2530 CC Moedig 1969, 1988

2529 DD Wonderfontein 1965, 1986

Cadastral diagrams for all farm portions (Chief Surveyor-General)

Maps provided by Exxaro Coal

### 4.4 Aerial photos

Google Earth

## PART 5: TERMINOLOGY USED IN THIS REPORT

### Cultural significance (Burra Charter)

Aesthetic, historic, scientific, social or spiritual importance, meaning or noteworthiness for past, present or future generations

Cultural significance is embodied in the place itself (intrinsic significance), its fabric, setting, use, associations, meanings, records, related places and related objects

### Heritage resources/features (NHRA)

Any place or object of cultural significance, including:

- (a) places, buildings, structures and equipment of cultural significance;
- (b) places to which oral traditions are attached or which are associated with living heritage;
- (c) historical settlements and townscapes;
- (d) landscapes and natural features of cultural significance;
- (e) geological sites of scientific or cultural importance;
- (f) archaeological and palaeontological sites;
- (g) graves and burial grounds, including—
  - (i) ancestral graves;
  - (ii) royal graves and graves of traditional leaders;
  - (iii) graves of victims of conflict;
  - (iv) graves of individuals designated by the Minister by notice in the *Gazette*;
  - (v) historical graves and cemeteries; and
  - (vi) other human remains, which are not covered in terms of the Human Tissue Act, 1983 Act No. 65 of 1983;
- (h) sites of significance relating to the history of slavery in South Africa;
- (i) movable objects, including—

- (i) objects recovered from the soil or waters of South Africa, including archaeological and palaeontological objects and material, meteorites and rare geological specimens;
- (ii) objects to which oral traditions are attached or which are associated with living heritage;
- (iii) ethnographic art and objects;
- (iv) military objects;
- (v) objects of decorative or fine art;
- (vi) objects of scientific or technological interest; and
- (vii) 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).

### Heritage significance (NHRA)

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

**Historic period**

Since the arrival of the white settlers - c. AD 1840 in this part of the country

**Impact**

A description of the effect of an aspect of the development on a specified component of the biophysical, social or economic environment within a defined time and space

**Impact assessment**

Issues that cannot be resolved during screening (Level 1) and scoping (Level 2) and thus require further investigation

**Iron Age**

Early Iron Age (EIA)	AD 200 - AD 1000
Late Iron Age (LIA)	AD 1000 - AD 1830

**Issue**

A question that asks what the impact of the proposed development will be on some element of the environment

**Maintenance**

Keeping something in good health or repair.

**Management actions**

Actions that enhance benefits associated with a proposed development or avoid, mitigate, restore, rehabilitate or compensate for the negative impacts

**Preservation**

Conservation activities that consolidate and maintain the existing form, material and integrity of a cultural resource.

**Reconstruction**

Re-erecting a structure on its original site using original components.

**Rehabilitation**

Re-using an original building or structure for its historic purpose or placing it in a new use that requires minimal change to the building or structure characteristics and its site and environment.

**Restoration**

Returning the existing fabric of a place to a known earlier state by removing additions or by reassembling existing components.

**SAHRA** - South African Heritage Resources Agency

**Stone Age**

Early Stone Age (ESA)	2 000 000 - 150 000 Before Present
Middle Stone Age (MSA)	150 000 - 30 000 BP
Late Stone Age (LSA)	30 000 - until c. AD 200

**Value**

Worth, conservation utility, desirability to conserve etc in terms of physical condition, level of significance (importance), economy (feasibility), possible new uses and associations/comparisons with similar features elsewhere

**APPENDIX 1: IDENTIFICATION, MAPPING AND ASSESSMENT OF INDIVIDUAL  
HERITAGE FEATURES**



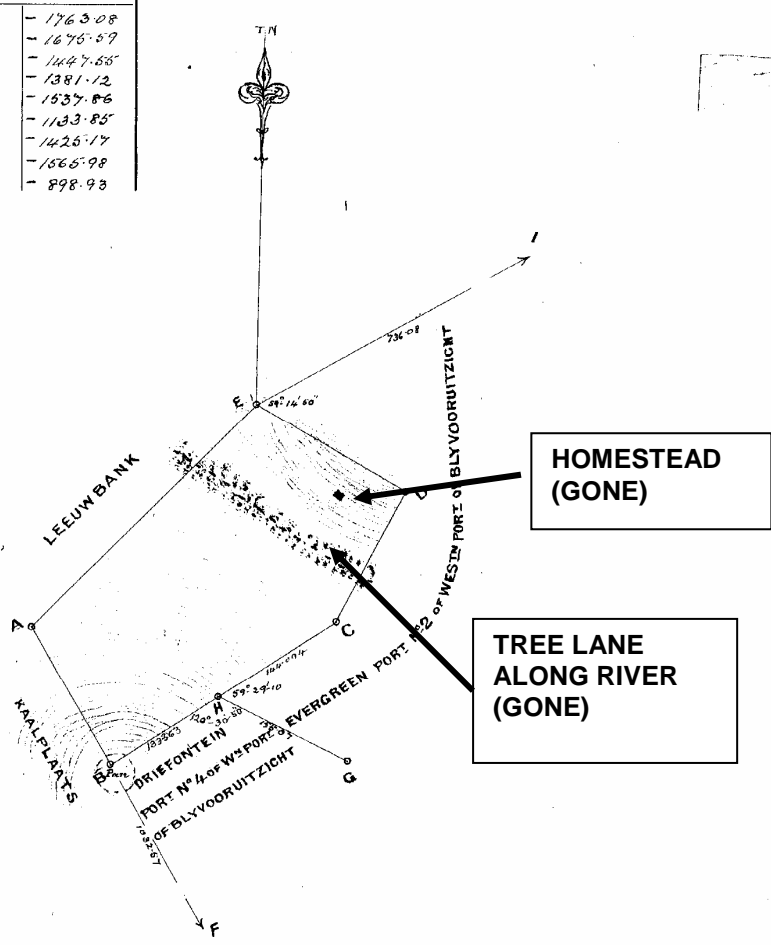
BLIJVOORUITZICHT PORTION 6



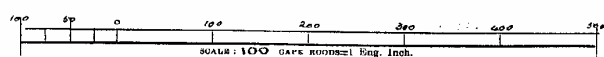
Form B2.—Diagram Form for a Sub-Division of a Farm or portion of a Farm.

S.G. No. A. 3335/14

SIDES.	ANGLES.	(Y) CO-ORDINATES.	(X)
AB 166.75	A 105° 13' 30"	A + 4846.90	- 1763.08
BC 277.457	B 96 55 10	B + 4988.86	- 1676.57
CD 151.16	C 150 47 40	C + 4820.81	- 1447.55
DE 180.04	D 73 24 20	D + 4675.03	- 1381.12
EA 329.46	E 103 39 00	E + 4606.44	- 1537.86
		F + 5867.90	- 1133.85
		G + 4977.80	- 1425.17
		H + 4912.89	- 1565.98
		I + 4240.95	- 898.93



This parcel was under :  
 Now registered under :  
 No. 383  
 REGISTRAR GENERAL  
 REGISTRAR GENERAL



The above Figure lettered **ABCDE** represents  
**121 Morgen 208** Square Rods of land, being **Portion N° 1 of the Western Portion**  
**BLYVOORUITZICHT N° 12** of the Farm

as appears on the Diagram S.G. No. A framed by Surveyor **F. Macdonald** in March 1892.  
 relating to Deed of Transfer No. **110/1889** dated **14-1-89** made in favour of **J.G. Kilian**  
 Situate in the District of **Carolina Belfast** Ward **Carolina** Province of Transvaal. Bounded as indicated above  
 The Beacons were pointed out by **C.J. Pieters, P.J. Kilian & Surveyor F. Macdonald** and have been properly erected according to law  
 Surveyed in June 1914 by me **Peter Macdonald** Land Surveyor.

No. **A 3335** Examined. The numerical data of this Diagram are sufficiently consistent. Approved  
**L. Maxwell Stewart** Examiner of Diagrams. **F. Macdonald** Surveyor-General.  
 Surveyor-General's Office, Pretoria. 24 NOV 1915  
 This Diagram belongs to Deed of Transfer No. made this day in favour of  
**T 1187/20** Registrar of Deeds. Deeds Office, Pretoria

Published by authority—Greent & Sherr, P.O. Box 2604, Johannesburg.—17/1/13.

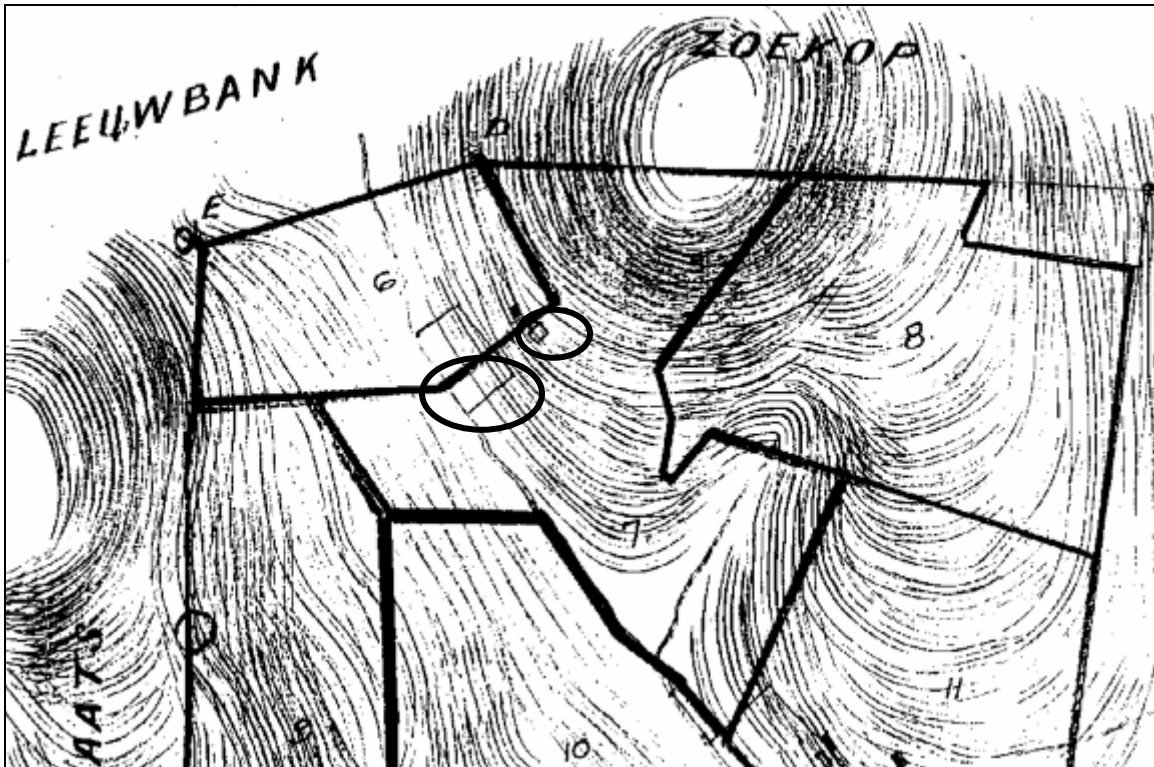


<b>BV6G FARM WORKER'S GRAVE</b>	
Feature name: Farm worker's grave	
Type of feature: Burial site	
Location/Area	Blijvooruitzicht 6
GPS coordinates	25°49'16.58"S 29°58'36.93"E
References	None
NHRA protection status	Section 36
Description: According to CJ Burger this is a single grave of a farm worker	
Significance status (1)	3
Condition status and value (2)	2
Sensitivity assessment (1 x 2 = range = level)	<b>6</b>
Predicted impact	Adverse (inside mining area)
Recommended management interventions to preserve feature or mitigate impact: Avoid if possible, restore, protect and interpret, otherwise relocate	
Photo	

**BLIJVOORUITZICHT PORTION 7**

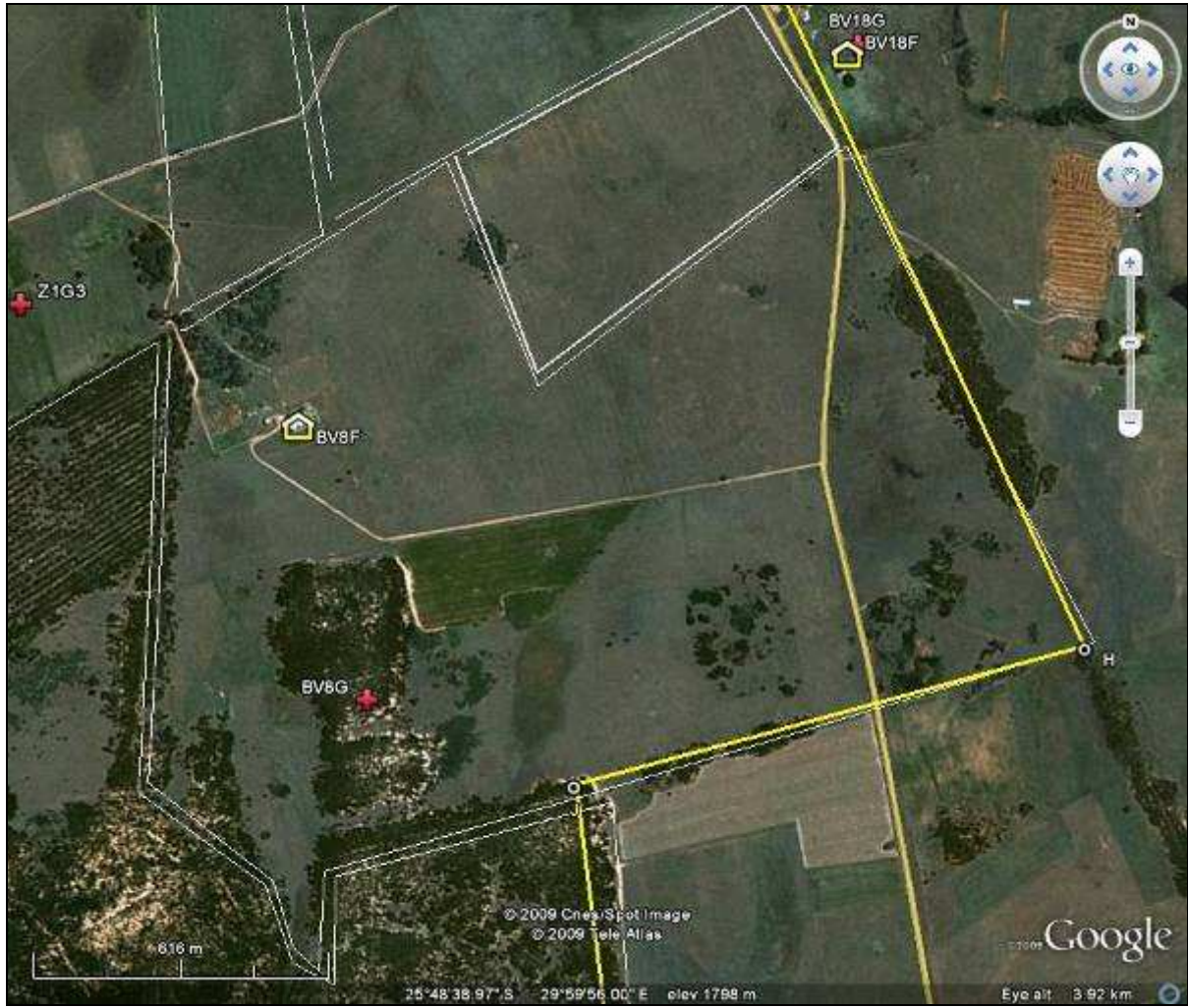
There are no heritage resources on this portion





Portion of survey diagram of Blijvooruitzicht Portion 2 indicating two unknown structures on Portion 7 (have disappeared)

BLIJVOORUITZICHT PORTION 8





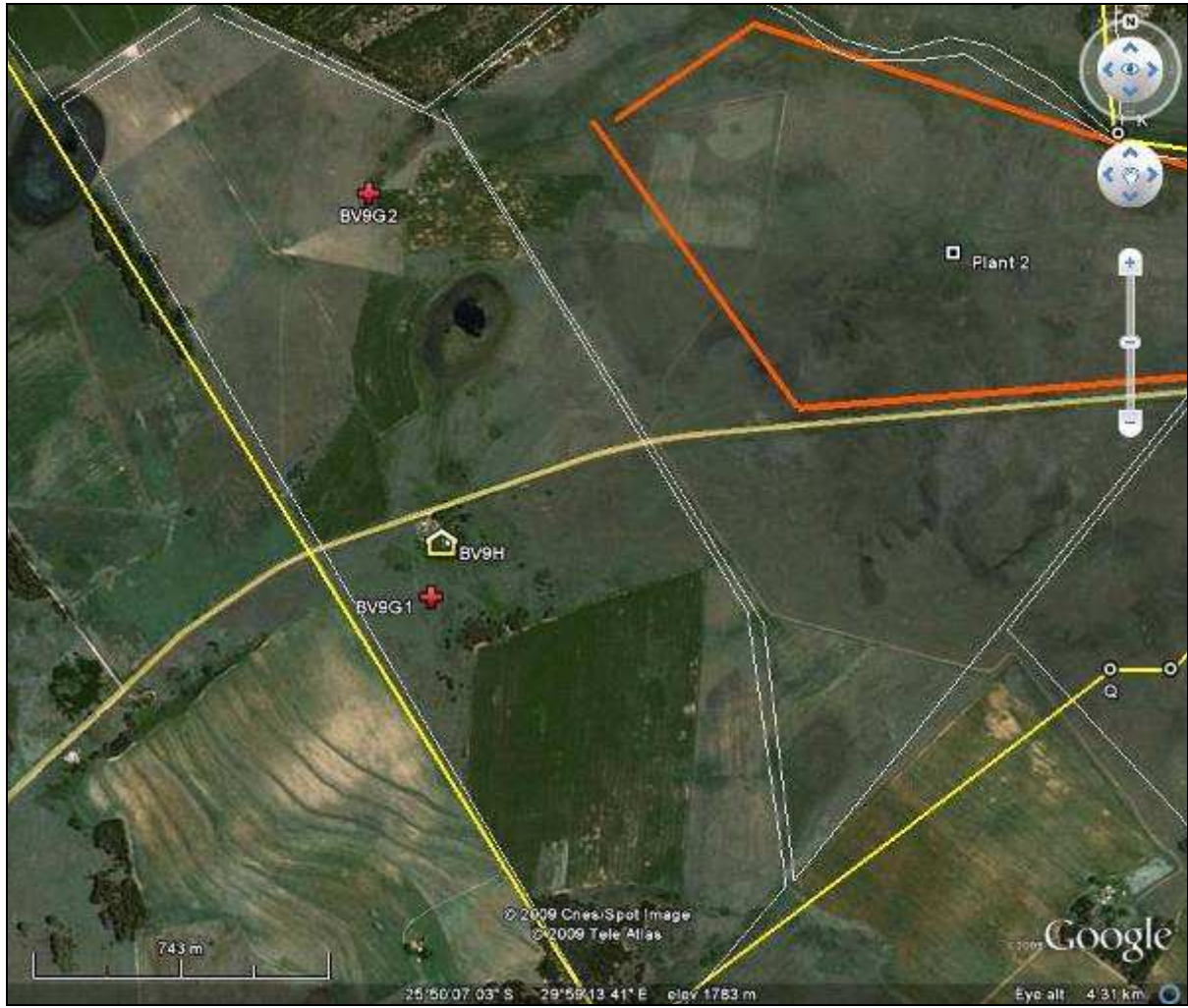
<b>BV8F FARMSTEAD</b>	
Feature name: Farmstead	
Type of feature: Building/structure	
Location/Area	Blijvooruitzicht 8
GPS coordinates	25°48'34.91"S 29°59'33.82"E
References	None
NHRA protection status	None
Description: Modern farmstead	
Significance status (1)	1
Condition status and value (2)	3
Sensitivity assessment (1 x 2 = range = level)	3
Predicted impact	Adverse (inside mining area)
Recommended management interventions to preserve feature or mitigate impact: Document before any demolition. There are no compelling reasons for preservation.	
Photo	

<b>BV8G MTSWENI GRAVEYARD</b>		
Feature name: Mtsweni graveyard		
Type of feature: Burial site		
Location/Area	Blijvooruitzicht 8 inside dense copse of trees	
GPS coordinates	25°48'53.23"S 29°59'38.78"E	
References	None	
NHRA protection status	Section 36	
Description: 5 graves with new headstones of members of Mtsweni family		
Significance status (1)		3
Condition status and value (2)		3
Sensitivity assessment (1 x 2 = range = level)		9
Predicted impact	Adverse (inside mining area)	
Recommended management interventions to preserve feature or mitigate impact: Avoid if possible, restore, protect and interpret, otherwise relocate. The graves are possibly linked to a land claim.		

Photo

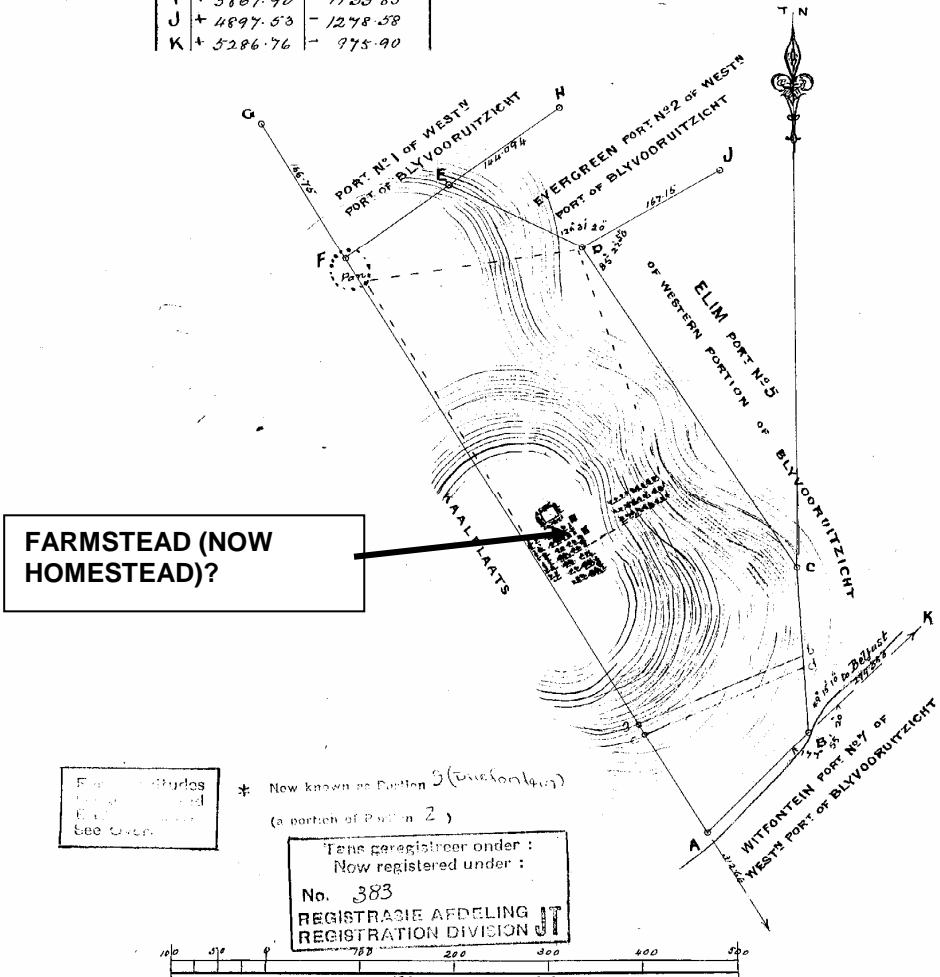


BLIJVOORUITZICHT PORTION 9



Form B2.—Diagram Form for a Sub-Division of a Farm or portion of a Farm.

SIDES.		ANGLES.		(Y) CO-ORDINATES. (X)	
AB	151.12	A	75° 03' 40"	A	+ 5601.73 - 1297.88
BC	175.65	B	132 49 30	B	+ 5293.48 - 1192.43
CD	407.22	C	149 35 20	C	+ 5318.06 - 1201.39
DE	155.07	D	148 5 50	D	+ 4977.84 - 1425.17
EF	133.863	E	120 30 57	E	+ 4912.89 - 1565.98
FA	719.91	F	93 4 50	F	+ 4988.86 - 1675.59
		G		G	+ 4846.90 - 1763.08
		H		H	+ 4830.81 - 1447.55
		I		I	+ 5867.90 - 1133.85
		J		J	+ 4897.53 - 1278.58
		K		K	+ 5286.76 - 975.90



The above Figure lettered **ABCDEF** represents 242 Morgen 415 Square Rods of land, being Portion No. 4 (known as **BRIEFONTEIN**) of the Western Portion of the Farm **BLYVOORUITZICHT No 12**

as appears on the Diagram S.G. No. A framed by Surveyor **F Macdonald** in March 1892 relating to Deed of Transfer No. **110/1889** dated 14-1-89 made in favour of **J.G Kilian** Situate in the District of **Carolina, Belfast** Ward **Carolina** Province of **Transvaal**. Bounded as indicated above The Beacons were pointed out by **Petrus J. Kilian, H.J. van Wijk** Surveyor **F. Macdonald** and have been properly erected according to law. Surveyed in **JUNE 1914**.

No. **3338** Examined. The numerical data of this Diagram are sufficiently consistent. Approved *[Signature]* This Diagram belongs to Deed of Transfer No. made this day in favour of *[Signature]* Registrar of Deeds.

*[Signature]* Examiner of Diagrams. *[Signature]* Surveyor-General. Deeds Office, Pretoria.

Published by authority—Grocott & Sherry, P.O. Box 2604, Johannesburg.—1/10/14



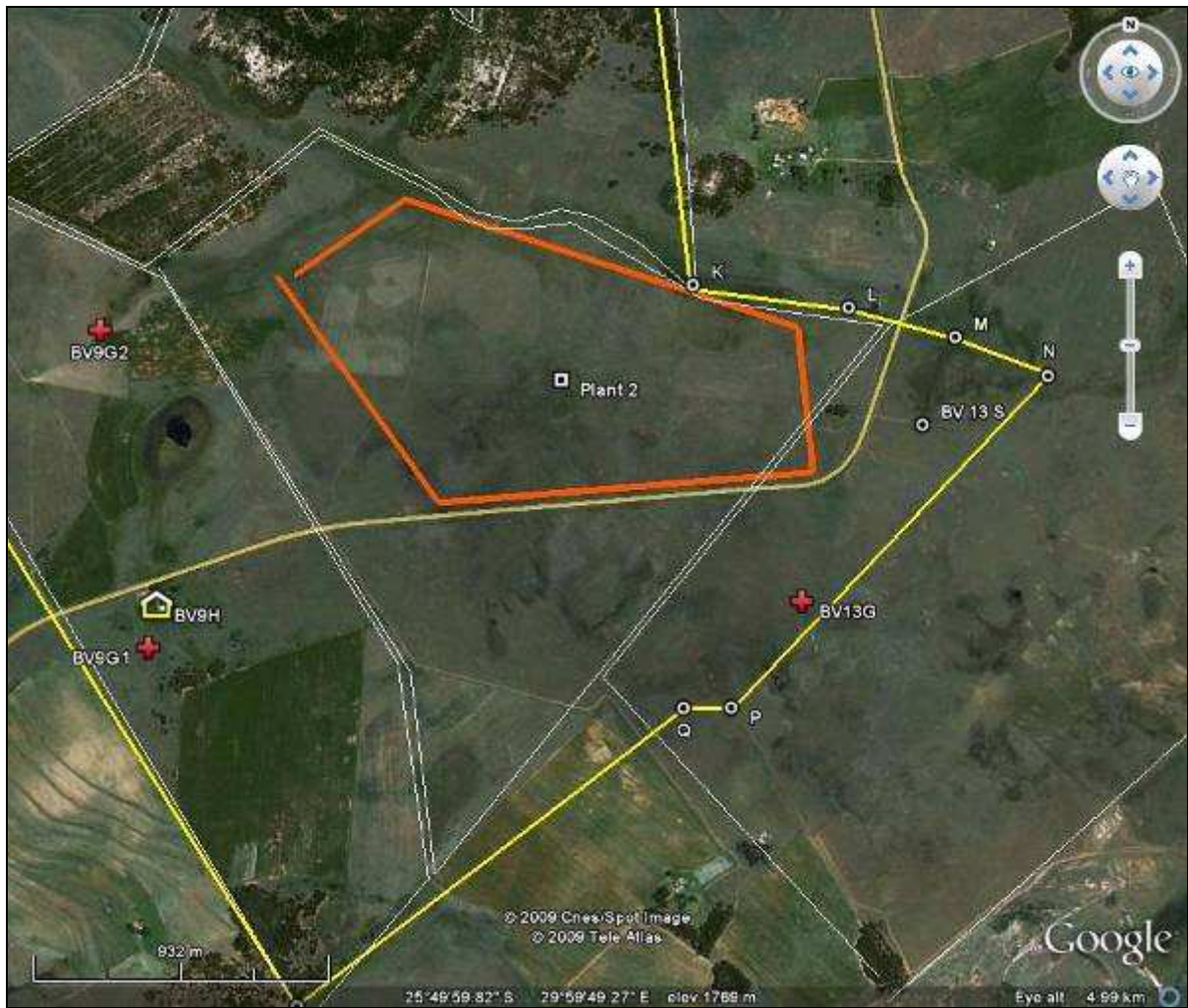
<b>BV9H HOMESTEAD</b>	
Feature name: Homestead	
Type of feature: Building/structure	
Location/Area	Blijvooruitzicht Portion 9 close to road
GPS coordinates	25°50'11.43"S 29°58'59.62"E
References	None
NHRA protection status	None
Description: Typical farm workers' homestead	
Significance status (1)	1
Condition status and value (2)	2
Sensitivity assessment (1 x 2 = range = level)	<b>2</b>
Predicted impact	Adverse (inside mining area)
Recommended management interventions to preserve feature or mitigate impact: Document before any demolition. There are no compelling reasons to preserve this feature.	
Photo	

<b>BV9G1 GRAVE</b>	
Feature name: Grave of farmer	
Type of feature: Burial site	
Location/Area	Blijvooruitzicht 9 south of road and homestead
GPS coordinates	25°50'15.73"S 29°58'58.72"E
References	None
NHRA protection status	Section 36
Description: According to WP Pretorius a single white person is buried here	
Significance status (1)	3
Condition status and value (2)	2
Sensitivity assessment (1 x 2 = range = level)	<b>6</b>
Predicted impact	Adverse (inside mining area)
Recommended management interventions to preserve feature or mitigate impact: Avoid if possible, restore, protect and interpret, otherwise relocate	
Photo	

<b>BV9G2 FARM WORKERS' GRAVES</b>	
Feature name: Farm workers' graves	
Type of feature: Burial site	
Location/Area	Blijvooruitzicht 9 north of road
GPS coordinates	25°49'43.49"S 29°58'53.12"E
References	None
NHRA protection status	Section 36
Description: According to WP Pretorius farm workers are buried here	
Significance status (1)	3
Condition status and value (2)	2
Sensitivity assessment (1 x 2 = range = level)	6
Predicted impact	Adverse (inside mining area)
Recommended management interventions to preserve feature or mitigate impact: Avoid if possible, restore, protect and interpret, otherwise relocate	
Photo	

**BLIJVOORUITZICHT PORTION 10**

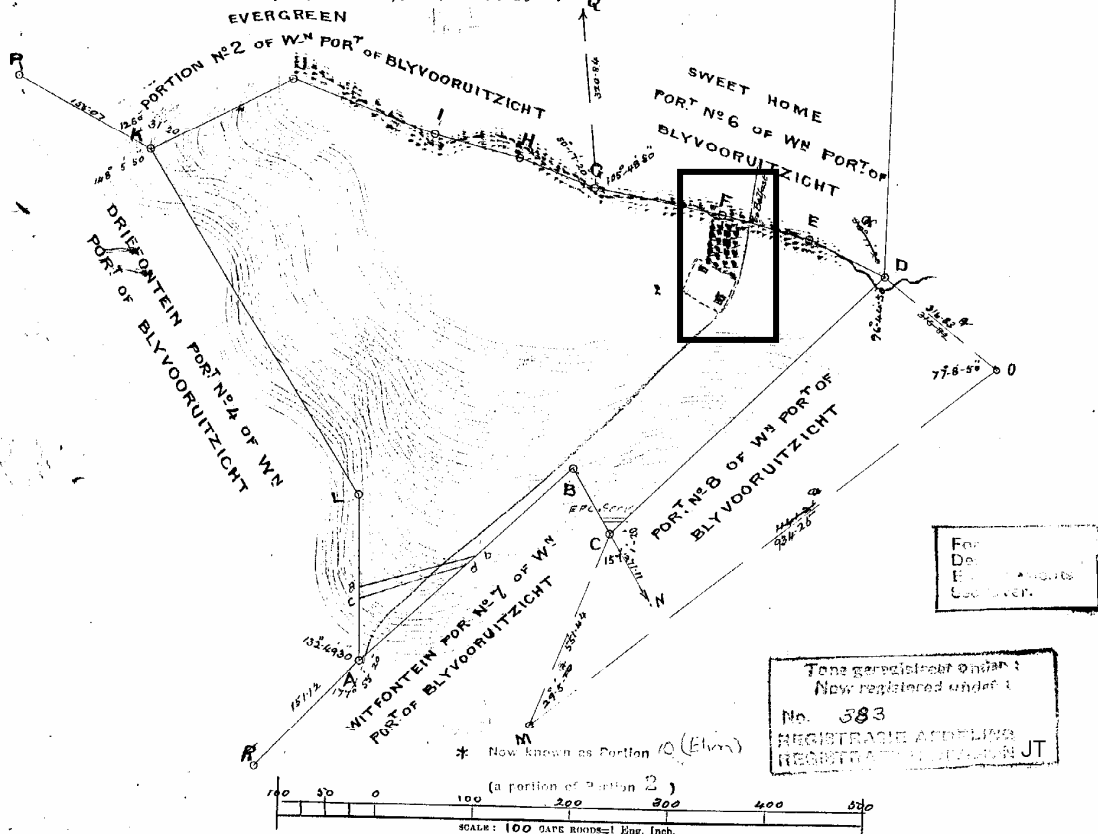
There are no heritage resources on this portion



Form B2.—Diagram Form for a Sub-Division of a Farm or portion of a Farm.

S.G. No. A. 3339/14

SIDES.	ANGLES.	(Y) CO-ORDINATES.	(X)
AB 299.363	A 49° 15' 10"	A +5493.48	-1192.43
BC 77.55	B 282 27 50	B +5286.76	-975.90
CD 384.04	C 75 15 40	C +5353.345	-935.563
DE 84.245	D 68 33 30	D +5077.33	-668.54
EF 73.136	E 172 35 00	E +5044.94	-746.31
FC 130.63	F 172 48 20	F +5020.53	-836.19
GH 87.393	G 203 53 50	G +5002.35	-965.55
HI 94.026	H 150 33 30	H +4955.91	-1040.17
IJ 154.335	I 198 9 40	I +4951.88	-1134.11
JK 767.15	J 130 40 00	J +4897.53	-1278.58
KL 407.22	K 85 22 50	K +4977.84	-1425.17
LA 195.65	L 210 24 40	L +5318.06	-1201.39
		M +5867.90	-1133.86
		N +5385.22	-795.22
		O +5269.34	-416.53
		P +4972.89	-1565.95
		Q +5257.93	-1297.98



The above Figure lettered ABCDEFGHIJKL (named **ELIM**) represents 347 Morgen 151 Square Roods of land, being ~~Portion No 5~~ **Portion No 10** of the Western Portion of the Farm

**BLYVOORUITZICHT No 12**  
 as appears on the Diagram S.G. No. A framed by Surveyor P Macdonald in March 1892  
 relating to Deed of Transfer No. **110/1889** dated **14/1/89** made in favour of **J.G. Kilian**  
 Situate in the District of **Carolina Belfast** Ward **Machadoodorp** Carolina Province of Transvaal. Bounded as indicated above  
 The Beacons were pointed out by **H. van Wyk, C.J. Y. J. D. Kilian** Surveyor **P. Macdonald** and have been properly erected according to law  
 Surveyed in **June 1914**

by me  
**Peter Macdonald G.E.**  
 Land Surveyor.

No. **3339** Examined. The numerical data of this Diagram are sufficiently consistent.  
**J. Maxwell Edwards**  
 Examiner of Diagrams.

Approved  
**[Signature]**  
 Surveyor-General.

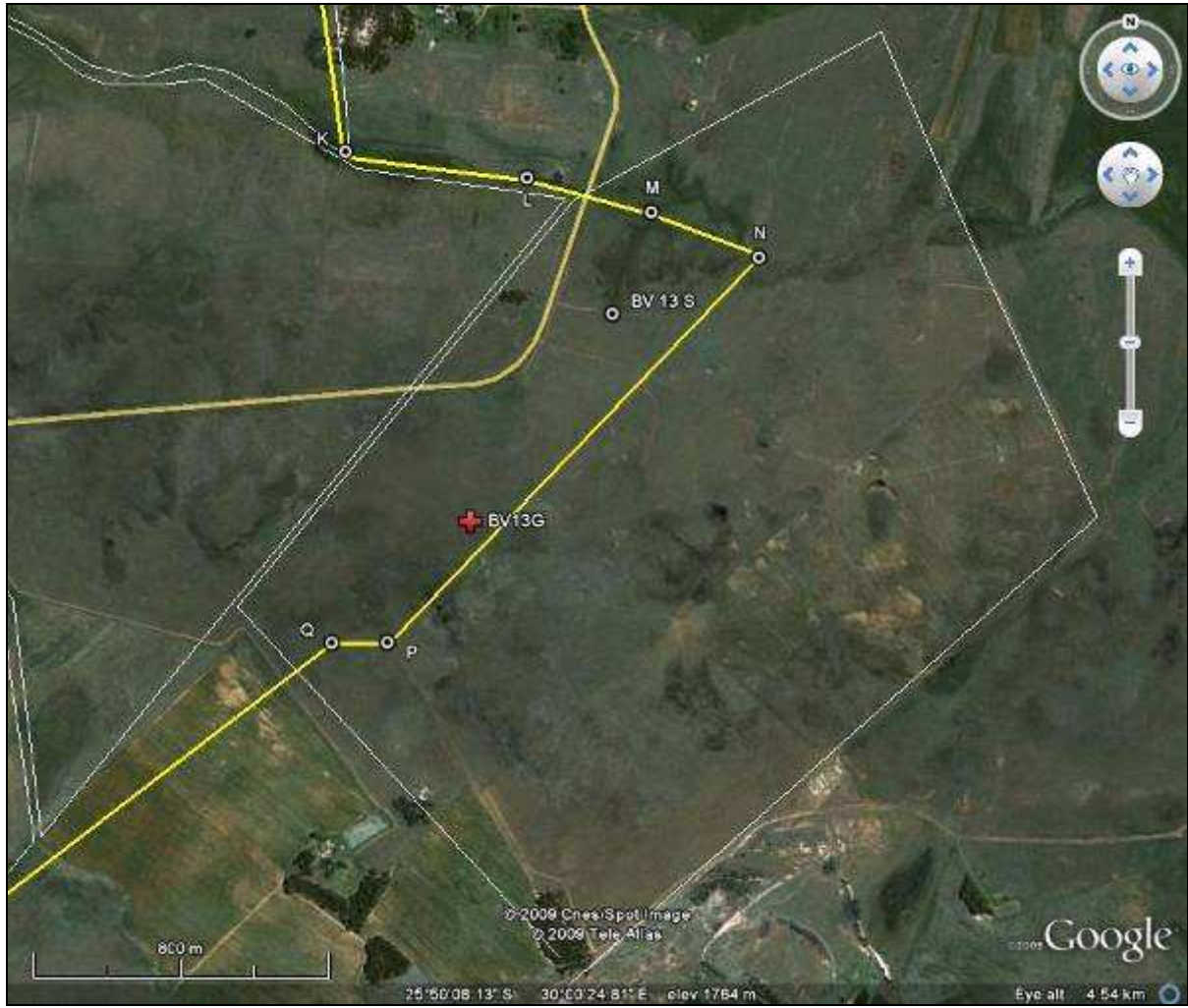
This Diagram belongs to Deed of Transfer No. **110/1889** made this day in favour of  
**[Signature]**  
 Registrar of Deeds.

Surveyor-General's Office, Pretoria. **24 NOV 1915**  
 Deeds Office, Pretoria.

Published by authority—Gracet & Sherr, P.O. Box 2404, Johannesburg.—17/11/15.

Survey diagram of Portion 10 indicating a possible homestead (has disappeared)

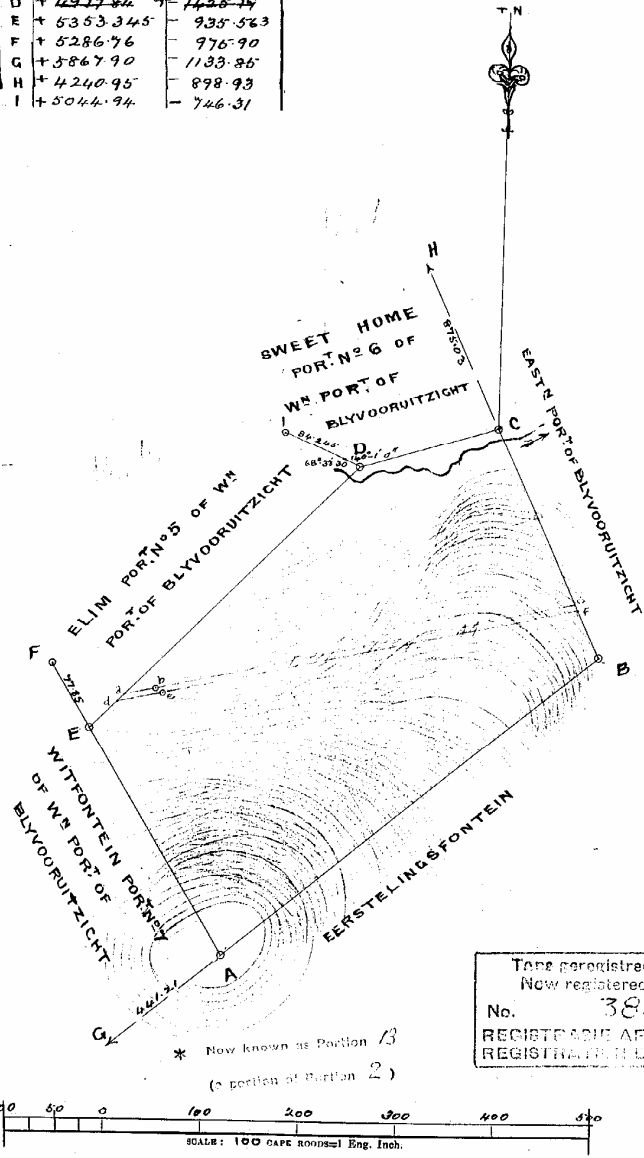
BLIJVOORUITZICHT PORTION 13



Form B2.—Diagram Form for a Sub-Division of a Farm or portion of a Farm.

S.G. No. A. 3342/114

SIDES.	ANGLES.	(Y) CO-ORDINATES.	(X)
AB 493.04	A 81° 22' 00"	A + 5585.22	- 795.22
BC 260.88	B 104° 42' 40"	B + 5269.34	- 416.53
CD 147.96	C 97° 45' 30"	C + 2832.43	- 152.23
DE 384.04	D 151° 28' 30"	D + 2832.43	- 152.23
EA 271.11	E 104° 44' 20"	E + 5353.345	- 935.523
		F + 5286.76	- 976.90
		G + 5867.90	- 1133.86
		H + 4240.95	- 898.93
		I + 5044.94	- 746.31



For Particulars  
Deeds and  
Endorsements  
See Over.

Trans registered under :  
Now registered under :  
No. 383  
REGISTRAR GE ADELING JT  
REGISTRAR DIVISION JT

The above Figure lettered A B C D E \*  
242 Morgen 415 Square Roods of land, being Portion N° 8 of the Western Portion  
represents  
of the Farm

**BLYVOORUITZICHT N° 12**

as appears on the Diagram S.G. No. A  
framed by Surveyor P. Macdonald  
In March 1892  
relating to Deed of Transfer No. 110/1890 dated 14/1/89 made in favour of J. G. Kilian  
Situat in the District of Carolina Belfast Ward Machadoodorp Carolina Province of Transvaal. Bounded as indicated above  
The Beacons were pointed out by H. J. van Wyk J. D. Kilian & Surveyor P. Macdonald and have been properly erected according to law  
Surveyed in June 1914  
by me  
Peter Macdonald G.S.  
Land Surveyor.

No. A 3342 Examined. The numerical data of this Diagram are sufficiently consistent.  
*H. Maxwell Edwards*  
Examiner of Diagrams.

Approved  
*P. Macdonald*  
Surveyor-General.

This Diagram belongs to Deed of Transfer No. made this day in favour of  
*T. H.*  
Registrar of Deeds.  
Deeds Office, Pretoria

Surveyor-General's Office, Pretoria, 24 NOV 1915

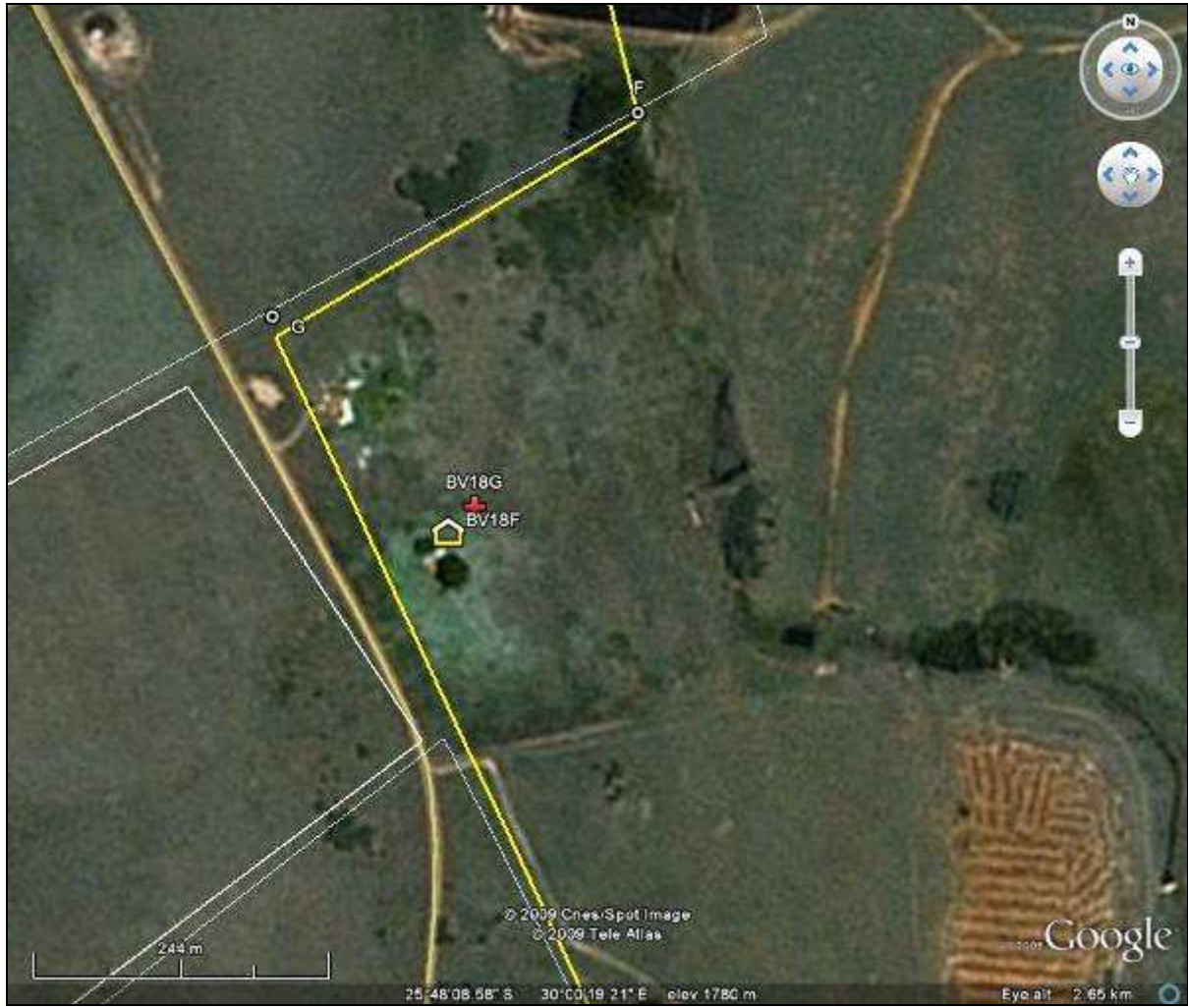
Published by authority—Groot & Sherr, P.O. Box 2604, Johannesburg.—17/11/13.



<b>BV13G GRAVES</b>	
Feature name: Farm workers' graves	
Type of feature: Burial site	
Location/Area	Blijvooruitzicht 13 in field
GPS coordinates	25°50'11.10"S 30°0'12.45"E
References	None
NHRA protection status	Section 36
Description: According to WP Pretorius farm workers are buried here	
Significance status (1)	3
Condition status and value (2)	2
Sensitivity assessment (1 x 2 = range = level)	<b>6</b>
Predicted impact	Unknown (on periphery of mining area)
Recommended management interventions to preserve feature or mitigate impact: Avoid if possible, restore, protect and interpret, otherwise relocate	
Photo	

<b>BV13S STRUCTURE REMAINS</b>	
Feature name: Remains of kraal and homestead	
Type of feature: Structure	
Location/Area	Blijvooruitzicht 13 in field
GPS coordinates	25°49'51.23"S 30°0'26.38"E
References	None
NHRA protection status	None
Description: According to the 1969 topo map there used to be a kraal and homestead, now hardly visible	
Significance status (1)	1
Condition status and value (2)	1
Sensitivity assessment (1 x 2 = range = level)	1
Predicted impact	Unknown (on periphery of mining area)
Recommended management interventions to preserve feature or mitigate impact: Avoid if possible, restore, protect and interpret, otherwise relocate	
Photo	

BLIJVOORUITZICHT PORTION 18



<b>BV18F FARMSTEAD</b>	
Feature name: Farmstead	
Type of feature: Building/structure	
Location/Area	Blijvooruitzicht 18 near road
GPS coordinates	25°48'9.80"S 30°0'14.70"E
References	None
NHRA protection status	Section 34
Description: Dwelling (much altered) and ruins of stone rondavel and outbuildings, unoccupied. Portion 18 is farmed by the Coetzers and they live in a new dwelling further to the north.	
Significance status (1)	1
Condition status and value (2)	2
Sensitivity assessment (1 x 2 = range = level)	2
Predicted impact	Unknown (just outside mining area)
Recommended management interventions to preserve feature or mitigate impact: Avoid, otherwise document before demolition. There are no compelling reasons for preservation.	

Photo





<b>BV18G GRAVES</b>	
Feature name: Coetzer graves	
Type of feature: Burial site	
Location/Area	Blijvooruitzicht 18 near farmstead and large tree
GPS coordinates	25°48'9.10"S 30°0'15.50"E
References	None
NHRA protection status	Section 36
Description: Graves of Coetzer and his wife	
Significance status (1)	3
Condition status and value (2)	2
Sensitivity assessment (1 x 2 = range = level)	6
Predicted impact	Unknown (just outside mining area)
Recommended management interventions to preserve feature or mitigate impact: Avoid if possible, restore, protect and interpret, otherwise relocate	

Photo



**LEEUEWBANK PORTION 2**

The part of this portion that falls within the mining rights area has no heritage resources.

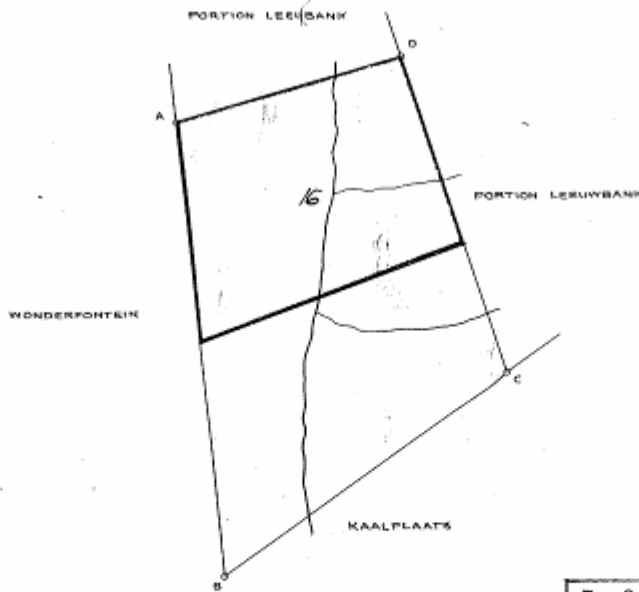




LEEUEWBANK PORTION 3



SIDES	ANGLE	(x) CO-ORDINATES (+)	(y) CO-ORDINATES (+)
AB 1000.00	A 107.12.10	A - 4738.53	B 3080.06
BC 355.31	B 83.28.10	B - 5731.64	C 2553.32
CD 115.37	C 108.8.00	C - 5376.12	D 2530.77
DA 875.68	D 51.57.10	D - 4590.27	A 2867.00



For Conditions  
Defectures and  
Endorsements  
See Over.

Trans registered under 1  
Now registered under 1  
No. 427  
REPUBLICAN APPELING 18  
REGISTRATION DIVISION 08

\* Now known as Portion 3,  
(a portion of Portion 1)

The above Diagram lettered ABCD represents 848 Morgen 370 Square Rods of land, being <sup>\*</sup> portion of portion of the Farm LEEUW BANK N<sup>o</sup> 557 77

transferred to T. T. Snyman by Deed of Transfer No. 468/1897 dated 1<sup>st</sup> May 1897.  
Situate in the District of ~~Middelburg~~ <sup>Belfast</sup> Ward Olifants River Transvaal Colony. Bounded as indicated above.  
The Beacons were pointed out by Surveyor H. Watermeyer and have been properly erected according to Law.  
Surveyed in November 1903 by me

*Chilton Watermeyer* Government Land Surveyor.

No. 2651 Examined. The numerical data of this Diagram are officially  
correct. Approved.  
*[Signature]*  
Surveyor-General.  
Surveyor-General's Office,  
Pretoria. 30 DEC. 1903

This Diagram belongs to Deed of Transfer No. *427* issued this day  
in favour of *Gr. 359/15*  
Deed Office,  
Pretoria. Registrar of Deeds.

<b>L3H HOMESTEAD</b>	
Feature name: Mtsweni homestead	
Type of feature: Building/structure	
Location/Area	Leeuwbank 3 near road
GPS coordinates	25°50'13.36"S 29°56'7.83"E
References	None
NHRA protection status	None
Description: Typical homestead of workers belonging mainly to the Mtsweni family	
Significance status (1)	1
Condition status and value (2)	2
Sensitivity assessment (1 x 2 = range = level)	2
Predicted impact	Adverse (inside mining area)
Recommended management interventions to preserve feature or mitigate impact: Avoid, otherwise document before demolition. There are no compelling reasons for preservation.	

Photo



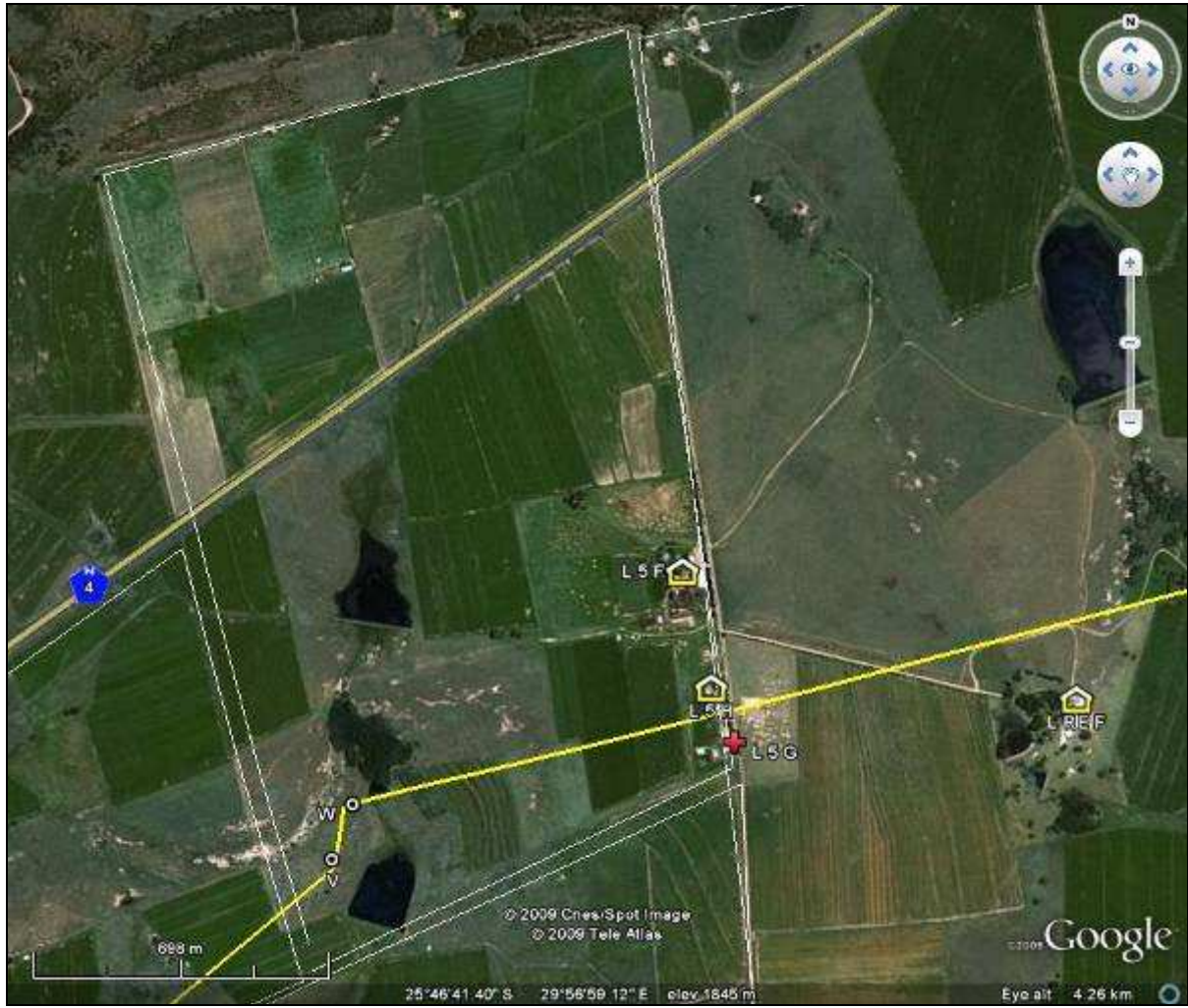
<b>L3G GRAVEYARD</b>	
Feature name: Farm workers' graveyard	
Type of feature: Burial site	
Location/Area	Leeuwbank 3 at homestead
GPS coordinates	25°50'15.80"S 29°56'6.40"E
References	None
NHRA protection status	Section 36
Description: Graveyard with about 20 graves, some with headstones	
Significance status (1)	3
Condition status and value (2)	2
Sensitivity assessment (1 x 2 = range = level)	6
Predicted impact	Adverse (inside mining area)
Recommended management interventions to preserve feature or mitigate impact: Avoid if possible, restore, protect and interpret, otherwise relocate	

Photo





LEEUEWBANK PORTION 5



A No. 1794 / 25

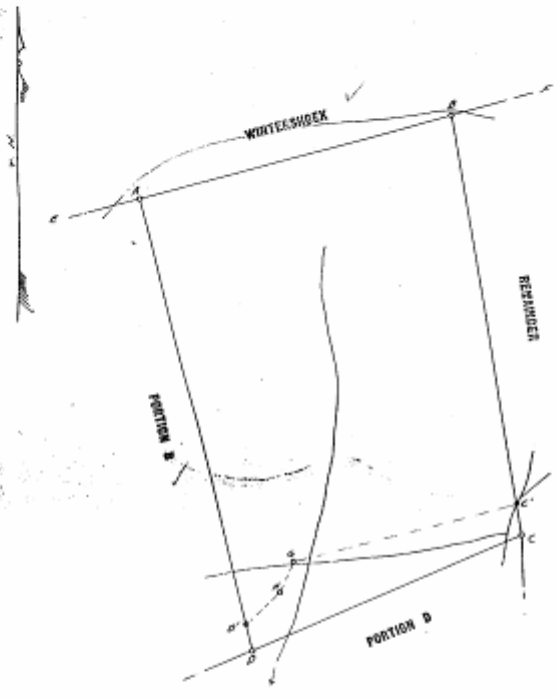
Form B4—Diagram Form for a Sub-Division of a Farm or portion of a Farm.

Diagram No. 1180 1025.

SIDES	ANGLES	(Y) CO-ORDINATES (X)
AB 343.62	A 91.28.50	A -3164.86 +2616.73
BC 461.04	B 84.2.50	B -3278.25 +2284.23
CD 312.49	C 104.20.10	C -3734.03 +2214.77
DA 506.00	D 78.29.10	D -3457.72 +2501.74
		E -3406.69 +2776.72
		F -3228.53 +2023.58

The Figure lettered A B C D H O's in extent 258 M. 363 sq. Rods. is Subject to Notarial Deed N° 6799.

BC 428.78	A 107.10	C -3701.61 +2219.71
CG 243.84	B 21.30.00	G -3763.67 +2637.30
GH 37.88	C 21.30.00	H -3708.74 +2470.77
HO 422.34	D 68.16.20	O -3830.603 +2508.218



Take notice under 1  
Now required under 2  
No. 427  
REGISTRAR APPELING  
REGISTRATION DIVISION JS

\* Now known as Portion 5



The above Figure lettered A B C D represents 258 Morgen 397 Square Rods of land, being portion C.

LEEUBANK No 557 77

of the Farm according to Diagram A. No. 343-34 relating to Deed of GRANT No. 11-8-1868 made in favour of D P PRETORIUS situated in the District of BELFAST PROVINCE OF THE TRANSVAAL. Bounded as indicated above.

The Boundaries have been properly erected according to law. Surveyed in March 1905 by me [Signature] Land Surveyor.

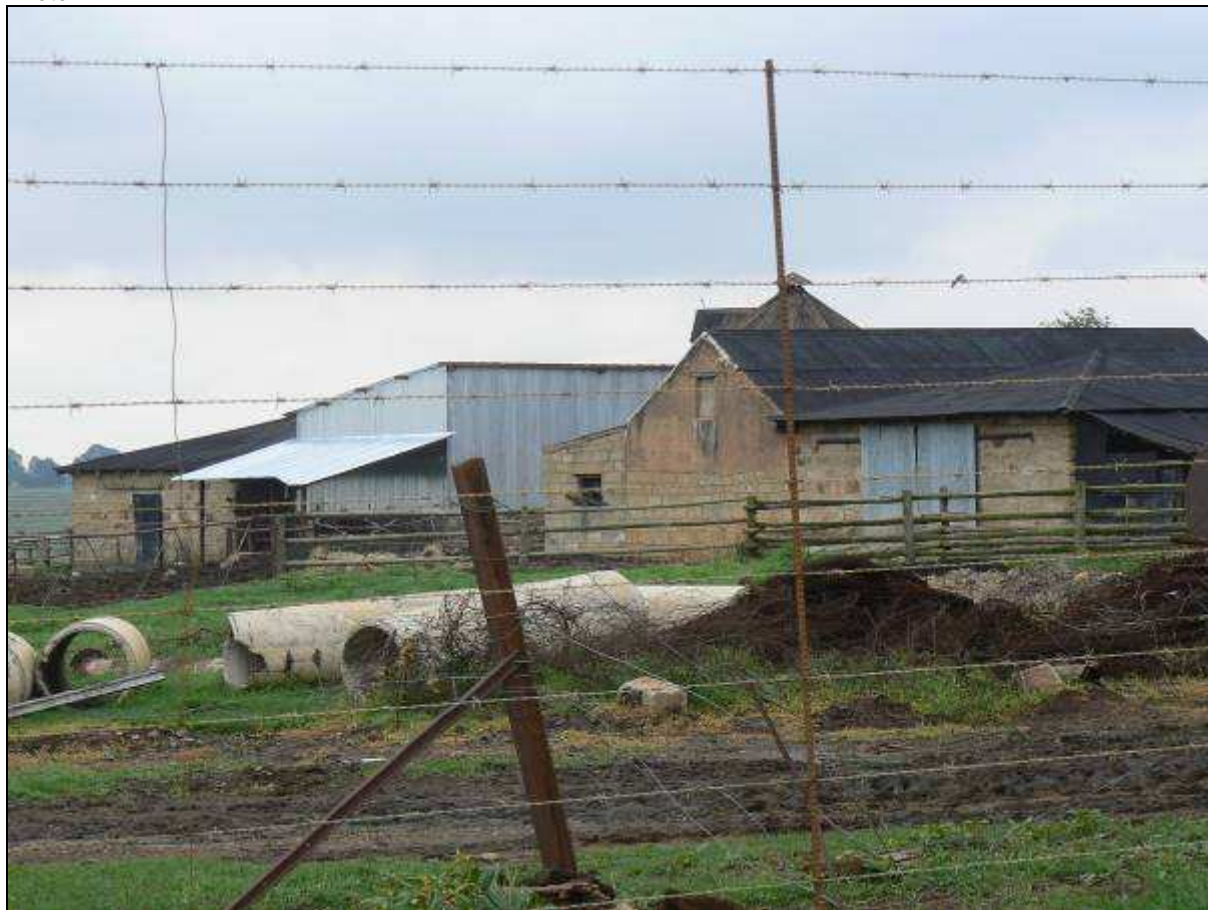
Approved [Signature] Surveyor-General. This diagram before me Deed of made this day in favour of 5672/25 Registrar of Deeds.

Printed by authority—Groot & Steyn, P.O. Box 851 Johannesburg.—17/25



<b>L5F FARMSTEAD</b>	
Feature name: Leeuwbank farmstead	
Type of feature: Buildings	
Location/Area	Leeuwbank near gravel road
GPS coordinates	25°46'47.86"S 29°57'6.33"E
References	None
NHRA protection status	Section 34
Description: Historic Leeuwbank farmstead with some elements older than 60 years	
Significance status (1)	2
Condition status and value (2)	2
Sensitivity assessment (1 x 2 = range = level)	4
Predicted impact	Just outside mining area
Recommended management interventions to preserve feature or mitigate impact: Document to enable monitoring during mining	

Photo



<b>L5H HOMESTEADS</b>	
Feature name: Homesteads of farm workers on Leeuwbank	
Type of feature: Buildings	
Location/Area	Leeuwbank farm Portion 5 near gravel road
GPS coordinates	25°46'56.78"S 29°57'8.80"E
References	None
NHRA protection status	None
Description: Village inhabited by farm workers	
Significance status (1)	1
Condition status and value (2)	2
Sensitivity assessment (1 x 2 = range = level)	2
Predicted impact	Just inside mining area
Recommended management interventions to preserve feature or mitigate impact: Avoid if possible, otherwise photo documentation before destruction	

Photo





<b>L5G GRAVES</b>	
Feature name: Leeuwbank graves	
Type of feature: Burial site	
Location/Area	Near gravel road
GPS coordinates	25°47'0.90"S 29°57'10.80"E
References	None
NHRA protection status	Section 36
Description: Graves of farm workers (ca 22)	
Significance status (1)	3
Condition status and value (2)	2
Sensitivity assessment (1 x 2 = range = level)	6
Predicted impact	Adverse (just inside mining area)
Recommended management interventions to preserve feature or mitigate impact: Avoid if possible, restore, protect and interpret, otherwise relocate	

Photo



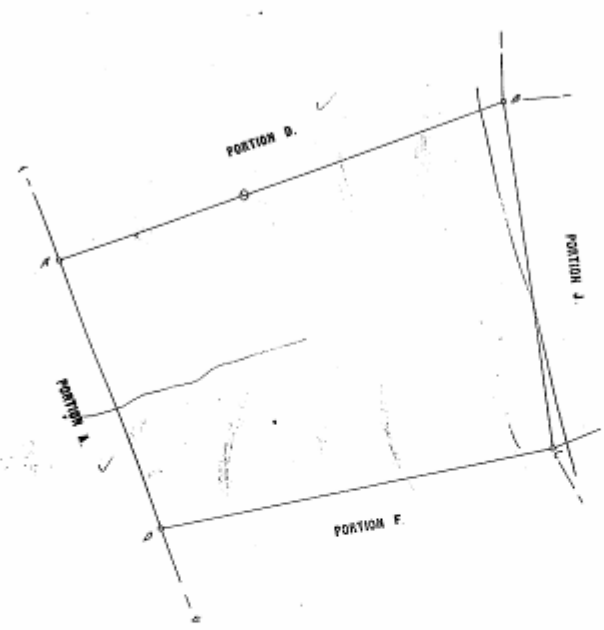
LEEUEWBANK PORTION 7



A No. 1796/25

Form 14.—Diagram Form for a Sub-Division of a Farm or portion of a Farm.  
 Form No. 1182 1905.

SIDES	ANGLES	(v) CO-ORDINATES (x)
AA 309.02	A 89.4.0	A -4256.48 +2681.94
BB 383.26	B 78.30.0	B -4098.60 +2198.02
CC 431.63	C 93.42.0	C -4079.35 +2152.17
DD 317.08	D 98.44.0	D -4556.28 +2578.89
		E -5276.12 +2230.77
		F -3606.96 +2905.64



For Details of Deductions and Encumbrances See Over.

Transferred to the Register of Deeds  
 No. 127  
 REGISTERED AND DELIVERED IN THE REGISTER DEPARTMENT

\* Now known as Portion 7



The above figure lettered A, B, C, D, E represents 271 Morgen 596 Square Rods of land, being ~~Portion E~~

LEEUBANK No 557 77

according to Diagram A. No. 343-94 relating to Deed of GRANT No. 11-9-1888 made in favour of G. P. PRETORIUS situate in the District of BELFAST - MIDDEBURG Province of the TRANSVAAL. Bounded as indicated above.

The Beacons have been properly erected according to law.  
 Surveyed in March 1885 by me [Signature] Land Surveyor.

Approved [Signature] Registrar of Deeds.  
 This diagram belongs to Deed of 1796/25 made this day in favour of [Signature]

Printed by authority—Groot & Sherr, P.O. Box 244 Johannesburg—1785.



<b>L7F FARMSTEAD</b>	
Feature name: Farmstead	
Type of feature: Building/structure	
Location/Area	Leeuwbank 7 near gravel road
GPS coordinates	25°48'24.11"S 29°57'10.67"E
References	None
NHRA protection status	Some buildings protected via Section 34
Description: Modern farmstead with established trees and some sandstone walls, kraals and buildings	
Significance status (1)	1
Condition status and value (2)	3
Sensitivity assessment (1 x 2 = range = level)	3
Predicted impact	Adverse (inside mining area and close to proposed plant)
Recommended management interventions to preserve feature or mitigate impact: Avoid, otherwise document before any demolitions. There are no compelling reasons for preservation.	

Photo





<b>L7G GRAVEYARD</b>	
Feature name: Graveyard	
Type of feature: Burial site	
Location/Area	Leeuwbank 7 near lane of trees and farmstead
GPS coordinates	25°48'14.22"S 29°57'13.25"E
References	None
NHRA protection status	Section 36
Description: Small graveyard	
Significance status (1)	3
Condition status and value (2)	2
Sensitivity assessment (1 x 2 = range = level)	<b>6</b>
Predicted impact	Adverse (inside mining area and close to proposed plant)
Recommended management interventions to preserve feature or mitigate impact: Avoid if possible, restore, protect and interpret, otherwise relocate	
Photo	

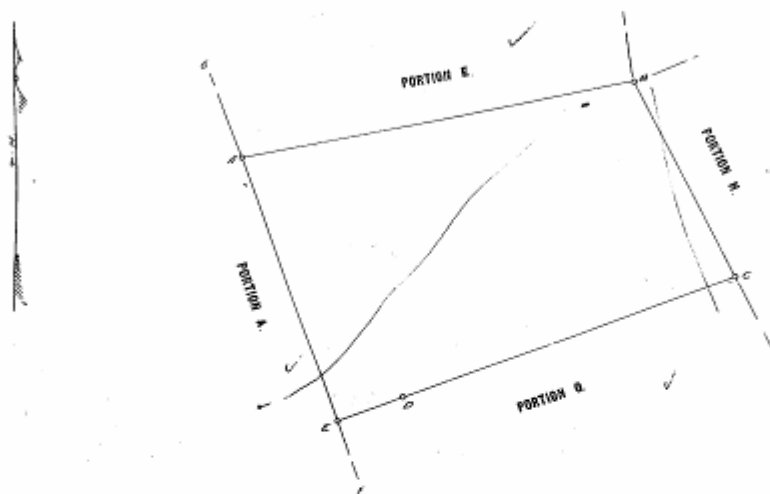
LEEUEWBANK PORTION 8



Form B1—Diagram Form for a Sub-Division of a Farm or portion of a Farm.  
 Diagram No. 1183 1285.

A No. 1797/25

SIDES	ANGLES	(x) CO-ORDINATES (x)	
AB 231.43	A 81.16.0	A -4556.28	+2578.69
BC 240.06	B 106.1.20	B -4879.36	+2154.17
CD 380.23	C 82.9.50	C -4892.59	+2027.65
DE 71.67	D 180.29.50	D -4821.23	+2406.37
EA 308.38	E 88.43.0	E -4847.81	+2478.28
		F -5276.12	+2330.77
		G -4606.36	+2208.64



This diagram is a duplicate of the original and is not for registration.  
 No. 427  
 REGISTRAR GENERAL  
 REGISTRATION DIVISION

\* Now known as Portion 3



The above figure lettered A B C D E represents  
189 Morgen 595 Square Rods of land, being portion F  
 of the Farm LEEUBANK No 557 77  
 according to Diagram A. No. 343 34 relating to Deed of GRANT No. dated 11-8-1868 made in favour of  
G P PRETORIUS situate in the District of Belfast  
OLIFANTS RIVER Province of the Transvaal. Bounded as indicated above.  
 The Boundaries have been properly erected according to law.

Surveyed in March 1925 by me [Signature]  
 Land Surveyor.

Approved \_\_\_\_\_ This diagram relates to Deed of 5674/25  
[Signature] made this day in favour of  
 Registrar of Deeds.  
 11-8-1925  
 Surveyor-General.

Published by authority—Government Printer, P.O. Box 904, Johannesburg.—1925.

<b>L8G1 GRAVEYARD</b>	
Feature name: Graveyard	
Type of feature: Burial site	
Location/Area	Leeuwbank 8 in field
GPS coordinates	25°48'39.55"S 29°57'16.78"E
References	None
NHRA protection status	Section 36
Description: Graveyard with graves of white farmers and their families	
Significance status (1)	3
Condition status and value (2)	2
Sensitivity assessment (1 x 2 = range = level)	<b>6</b>
Predicted impact	Adverse (inside mining area and proposed Plant Site 1)
Recommended management interventions to preserve feature or mitigate impact: Avoid if possible, restore, protect and interpret, otherwise relocate	
Photo	

<b>L8G2 GRAVEYARD</b>	
Feature name: Graveyard	
Type of feature: Burial site	
Location/Area	Leeuwbank 8 in field
GPS coordinates	25°49'6.34"S 29°56'37.92"E
References	None
NHRA protection status	Section 36
Description: Graveyard of farm workers	
Significance status (1)	3
Condition status and value (2)	2
Sensitivity assessment (1 x 2 = range = level)	<b>6</b>
Predicted impact	Unknown (could be inside mining area)
Recommended management interventions to preserve feature or mitigate impact: Avoid if possible, restore, protect and interpret, otherwise relocate	
Photo	

LEEUBANK PORTION 10

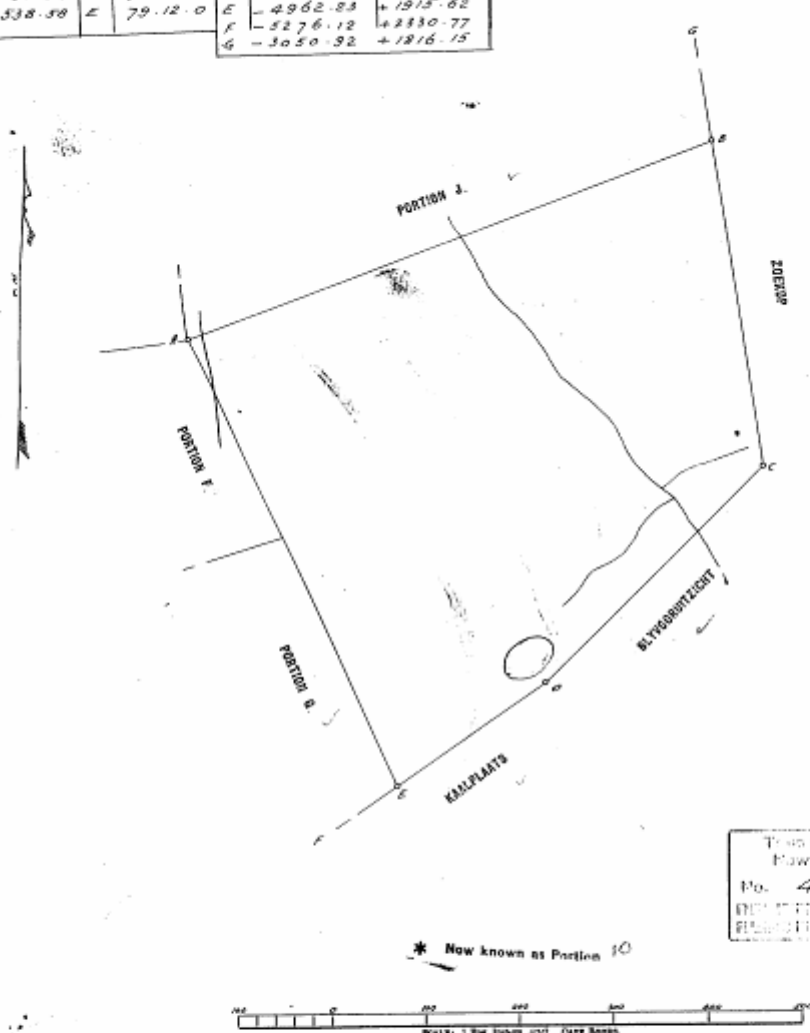




SG No A  
A-NO. 1799 / 23-

Form 29—Diagram Form for a Sub-Division of a Farm or portion of a Farm.  
Scale No. 1185 1925.

SIDES		ANGLES		(Y) CO-ORDINATES (X)	
AB	596.63	A	85.31.10	A	-4479.36 +2154.17
BC	354.29	B	78.20.0	B	-4257.69 +1600.25
CD	329.46	C	126.83.30	C	-4606.44 +1537.86
DE	191.24	D	170.15.0	D	-4806.90 +1763.08
EA	538.58	E	79.12.0	E	-4962.83 +1915.62
		F		F	-5276.12 +2330.77
		G		G	-3050.92 +1916.15



For Servitudes Deductions and Endorsements See Over.  
This diagram is a copy of the original drawing, and is subject to No. 427 DEPARTMENT OF SURVEY AND LAND DIVISION JS

The above Figure lettered **A. B. C. D. E.** represents  
**404 Morgen 58** Square Rods of land, being *portion H.*  
 of the Farm **LEEUBANK No 557 77**  
 according to Diagram A. No. **349/32** relating to Deed of **GRANT** No. **11 B-1808** made in favour of **G P PRETORIUS** situate in the District of **Bethesda**  
 Ward **OLIFANTS RIVER** Province of the Transvaal. Bounded as indicated above.  
 The Boundaries have been properly erected according to law.  
 Surveyed in **March 1925** by me **D. H. Korte**  
 Land Surveyor.

Approved \_\_\_\_\_ This diagram belongs to Deed of **6709/25**  
 made this day in favour of \_\_\_\_\_  
**Colias McQueen** Registrar of Deeds.  
 Surveyor-General.  
**MAY 19 1925**

Published by authority—Growth & Supply, P.O. Box 204, Johannesburg.—17/25.

<b>L10F FARMSTEAD</b>		
Feature name: Farmstead		
Type of feature: Building/structure		
Location/Area	Leeuwbank 10	
GPS coordinates	25°48'42.80"S 29°58'39.40"	
References	None	
NHRA protection status	Section 34	
Description: Well-preserved farmstead comprising sheds, kraals, sandstone main house, sandstone barn, 1950s house etc		
Significance status (1)		3
Condition status and value (2)		3
Sensitivity assessment (1 x 2 = range = level)		9
Predicted impact	Adverse (inside mining area)	
Recommended management interventions to preserve feature or mitigate impact: Avoid and preserve if possible. This farmstead is one of the best preserved in the study area. If this is not possible the farmstead should be fully documented before demolition.		

Photo



<b>L10G 1 GRAVEYARD</b>	
Feature name: Graveyard	
Type of feature: Burial site	
Location/Area	Leeuwbank 10 near farmstead
GPS coordinates	25°48'39.55"S 29°57'16.78"E
References	None
NHRA protection status	Section 36
Description: Fenced-in graveyard with graves of Swart and Senekal families. One grave (unmarked) is outside the fence.	
Significance status (1)	3
Condition status and value (2)	2
Sensitivity assessment (1 x 2 = range = level)	6
Predicted impact	Adverse (inside mining area)
Recommended management interventions to preserve feature or mitigate impact: Avoid if possible, restore, protect and interpret, otherwise relocate	

Photo



<b>L10G2 GRAVE</b>	
Feature name: Grave	
Type of feature: Burial site	
Location/Area	Leeuwbank 10 near homestead of farm workers
GPS coordinates	25°49'0.75"S 29°58'24.16"E
References	None
NHRA protection status	Section 36
Description: Single black grave	
Significance status (1)	3
Condition status and value (2)	2
Sensitivity assessment (1 x 2 = range = level)	<b>6</b>
Predicted impact	Adverse (inside mining area)
Recommended management interventions to preserve feature or mitigate impact: Avoid if possible, restore, protect and interpret, otherwise relocate	
Photo	

<b>L10G3 GRAVE</b>	
Feature name: Grave	
Type of feature: Burial site	
Location/Area	Leeuwbank 10 in field
GPS coordinates	25°48'51.57"S 29°58'9.50"E
References	None
NHRA protection status	Section 36
Description: Single black grave	
Significance status (1)	3
Condition status and value (2)	2
Sensitivity assessment (1 x 2 = range = level)	<b>6</b>
Predicted impact	Adverse (inside mining area)
Recommended management interventions to preserve feature or mitigate impact: Avoid if possible, restore, protect and interpret, otherwise relocate	
Photo	



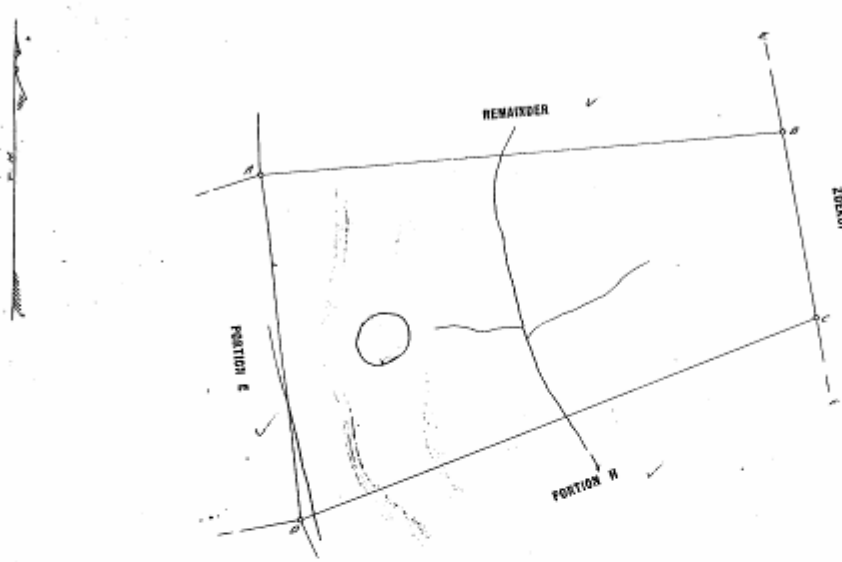
LEEUEWBANK PORTION 11



A No. 1800 / 25-

Form B1 - Diagram Form for a Sub-Division of a Farm or portion of a Farm.

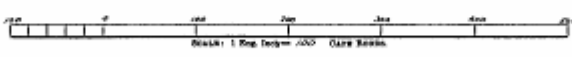
Sides		Angles		(x) CO-ORDINATES (y)	
AB	563.32	A	87° 44' 30"	A	-4098.60 + 2198.02
BC	204.68	B	35° 49' 40"	A	-4056.21 + 1636.30
CD	356.63	C	101° 40' 0"	C	-2257.69 + 1600.25
DA	383.28	D	74° 45' 30"	D	-4479.36 + 2152.17
				E	-3050.92 + 1816.15
				F	-4606.42 + 1537.86



For Servitudes  
Deductions and  
Endorsements  
See Over.

This plan is a copy of  
How no. 427 is shown  
No. 427  
DEPARTMENT OF SURVEYING  
REGISTERED DIVISION JS

\* Now known as Portion I



The above figure lettered *A. B. C. D.* represents  
279 Morgan 266 Square Rods of land, being *portion I*  
of the Farm **LEEUBANK No 557 77**  
according to Diagram A. No. *342 24* relating to Deed of Grant No. *---* dated *11.8.1858* made in favour of  
*G. P. Pretorius* sits in the District of *Middelburg Belfast*  
Ward *Olden's River* Province of the Transvaal. Bounded as indicated above.  
The Boundaries have been properly erected according to law.

Surveyed in *March 1925* by me *P. de Korte*  
Land Surveyor.

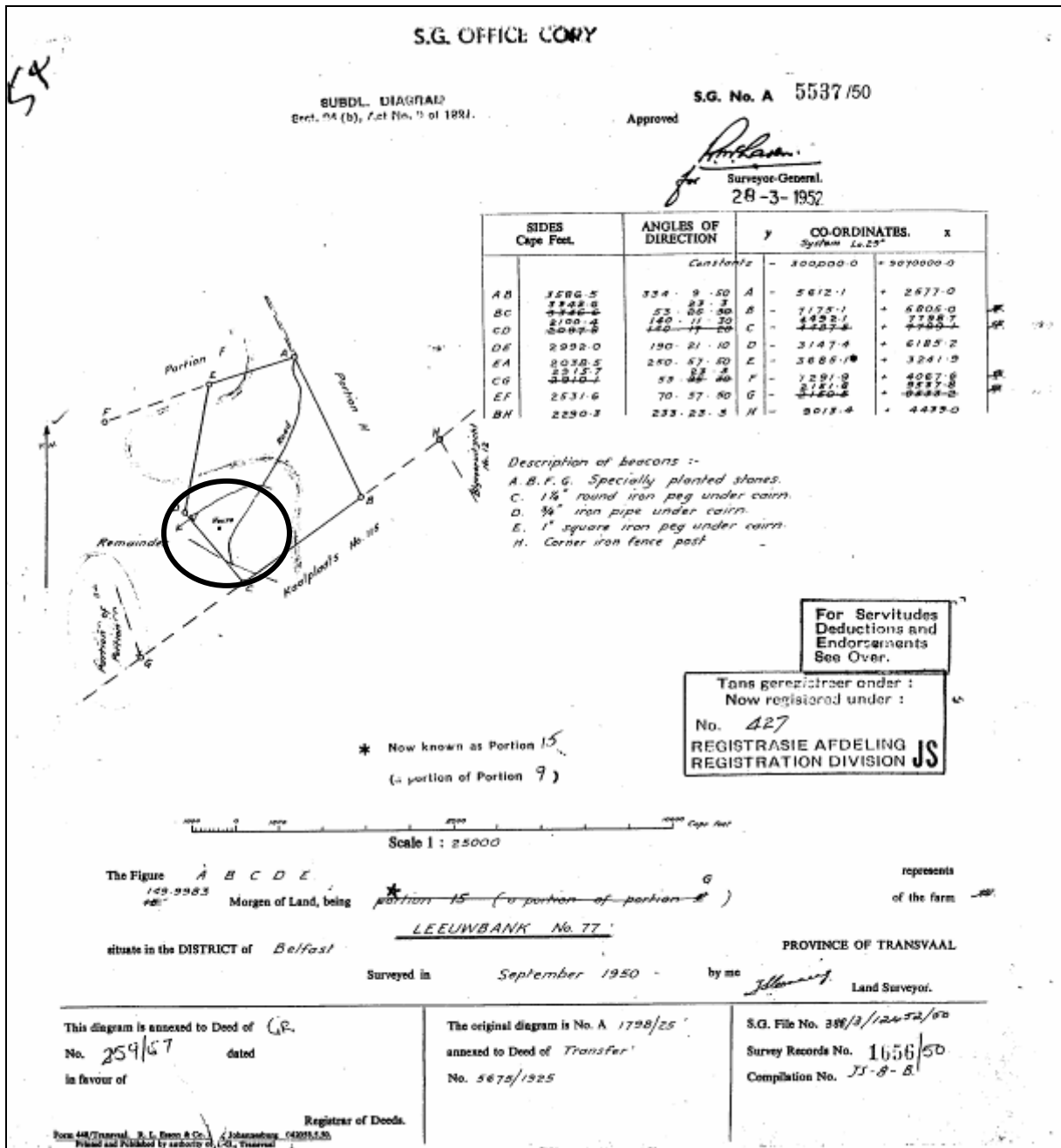
Approved \_\_\_\_\_ This diagram belongs to Deed of 5676/25  
made this day in favour of \_\_\_\_\_  
*John M. M. M.*  
MAY 19 1925 Surveyor-General. Registrar of Deeds.

Published by authority - Grant & Sherr, P.O. Box 104 Johannesburg - 1925.

<b>L11G GRAVEYARD</b>	
Feature name: Graveyard	
Type of feature: Burial site	
Location/Area	Leeuwbank 11 near gravel road
GPS coordinates	25°47'50.55"S 29°58'28.81"E
References	None
NHRA protection status	Section 36
Description: Farm workers' graves	
Significance status (1)	3
Condition status and value (2)	2
Sensitivity assessment (1 x 2 = range = level)	<b>6</b>
Predicted impact	Adverse (inside mining area)
Recommended management interventions to preserve feature or mitigate impact: Avoid if possible, restore, protect and interpret, otherwise relocate	
Photo	

LEEUEWBANK PORTION 15





Survey diagram of Leeuwbank Portion 15 indicating the position of a house (no longer in existence)



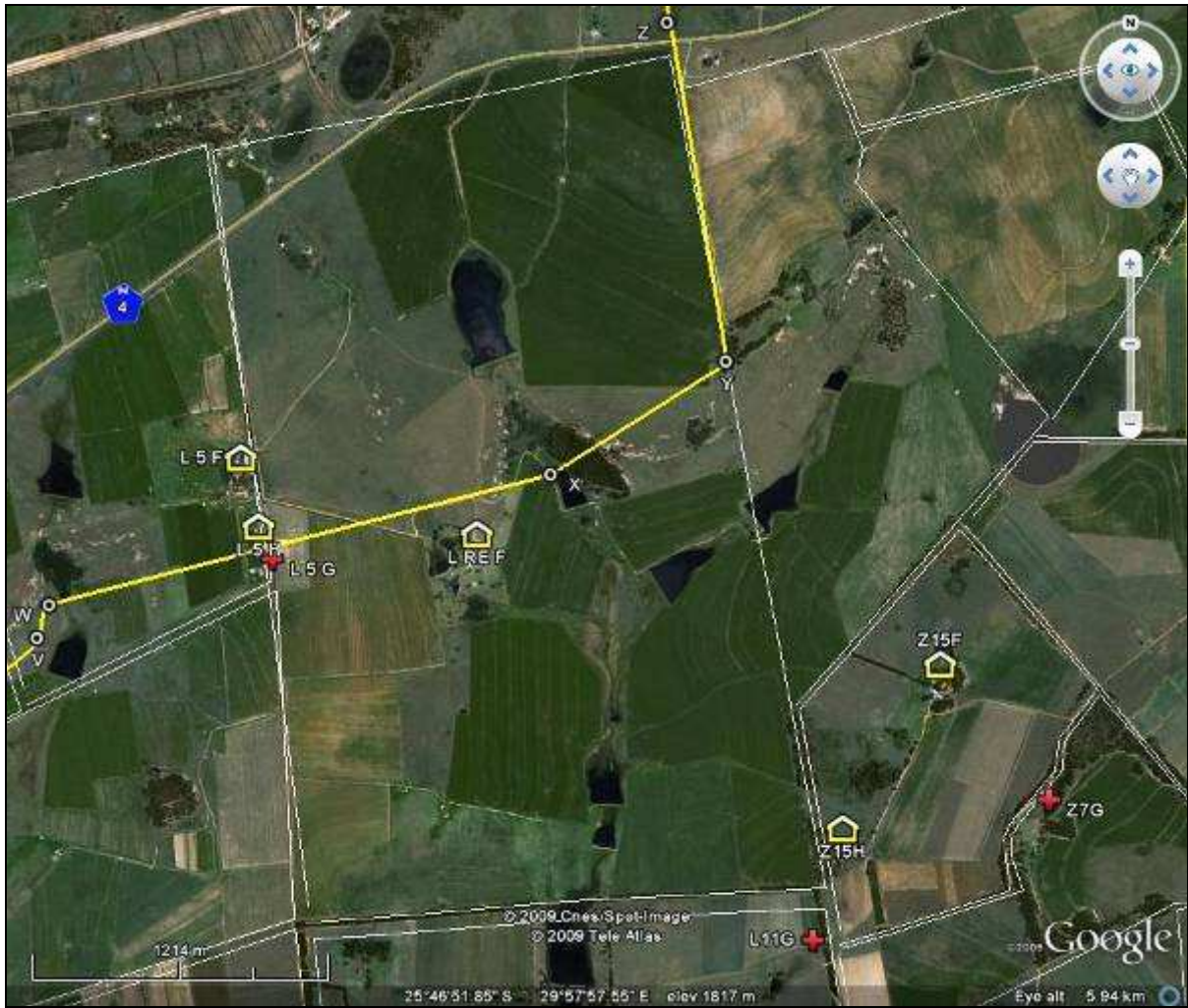
<b>L15G GRAVE</b>	
Feature name: Roy Coetzer grave	
Type of feature: Burial site	
Location/Area	Leeuwbank 15 in field
GPS coordinates	25°49'17.24"S 29°57'16.53"E
References	None
NHRA protection status	Section 36
Description: Single grave, according to Jan Burger that of Roy Coetzer	
Significance status (1)	3
Condition status and value (2)	2
Sensitivity assessment (1 x 2 = range = level)	<b>6</b>
Predicted impact	Adverse (inside mining area)
Recommended management interventions to preserve feature or mitigate impact: Avoid if possible, restore, protect and interpret, otherwise relocate	
Photo	

LEEUEWBANK PORTION 16



<b>L16G GRAVEYARD</b>	
Feature name: Graveyard	
Type of feature: Burial site	
Location/Area	Leeuwbank 16 in field
GPS coordinates	25°49'20.01"S 29°56'6.87"E
References	None
NHRA protection status	Section 36
Description: Graveyard with farm workers' graves. The farmstead was demolished some years ago.	
Significance status (1)	3
Condition status and value (2)	2
Sensitivity assessment (1 x 2 = range = level)	<b>6</b>
Predicted impact	Adverse (inside mining and proposed Plant No 1 site)
Recommended management interventions to preserve feature or mitigate impact: Avoid if possible, restore, protect and interpret, otherwise relocate	
Photo	

LEEUBANK REMAINING EXTENT



<b>LREF FARMSTEAD</b>	
Feature name: Leeuwbank farmstead	
Type of feature: Buildings	
Location/Area	Leeuwbank RE at end of track close to northern boundary of mining area
GPS coordinates	25°46'57.78"S 29°57'40.19"E
References	None
NHRA protection status	Section 36
Description: Modern farmstead	
Significance status (1)	1
Condition status and value (2)	3
Sensitivity assessment (1 x 2 = range = level)	3
Predicted impact	Adverse (just inside mining area)
Recommended management interventions to preserve feature or mitigate impact: Avoid if possible, otherwise photo documentation before demolition	
Photo	



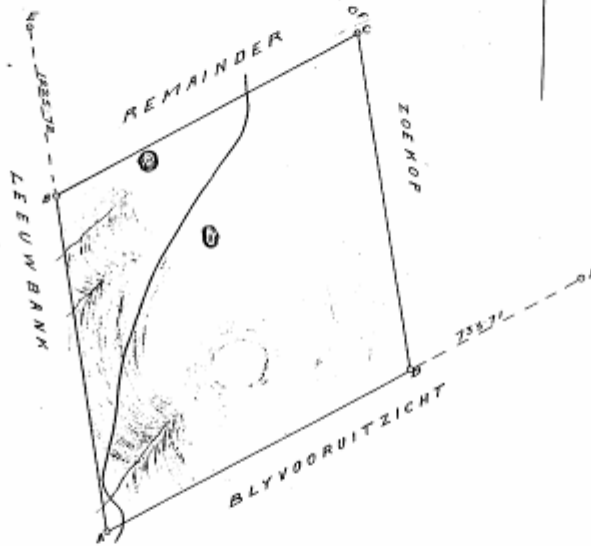
ZOEKOP PORTION 1



Form B2.—Diagram Form for a Sub-Division of a Farm or Portion of a Farm.

S.G. No. A. 1020/13

SIDES	ANGLES	(Y) CO-ORDINATES (X)
AB 354.50	A 70-22-20	A + 4606.44 - 1537.68
BC 354.58	B 109-37-40	B + 4257.48 - 1600.89
CD 354.50	C 70-22-20	C + 4081.41 - 1292.51
DA 354.59	D 109-37-40	D + 4430.57 - 1830.07
		E + 3080.32 - 1816.15
		F + 4066.06 - 533.20



This generic plan under:  
 Now registered under:  
 No. 426  
 REGISTRAR AFDELING  
 REGISTRATION DIVISION JS

\* Now known as Portion 1



The above Figure lettered **ABCD** represents 187 Morgen 200 Square Rods of land, being **Portion A** of the Farm

**ZOEKOP N° 10**

as appears on the Diagram S.G. No. A 2624/90 framed by Surveyor **P. Macdonald** in December 1889 relating to Deed of Grant No. 1378 dated 11/3. 1888 made in favour of **G.J. Kest** Situate in the District of **Carolina Belfast** Ward **Carolina** Province of Transvaal. Bounded as indicated above. The Beacons were pointed out by **C. Kilian** and have been properly erected according to law. Surveyed in **March 1913**

by me **Ode Korte**  
 Land Surveyor.

No. **A1020** Examined. The numerical data of this Diagram are sufficiently consistent.

*P. Maxwell Edwards*

Examiner of Diagrams

Surveyor-General's Office  
 Pretoria.

Approved.

*W. Schoon*  
 Surveyor-General.

This Diagram belongs to Deed of Transfer No. made this day in favour of

T2684/15

Registrar of Deeds.

Deeds Office  
 Pretoria.

<b>Z1F FARMSTEAD</b>	
Feature name: Farmstead	
Type of feature: Building/structure	
Location/Area	Zoekop1 near centre
GPS coordinates	25°48'29.20"S 29°58'58.50"E
References	None
NHRA protection status	None
Description: Modern farmstead	
Significance status (1)	1
Condition status and value (2)	2
Sensitivity assessment (1 x 2 = range = level)	<b>2</b>
Predicted impact	Adverse ( inside mining area)
Recommended management interventions to preserve feature or mitigate impact: Avoid, otherwise photo documentation before any demolition. There are no compelling reasons for preservation.	
Photo	

<b>Z1G1 GRAVEYARD</b>	
Feature name: Graveyard	
Type of feature: Burial site	
Location/Area	North of farmstead
GPS coordinates	25°48'22.10"S 29°58'53.50"E
References	None
NHRA protection status	Section 36
Description: Small graveyard of farm workers, hardly recognisable, identifiable by broken fence poles and mounds of rocks	
Significance status (1)	3
Condition status and value (2)	1
Sensitivity assessment (1 x 2 = range = level)	3
Predicted impact	Adverse (inside mining area)
Recommended management interventions to preserve feature or mitigate impact: Avoid if possible, restore, protect and interpret, otherwise relocate	

Photo





<b>Z1G2 GRAVEYARD</b>	
Feature name: Graveyard	
Type of feature: Burial site	
Location/Area	South of farmstead under trees
GPS coordinates	25°48'27.44"S 29°59'8.81"E
References	None
NHRA protection status	Section 36
Description: Farm workers' graveyard under trees, recognisable by mounds of rocks, hardly visible	
Significance status (1)	3
Condition status and value (2)	1
Sensitivity assessment (1 x 2 = range = level)	3
Predicted impact	Adverse (inside mining area)
Recommended management interventions to preserve feature or mitigate impact: Avoid if possible, restore, protect and interpret, otherwise relocate	

Photo





<b>Z1G3 GRAVEYARD</b>	
Feature name: Graveyard	
Type of feature: Burial site	
Location/Area	East of farmstead in open land
GPS coordinates	25°48'26.83"S 29°59'13.61"E
References	None
NHRA protection status	Section 36
Description: Small graveyard of about 5 graves of farm workers	
Significance status (1)	3
Condition status and value (2)	2
Sensitivity assessment (1 x 2 = range = level)	6
Predicted impact	Adverse (inside mining area)
Recommended management interventions to preserve feature or mitigate impact: Avoid if possible, restore, protect and interpret, otherwise relocate	

Photo



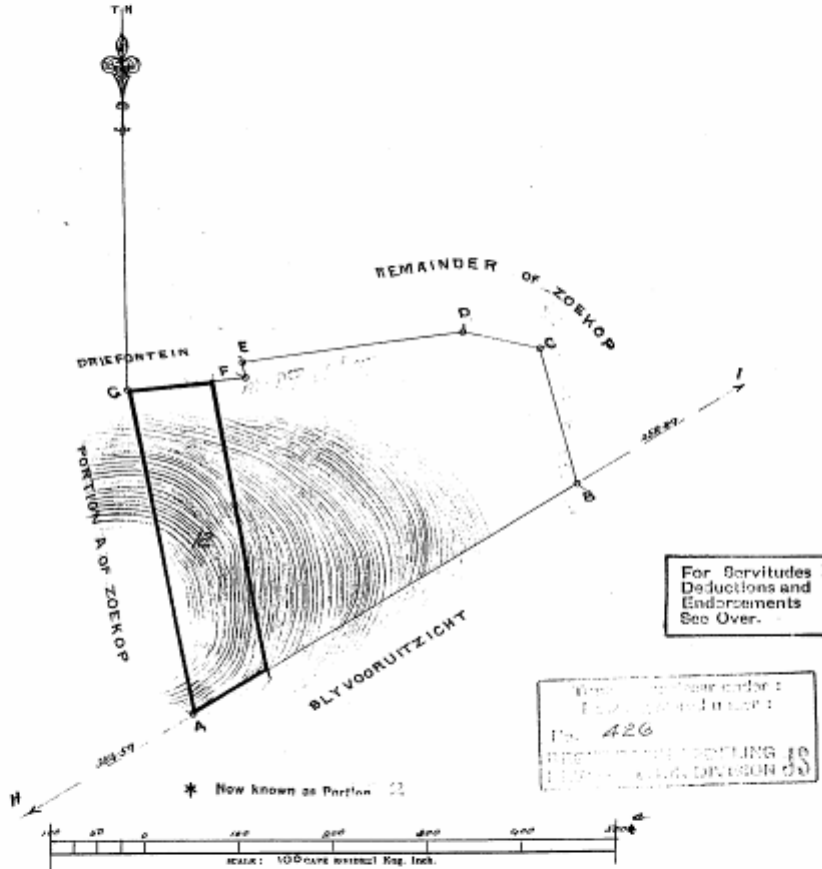
ZOEKOP PORTION 2



Form B2—Diagram Form for a Sub-Division of a Farm or portion of a Farm.

S.G. No. A. 2395/13

SIDES.		ANGLES.		(Y) CO-ORDINATES. (X)	
AB	474.82	A	20° 22' 26"	A	+ 4430.37 - 1230.04
BC	152.69	B	105° 52' 10"	B	+ 4194.60 - 817.92
CD	86.72	C	117° 1' 50"	C	+ 4046.38 - 886.61
DE	332.22	D	160° 5' 30"	D	+ 4027.16 - 937.12
EF	16.57	E	83° 28' 60"	E	+ 4054.96 - 1120.92
FG	125.80	F	278° 35' 10"	F	+ 4071.07 - 1167.14
GA	354.50	G	88° 36' 20"	G	+ 4081.41 - 1292.51
				H	+ 4606.44 - 1537.86
				I	+ 4066.06 - 573.20



The above Figure lettered **ABCDEFG** represents  
**197 Morgen 200 Square Roods** of land, being **Portion B** of the Farm  
**ZOEKOP N° 10**

as appears on the Diagram S.G. No. A <sup>2624</sup>/<sub>90</sub> framed by Surveyor **P. Macdonald** in December 1889.  
 relating to Deed of Grant No. 1578 dated 11-8-1868 made in favour of **G.J. Korf**  
 situate in the District of **Carolina Belfast** Ward **Carolina**, Province of Transvaal. Bounded as indicated above  
 The Reasons were pointed out by **J. B. Minnie & C. J. Kilian** and have been properly erected according to law  
 Surveyed in **March 1913**

by me  
**Peter Macdonald, G.S.**  
 Land Surveyor.

No. **A 2395/13** Examined. The numerical data of this Diagram are sufficiently consistent.  
*J. Maxwell Swains*  
 Examiner of Diagrams.

Approved  
*W. M. ...*  
 Surveyor-General.

This Diagram belongs to Deed of Transfer No. **T2685/13** made this day in favour of  
 Registrar of Deeds.



<b>Z2F FARMSTEAD</b>		
Feature name: Farmstead		
Type of feature: Building/structure		
Location/Area	Zoekop 2 near gravel road	
GPS coordinates	25°47'42.57"S 29°59'59.36"E	
References	None	
NHRA protection status	Section 34	
Description: Old farmstead comprising dilapidated dwellings and ruins of sandstone outbuildings and kraals		
Significance status (1)		1
Condition status and value (2)		1
Sensitivity assessment (1 x 2 = range = level)		1
Predicted impact	Adverse (inside mining area)	
Recommended management interventions to preserve feature or mitigate impact: Avoid, otherwise document before any demolition. There are no compelling reasons for preservation.		

Photo



<b>Z2G GRAVE</b>	
Feature name: Grave	
Type of feature: Burial site	
Location/Area	Near farmstead
GPS coordinates	25°47'45.48"S 30°0'2.35"E
References	None
NHRA protection status	Section 36
Description: Single grave of white person	
Significance status (1)	3
Condition status and value (2)	2
Sensitivity assessment (1 x 2 = range = level)	<b>6</b>
Predicted impact	Adverse (inside mining area)
Recommended management interventions to preserve feature or mitigate impact: Avoid if possible, restore, protect and interpret, otherwise relocate	
Photo	



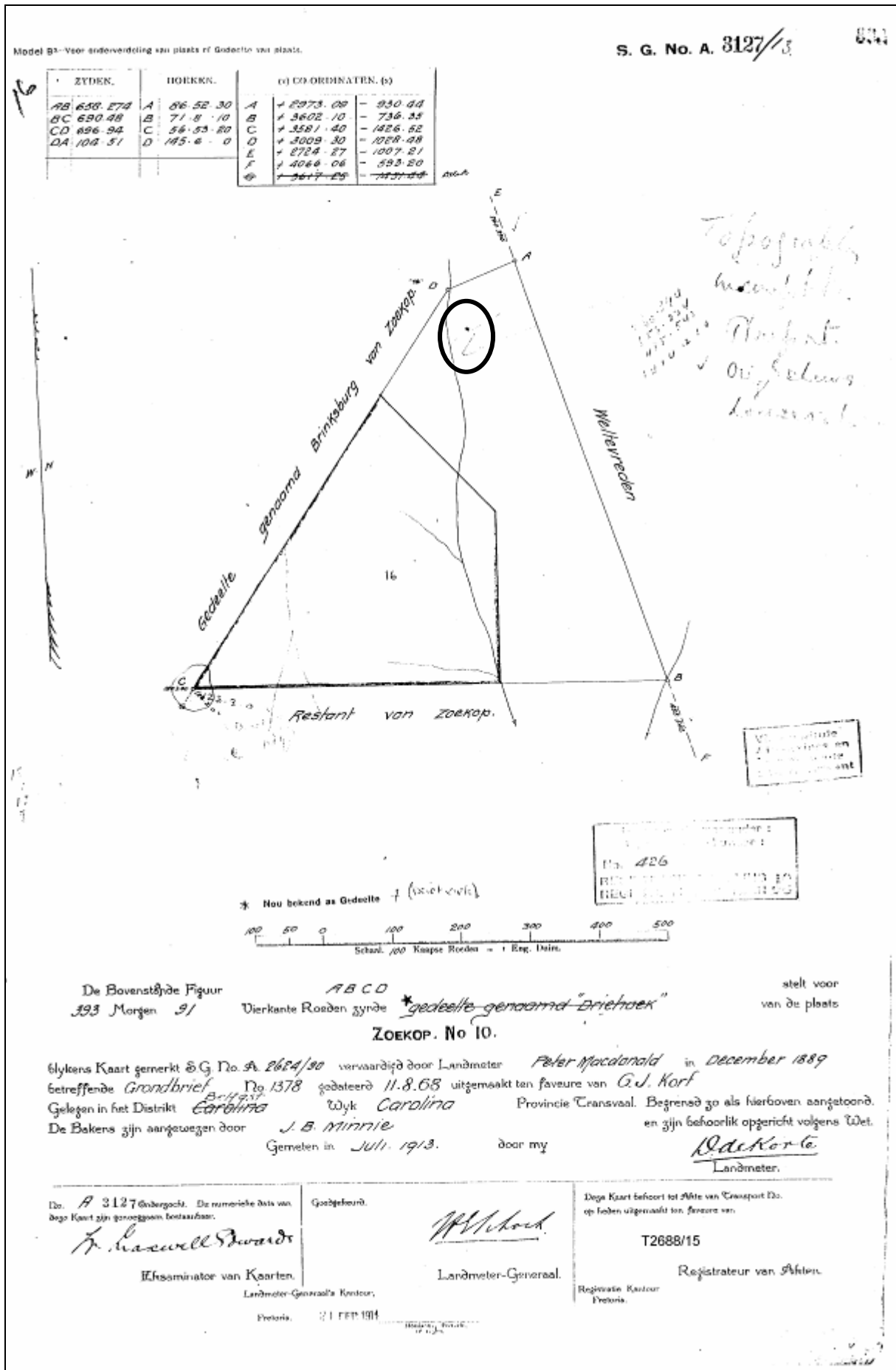
**ZOEKOP PORTION 3**

There are no heritage resources on Portion 3.



ZOEKOP PORTION 4





Survey diagram of Portions 4 and 16 indicating farmstead on Portion 4



<b>Z4F FARMSTEAD</b>	
Feature name: Farmstead	
Type of feature: Building/structure	
Location/Area	Northern corner of Portion 4
GPS coordinates	25°45'34.70"S 29°59'56.60"E
References	None
NHRA protection status	Section 34 (some buildings)
Description: Modern farmstead with one sandstone outbuilding, much altered	
Significance status (1)	1
Condition status and value (2)	2
Sensitivity assessment (1 x 2 = range = level)	2
Predicted impact	Adverse (inside mining area)
Recommended management interventions to preserve feature or mitigate impact: Avoid, otherwise document before demolition. There are no compelling reasons for preservation.	

Photo



<b>Z4G1 GRAVE</b>	
Feature name: Van Deventer grave	
Type of feature: Burial site	
Location/Area	North of farmstead near edge of field
GPS coordinates	25°45'29.10"S 30°0'4.20"E
References	None
NHRA protection status	Section 36
Description: Single grave of Van Deventer, broken headstone	
Significance status (1)	3
Condition status and value (2)	1
Sensitivity assessment (1 x 2 = range = level)	3
Predicted impact	Adverse (inside mining area)
Recommended management interventions to preserve feature or mitigate impact: Avoid if possible, restore, protect and interpret, otherwise relocate	

Photo





<b>Z4G2 GRAVEYARD</b>	
Feature name: Graveyard	
Type of feature: Burial site	
Location/Area	South of farmstead near boundary with Portion 16
GPS coordinates	25°45'59.90"S 30°0'4.30"E
References	None
NHRA protection status	Section 36
Description: Graveyard with some 20 graves of farm workers, some with headstones	
Significance status (1)	3
Condition status and value (2)	2
Sensitivity assessment (1 x 2 = range = level)	6
Predicted impact	Adverse (inside mining area)
Recommended management interventions to preserve feature or mitigate impact: Avoid if possible, restore, protect and interpret, otherwise relocate	

Photo



<b>Z4N OUTCROP</b>	
Feature name: Sandstone outcrop	
Type of feature: Natural feature with heritage significance/geological site	
Location/Area	East of farmstead
GPS coordinates	25°45'37.75"S 30°0'4.82"E
References	None
NHRA protection status	None
Description: Sandstone outcrop with small overhang	
Significance status (1)	2
Condition status and value (2)	2
Sensitivity assessment (1 x 2 = range = level)	4
Predicted impact	Unknown
Recommended management interventions to preserve feature or mitigate impact: Avoid since the site could contain archaeological finds (none were observed)	
Photo	

ZOEKOP PORTION 5

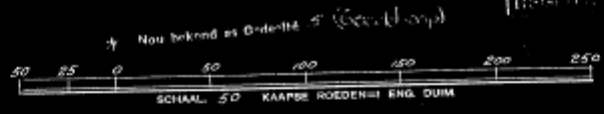
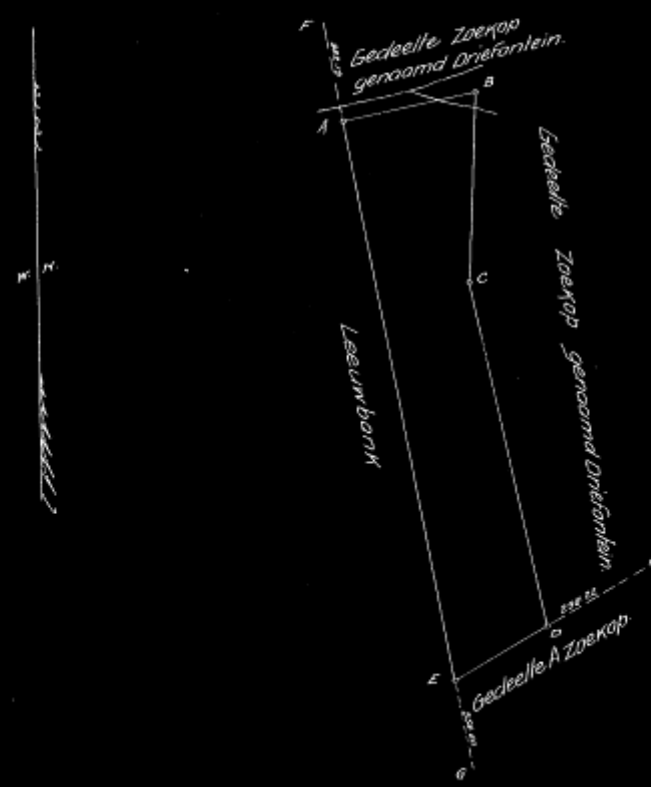


Model B2 voor onderverdeling van plaats of Gedeelte van plaats.

76. 7210

S.G. No. A. 3128/13

ZYDEN.		HOKKEN.		(Y) CO-ORDINATEN. (X)	
AB	71.63	A	91.21.50	A	+ 3958.698 - 1653.799
BC	101.12	B	75.40.10	B	+ 3928.40 - 1583.55
CD	187.61	C	194.19.0	C	+ 4045.40 - 1588.53
DE	36.36	D	108.31.40	D	+ 4229.894 - 1551.37
EA	503.53	E	79.22.20	E	+ 4257.88 - 1600.29
		F		F	+ 3050.92 - 1816.15
		G		G	+ 4006.84 - 1537.86
		H		H	+ 4081.41 - 1292.51



De bovenstaande Figuur **ABCDE** stelt voor  
 26 Morgen 357 Vierkante Roeden, zynde **gedeelte genaamd "Goedehoop"** van de plaats

**ZOEKOP. No 10.**

blykens Kaart gemerkt S.G. No. A 2624/90 vervaardigd door Landmeter **Pefer Macdonald** in December 1889.  
 betreffende Akte van **Grondbesit** No. 1378 gedateerd 11.8.68. uitgemaakt ten faveure van **G.J. Korf**  
 Gelegen in het District **Gezonding Baaijst** Wyk **Carolina** Provincie Transvaal. Begreend zo als hierboven aangehouden,  
 De Rekens zijn aangewezen door **J.B. Minnie** en zijn behoorlijk opgericht volgens Wet.  
 Gemeten in **Juli 1913.** door my **De Korte**  
 Landmeter.

No. **A 3128** Onderzocht. De nauwkeurige data van  
 deze Kaart zijn geregeerd door  
**J. Maxwell Edwards**  
 Examinator van Kaarten.

Goedgekeurd.  
**H. M. ...**  
 Landmeter-Generaal.

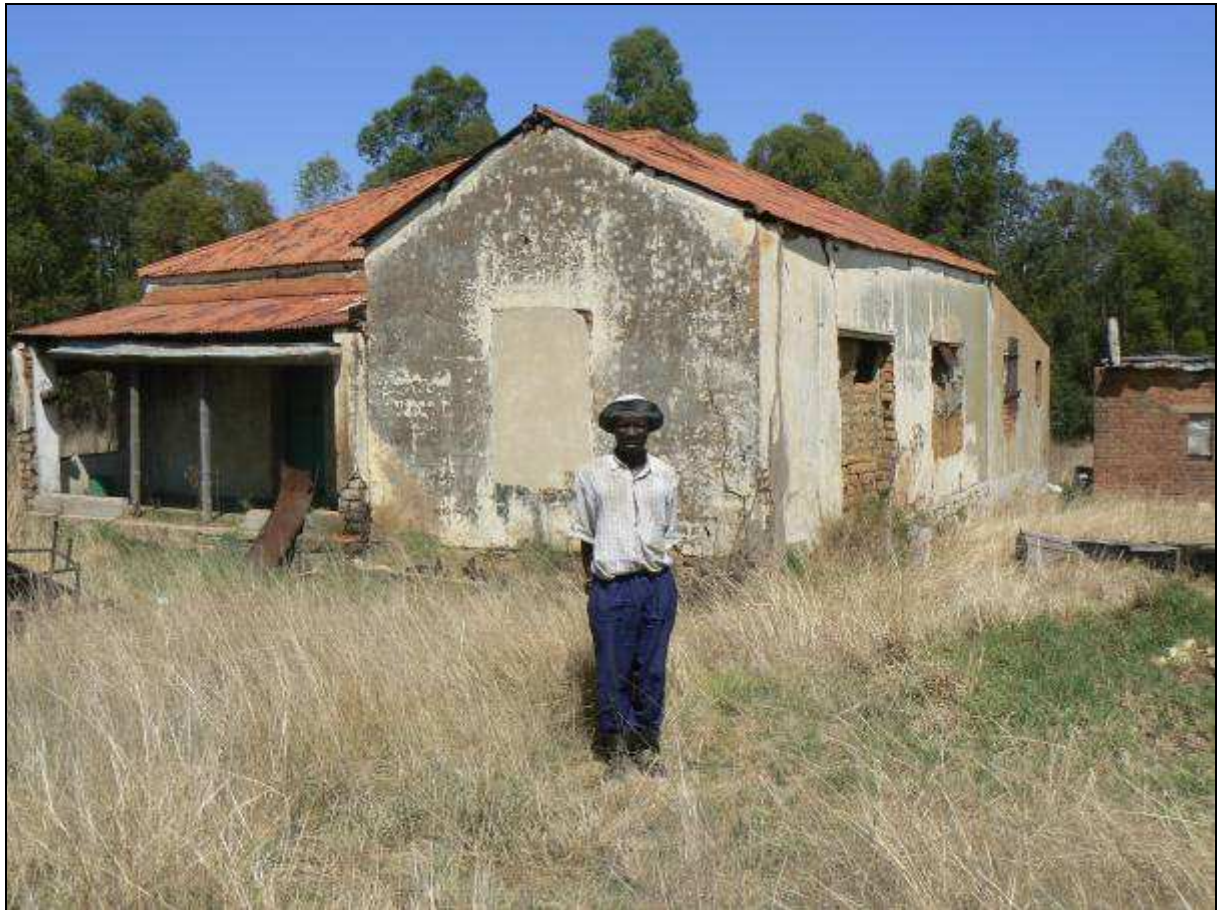
Deze Kaart behoort tot Akte van Transport No.  
 op boden uitgemaakt ten faveure van  
**T2688/15**  
 Registratie Kantoor.  
 Pretoria.  
 Registreur van Akten.

Printed by order of the Surveyor-General, P.O. Box 200, Johannesburg-2001



<b>Z5H HOMESTEAD</b>	
Feature name: Old farm house	
Type of feature: Building/structure	
Location/Area	Zoekop 5
GPS coordinates	25°47'36.00"S 29°58'33.00"E
References	None
NHRA protection status	Section 34
Description: 1930s farm house, inhabited by farm worker, poor condition	
Significance status (1)	2
Condition status and value (2)	1
Sensitivity assessment (1 x 2 = range = level)	2
Predicted impact	Adverse (inside mining area)
Recommended management interventions to preserve feature or mitigate impact: Avoid, otherwise full documentation before demolition	

Photo





**ZOEKOP PORTION 6**

There are no heritage resources on Portion 6.



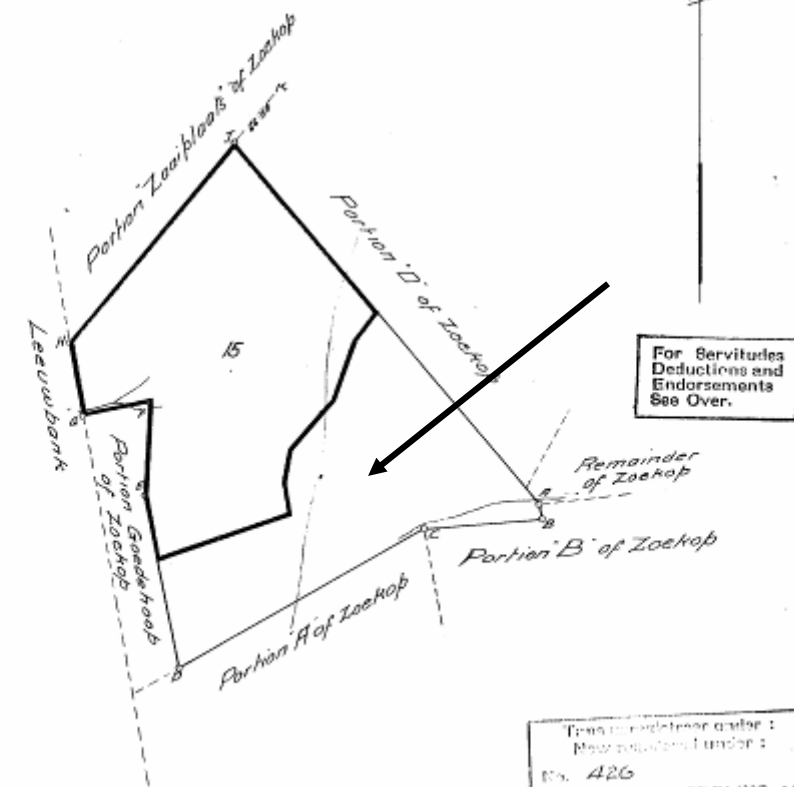
ZOEKOP PORTION 7



FORM 62.-DIAGRAM FORM FOR A SUB-DIVISION OF A FARM OR PORTION OF A FARM.

S.G. No. A. 1442/16

Sides.	Angles.	(Y) Co-ordinates (X)
AB 16.58	B 153.25.20	A + 4854.250 - 1170.268
BC 126.80	C 81.24.30	B + 4871.07 - 167.18
CD 229.22	D 205.5.20	C + 4661.41 - 1222.81
DA 187.81	A 71.38.20	D + 4225.494 - 1531.37
EA 101.12	E 165.46.0	E + 4645.46 - 1589.63
FA 71.63	F 204.18.00	F + 3944.40 - 1593.55
GA 78.53	G 89.38.10	G + 3958.692 - 1653.744
HA 224.72	H 159.55.50	H + 3821.888 - 1667.373
JA 203.21	J 79.10.20	J + 3666.773 - 1493.602
		K + 3617.24 - 1481.44



The above Figure lettered **ABCDEFGHIJ** represents  
 223 Morgen 85 Square Rods of Land, being **\* Portion 'C'**  
**ZOEKOP N° 10** of the Farm

as appears on the Diagram S.G. No. A 2624/50 framed by Surveyor **Peter Macdonald** in December 1888  
 relating to Deed of Grant No. 1378 dated 11.8.68 made in favour of **G.J. Korf**  
 situate in the District of **Carolina Belfast** Ward **Carolina** Province of **Transvaal** bounded as indicated above.  
 The bearings were pointed out by **J.F. Benadie** and have been properly erected according to Law.  
 Surveyed in July 1916 by me, **Rode Korte**  
 Land Surveyor.

No. **A 1442** Examined. The numerical dots of this Diagram are sufficiently consistent.

Approved  
**[Signature]**  
 Surveyor-General.

This Diagram belongs to Deed of Transfer No. **T7143/16** made this day in favour of  
 Registrar of Deeds.

Examiner of Diagrams.  
**[Signature]**  
 Surveyor-General's Office,  
 Pretoria. 24/11/16

Deeds Office,  
 Pretoria.

<b>Z7G GRAVEYARD</b>	
Feature name: Graveyard	
Type of feature: Burial site	
Location/Area	Amongst trees near northern boundary of Zoekop 7
GPS coordinates	25°47'32.07"S 29°59'2.63"E
References	None
NHRA protection status	Section 36
Description: According to WP Pretorius farm workers are buried here	
Significance status (1)	3
Condition status and value (2)	2
Sensitivity assessment (1 x 2 = range = level)	<b>6</b>
Predicted impact	Adverse (inside mining area)
Recommended management interventions to preserve feature or mitigate impact: Avoid if possible, restore, protect and interpret, otherwise relocate	
Photo	



ZOEKOP PORTION 8

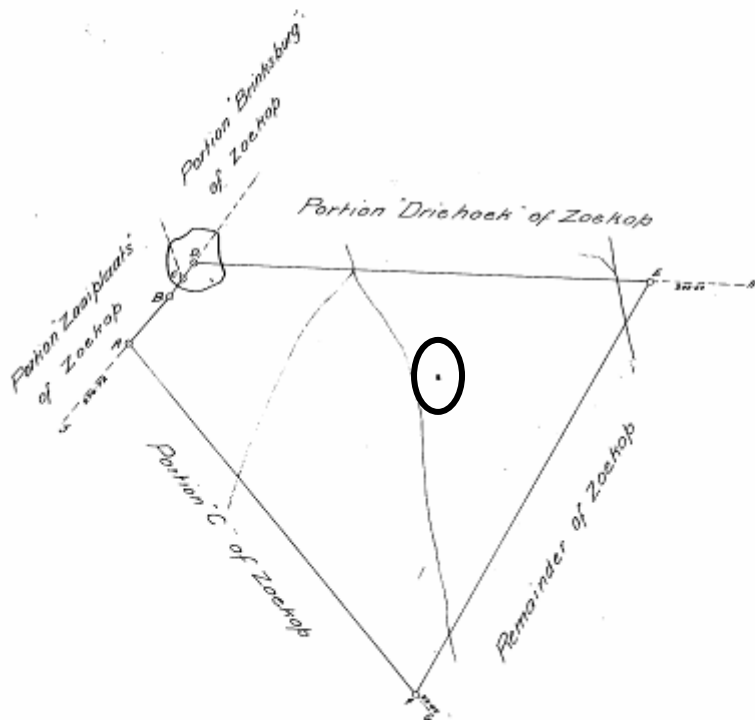




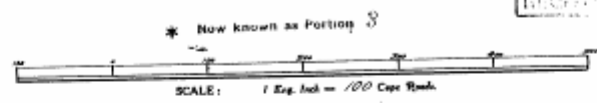
FORM 22.-DIAGRAM FORM FOR A SUB-DIVISION OF A FARM OR PORTION OF A FARM

S.G. N° A. 1443/16

Sides	Angles	(Y) Co-ordinates (X)
AB 66.58	A 100° 49' 40"	A + 3608.773 - 1493.602
BC 22.72	B 184° 27' 20"	B + 3617.250 - 1451.440
CD 20.94	C 180° 4' 10"	C + 3598.60 - 1458.46
DE 48.88	D 123° 3' 0"	D + 3581.40 - 1426.52
EJ 508.08	E 63° 9' 40"	E + 3535.847 - 944.860
FA 480.79	F 68° 26' 10"	F + 4037.123 - 1188.527
		G + 4054.930 - 1170.950
		H + 3602.10 - 736.33
		J + 3681.593 - 667.513



This is a true and correct copy of the original as filed under S.G. No. 426  
 RECEIVED BY ARDELING  
 DEPARTMENT OF LAND DIVISION



The above Figure lettered ABCDEF represents 85 Square Rods of Land, being Portion B of the Farm

**ZOEKOP N°10**  
 as appears on the Diagram S.G. No. A 2624/30 framed by Surveyor Peter Macdonald in December 1889 relating to Deed of Grant No. 1378 dated 11/8/68 made in favour of G.J. Hofz Province of Transvaal bounded as indicated above and have been properly erected according to Law. The beacons were pointed out by J.F. Benadie by me. Surveyed in July 1916

*P. de Koning*  
 Land Surveyor.

No. A 1443 Examined. The numerical data of this Diagram are sufficiently consistent. <i>T. Maxwell Edwards</i> Examiner of Diagrams. Surveyor-General's Office. Pretoria.	Approved <i>H. Schoot</i> Surveyor-General.	This Diagram belongs to Deed of Transfer No. T7144/16 made this day in favour of Registrar of Deeds. Deeds Office. Pretoria.
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Survey diagram of Portion 8 indicating farmstead

<b>Z8F FARMSTEAD</b>	
Feature name: Farmstead	
Type of feature: Building/structure	
Location/Area	Near gravel road
GPS coordinates	25°46'57.30"S 29°59'32.40"E
References	None
NHRA protection status	None
Description: Modern farmstead	
Significance status (1)	1
Condition status and value (2)	2
Sensitivity assessment (1 x 2 = range = level)	<b>2</b>
Predicted impact	Adverse (in mining area and close to Plant Site 3)
Recommended management interventions to preserve feature or mitigate impact: Avoid, otherwise photo documentation before any demolition	
Photo	

<b>Z8G GRAVEYARD</b>	
Feature name: Graveyard	
Type of feature: Burial site	
Location/Area	West of gravel road
GPS coordinates	25°47'11.70"S 29°59'27.80"E
References	None
NHRA protection status	Section 36
Description: According to JH Gerrits children of farm workers are buried here. There are about four graves, hardly visible.	
Significance status (1)	3
Condition status and value (2)	1
Sensitivity assessment (1 x 2 = range = level)	3
Predicted impact	Adverse (inside mining area)
Recommended management interventions to preserve feature or mitigate impact: Avoid if possible, restore, protect and interpret, otherwise relocate	

Photo



**ZOEKOP PORTION 9**

There are no heritage resources on Portion 9.



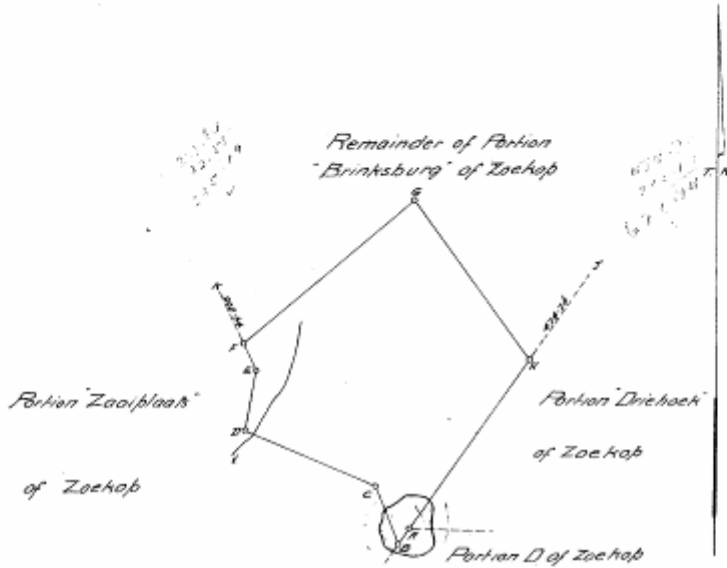
21

File 7210/1

S.G. No. A.1962/16

FORM 82.—DIAGRAM FORM FOR A SUB-DIVISION OF A FARM OR PORTION OF A FARM.

Sides.	Angles.	(Y) Co-ordinates (X)
AB 139.94	A 100° 5' 40"	A 3281.92 -1422.88
BC 86.77	B 56° 2' 00"	B 3290.60 -1438.48
CD 150.42	C 208° 29' 40"	C 3258.44 -1462.67
DE 86.73	D 105° 32' 40"	D 3477.12 -1500.90
EF 32.55	E 214° 58' 50"	E 3411.34 -1489.68
FG 287.85	F 108° 29' 30"	F 3261.990 -1305.541
GH 211.98	G 86° 57' 30"	G 3226.60 -1425.22
HA 222.18	H 105° 30' 30"	H 3299.02 -1259.63
		I 3009.50 -1028.48
		K 3198.58 -1489.85



Transferred under the  
 Deeds Act, 1954  
 No. 426  
 REGISTERED AND INDEXED IN  
 REGISTER OF DEEDS, DURBAN

\* Now known as Portion 7  
 (a portion of Portion 3)



The above Figure lettered ABCDEFGH represents  
 100 Morgen 0 Square Rods of Land, being Portion 7 of Portion Brinksburg of the Farm

**ZOEKOP No 10**

as appears on the Diagram S.G. No. A 3126/13 framed by Surveyor D. de Kort in July 1913  
 relating to Deed of Transfer No. 2687/15 dated 29.5.1915 made in favour of A.W. Brink  
 situate in the District of Carolina Belfast Ward Carolina Province of Transvaal bounded as indicated above.  
 The beacons were pointed out by J.L.P. Coetzer and have been properly erected according to Law.  
 Surveyed in September 1916 by me,

*Rode Korte*  
 Land Surveyor.

No. A1962 Examined. The essential data  
 of this Diagram are sufficiently consistent.  
*L. Maxwell Edwards*

Examiner of Diagrams.

Surveyor-General's Office,  
 Pretoria, 17 OCT 1918

Approved

*W.H. Cook*

Surveyor-General.

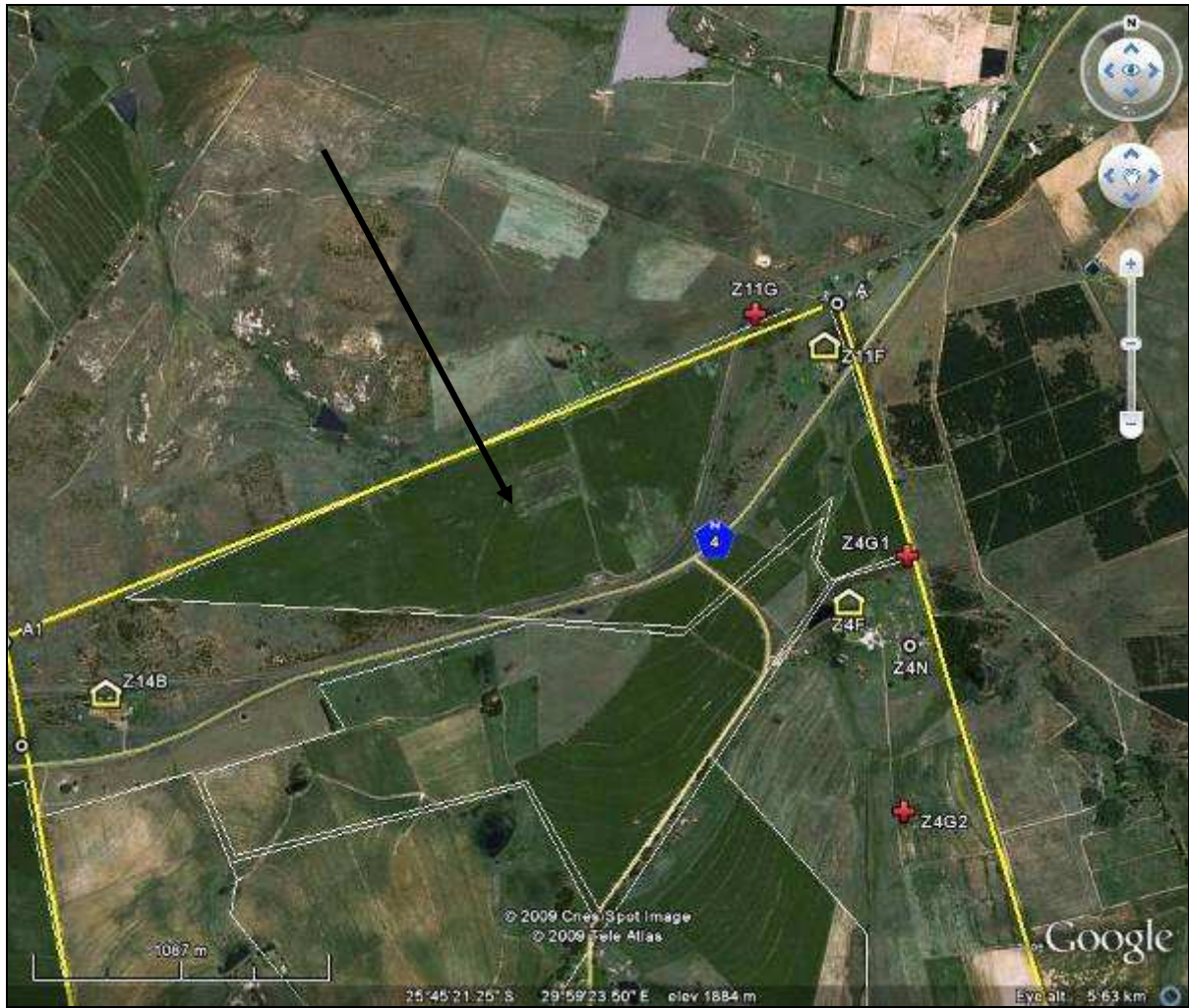
This Diagram belongs to Deed of Transfer No.  
 made this day in favour of

Deeds Office,  
 Pretoria.

Registrar of Deeds.



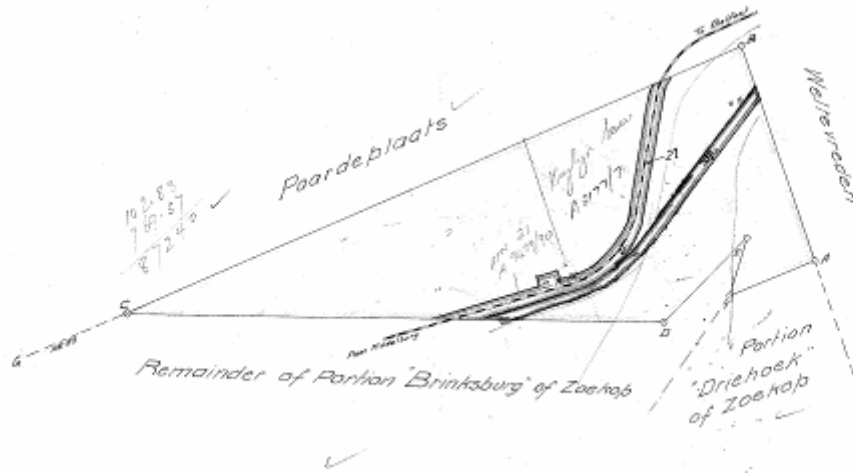
ZOEKOP PORTION 11



S.G. N° A. 2561/18 552

FORM 11.—DIAGRAM FOR A SUBDIVISION OF A FARM OR PORTION OF A FARM.

Sides.	Angles.	(Y) Coordinates (X)
AB 380.394	A 08° 7' 30"	+2873.08 -920.44
BC 759.57	B 85° 0' 30"	+2726.27 -1007.21
CD 616.68	C 84° 25' 0"	+3012.417 -1720.797
DE 735.78	D 150° 48' 40"	+2036.54 -1104.47
EF 68.44	E 88° 51' 30"	+2942.23 -1008.06
FA 104.51	F 52° 37' 30"	+3009.30 -1028.48
		G +5050.22 -1816.15



Tans geregistreer onder :  
 Nieuw geregistreer onder :  
 No. 426  
 REGISTRARIS AFDELING  
 REGISTRASIE DIVISION

\* Now known as Portion 11  
 (a portion of Portion 3)



The above figure lettered **ABCDEF** represents **0** Square Rods of Land, being **Portion 'B' of Portion called 'Brintsburg'** of the farm **ZOEKOP N° 10** in **July 1913**

as appears on Diagram S.G. No. A 3126/13 framed by Surveyor **D. de Korte** made in favour of **R.W. Brink** Province of Transvaal and bounded as indicated above and have been properly erected according to Law by me.  
 relating to Deed of Transfer No. 265/1915 dated 29.5.1915 made in favour of **R.W. Brink**  
 situate in the District of **Carolingia/Belfast** Wards **Carolina**  
 The beacons were pointed out by **C.M. du Plooy** surveyed in **October 1915**

*D. de Korte*  
 Land Surveyor.

No. <b>A 2561</b> Examined. The numerical data of this Diagram are sufficiently consistent.  <i>L. Maxwell Edwards</i> Examiner of Diagrams. Surveyor-General's Office, Pretoria. - 1 1918	Approved  <i>W. Schoch</i> Surveyor-General.	This Diagram belongs to Deed of Transfer No. <b>265/1915</b> made this day in favour of  <i>J. 676/19</i> Deeds Office, Pretoria. Registrar of Deeds.
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<b>Z11F FARMSTEAD</b>	
Feature name: Farmstead	
Type of feature: Building/structure	
Location/Area	Near N 4
GPS coordinates	25°45'4.40"S 29°59'53.10"E
References	None
NHRA protection status	Section 34
Description: Sandstone farm house with outbuildings, visible from the N 4	
Significance status (1)	3
Condition status and value (2)	2
Sensitivity assessment (1 x 2 = range = level)	<b>6</b>
Predicted impact	Outside mining area
Recommended management interventions to preserve feature or mitigate impact: Avoid (local landmark). Compelling reasons for preservation.	

Photo





<b>Z11G GRAVEYARD</b>		
Feature name: Graveyard		
Type of feature: Burial site		
Location/Area	Next to railway line	
GPS coordinates	25°45'0.60"S 29°59'44.10"E	
References	None	
NHRA protection status	Section 36	
Description: Graves of farm workers (about 5), fairly recent		
Significance status (1)	3	
Condition status and value (2)	2	
Sensitivity assessment (1 x 2 = range = level)	6	
Predicted impact	Outside mining area	
Recommended management interventions to preserve feature or mitigate impact: Avoid		

Photo



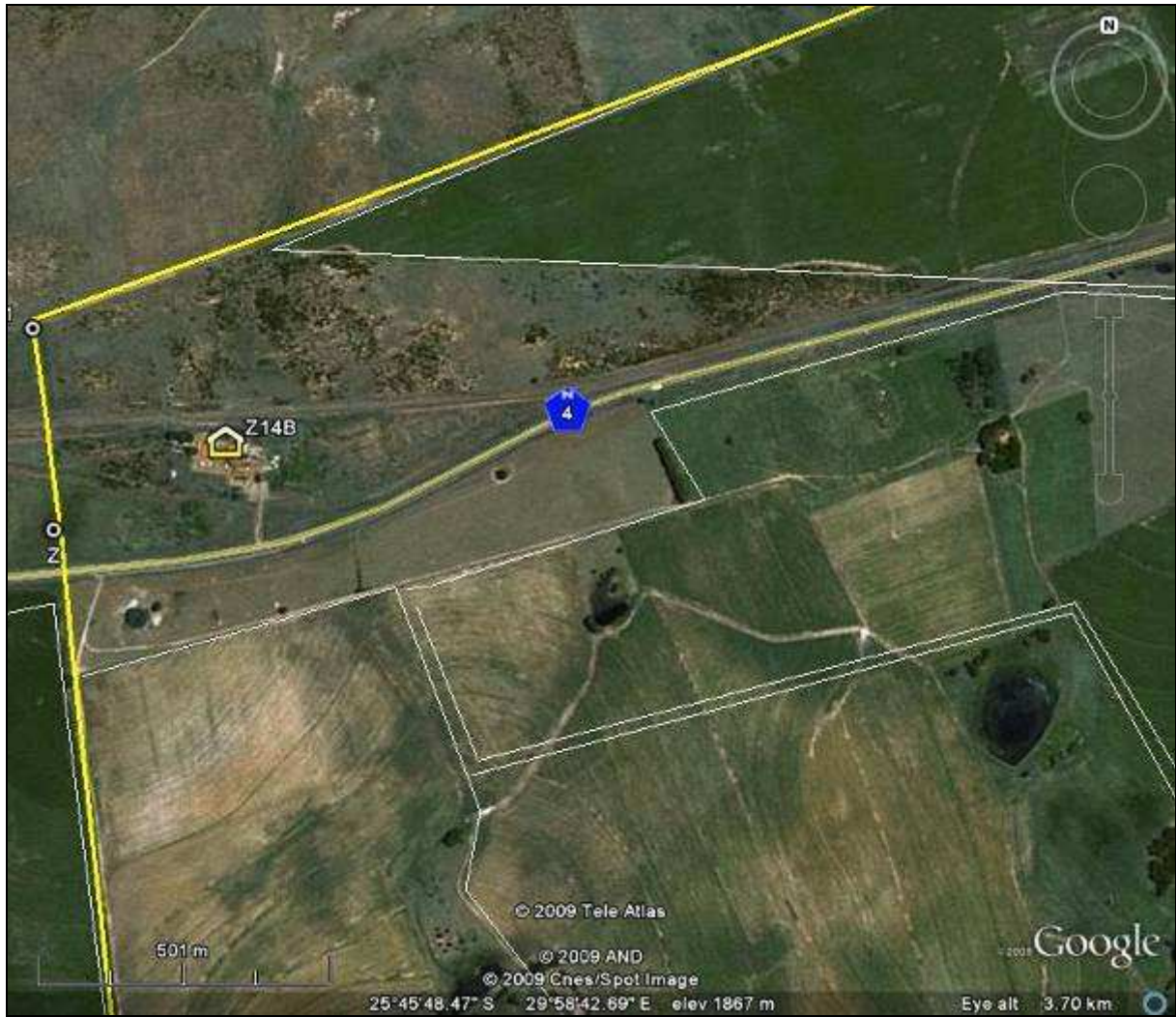
**ZOEKOP PORTION 12**

There are no heritage resources on Portion 12.





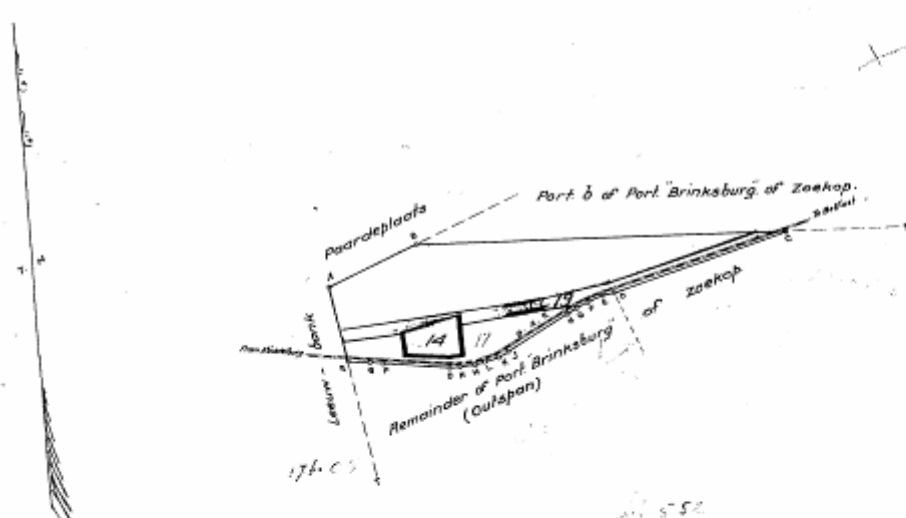
ZOEKOP PORTION 14



Form B2.—Diagram Form for a Sub-Division of a Farm or portion of a Farm.

S.G. No. A. 4335/20

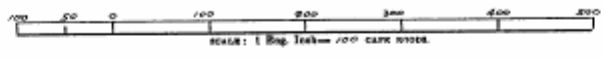
SIDES.	ANGLES.	(Y) CO-ORDINATES (X)
AB 102.63	A 107.30 40	A + 3050.92 - 1014.15
BC 388.08	B 157.32 0	B + 3012.417 - 1720.797
CD 190.71	C 17.23 0	C + 3080.216 - 1334.262
DE 15.30	D 102.21 50	D + 3077.93 - 1320.51
EF 15.93	E 102.21 50	E + 3081.89 - 1333.21
FG 15.28	F 102.28 10	F + 3087.32 - 1348.13
GH 10.44	G 102.42 50	G + 3092.88 - 1360.30
HJ 74.67	H 102.3 10	H + 3097.58 - 1369.84
IJK 10.32	I 177.16 20	I + 3133.05 - 1435.54
KL 15.97	K 172.37 30	K + 3137.80 - 1445.03
LM 10.42	L 170.16 0	L + 3142.60 - 1460.20
NO 18.00	N 174.20 50	N + 3146.23 - 1470.72
OP 10.44	O 173.0 30	O + 3145.25 - 1464.49
QP 60.25	P 171.3 30	P + 3144.83 - 1457.33
RS 13.20	R 102.28 10	R + 3134.64 - 1445.04
QT 23.14	Q 178.58 40	Q + 3133.30 - 1447.00
RA 00.02	R 107.4 30	R + 3129.69 - 1402.059
	S	S + 3050.92 - 1104.47
	T	T + 3224.22 - 1785.163



For Servitudes Deductions and Encumbrances See Over.

\* Now known as Portion 13  
(a portion of Portion 3)

Transvaal Survey Office  
No. 426  
REGISTERED SURVEYING  
REGISTERED SURVEYOR 1913



The above Figure lettered **ABCDEFGHIJKLMNPOQR** represents **38 Morgen 363 Square Rods of land, being Portion G of Portion called "BRINKSBURG"** of the Farm

**ZOEKOP. No 10.**

as appears on Diagram S.G. No. A. 3126/13 framed by Surveyor **D. de Korte** in **July 1913**  
relating to Deed of Transfer No. 2687/1915 dated **29.5.1915** made in favour of **A. N. Brink**  
situate in the District of **Carolina Belfast** Ward **Carolina** Province of Transvaal. Bounded as indicated above.  
The Beacons were pointed out by **D. de Korte** and have been properly erected according to law.  
Surveyed in **November 1920.** by me **D. de Korte**  
Chief Surveyor.

<p>No. <b>A 4335</b> Examined. The numerical data of this diagram are sufficiently consistent.</p> <p><i>[Signature]</i> Acting Examiner of Diagrams.</p>	<p>Approved</p> <p><i>[Signature]</i> Acting Surveyor-General.</p> <p>Surveyor-General's Office, Pretoria, 12 JAN 1921</p>	<p>This diagram belongs to Deed of Transfer No. made this day in favour of</p> <p>T5957/21</p> <p>Deeds Office, Pretoria.</p> <p>Registrar of Deeds.</p>
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Published by authority—Street & Sherr, P.O. Box 864, Johannesburg.—25/10/20.

<b>Z14B VICTORY FELLOWSHIP</b>	
Feature name: Mission station	
Type of feature: Building/structure	
Location/Area	Between N 4 and railway line
GPS coordinates	-
References	None
NHRA protection status	None
Description: Collection of modern buildings comprising hall, sheds, garages, kitchens, dormitories and dwellings	
Significance status (1)	2
Condition status and value (2)	2
Sensitivity assessment (1 x 2 = range = level)	4
Predicted impact	Outside mining area
Recommended management interventions to preserve feature or mitigate impact: Avoid	

Photo





ZOEKOP PORTION 15



28

L. G. KANTOOR KOPIE

ONDERWYSELMESURANT  
Art. 24 (b), Wet (No. 9 van 1927.

L. G. Nr. A. 2582/57

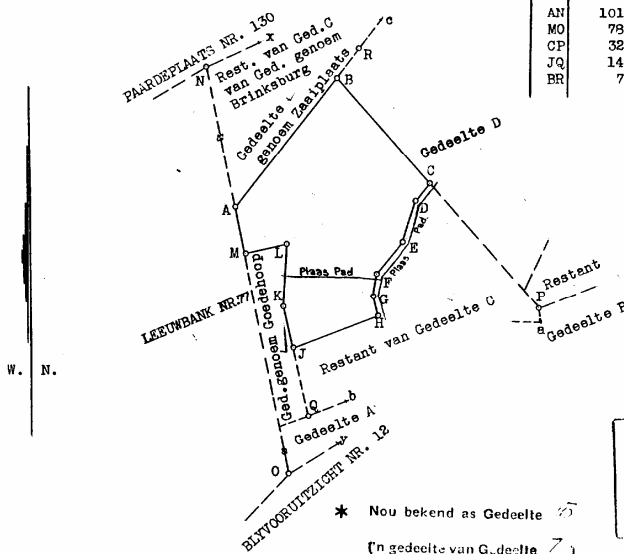
Goedgekeur

nmis. Landmeter-generaal.

2007 1957

- Beskrywings van Bakens**
- A, C, D, M ... 3" x 3' Ysterpen en klipstapel.
  - B ... Stam van Bloekomboom. Aanduidingspenne 15' op lyn na A en C.
  - E ... Houtdraadpaal. Aanduidingspenne 15' op lyn na D en F.
  - F ... Houtdraadpaal. Aanduidingspenne 20' op lyn na E en G.
  - G ... Houtdraadpaal. Aanduidingspenne 15' op lyn na F en H.
  - H ... Houtdraadpaal. Aanduidingspenne 15' op lyn na G en J.
  - J ... Ysterdraadpaal. Aanduidingspenne 15' op lyn na H en K.
  - K ... Houtdraadpaal. Aanduidingspenne 15' op lyn na J en L.
  - L ... Houtdraadpaal. Aanduidingspenne 15' op lyn na K en M.
  - N ... Spoorweg hout-dwarsleer draadpaal. Aanduidingspenne 10' op lyn na A en x.
  - O ... Klipdraadpaal. Aanduidingspenne 15' op lyn na M en y.
  - P ... Klipdraadpaal. Aanduidingspenne 15' op lyn na C en a.
  - Q ... Houtdraadpaal. Aanduidingspenne 15' op lyn na K en b.
  - R ... Houtdraadpaal. Aanduidingspenne 15' op lyn na B en c.

SYE Kaapse Voet.	RIGTINGS- HOEKE	Y Stelsel	KO-ORDINATE Lo. 290 (Prelim.)	
			X	X
AB	3295.2	Konstante	- 263000.0	+ 9041000.0
BC	2778.0	219.46.30	A - 47260.5	+ 21856.2
CD	424.2	38.34.40	B - 49368.7	+ 19323.6
DE	866.1	19.38.20	C - 51135.4	+ 21467.5
EF	804.9	40.41.30	D - 50870.9	+ 21799.1
FG	454.8	8.03.10	E - 50579.8	+ 22614.8
GH	411.7	349.09.50	F - 49991.3	+ 23675.4
HJ	1808.1	71.23.00	G - 50068.7	+ 24079.8
JK	842.7	169.01.40	H - 48355.2	+ 24657.0
KL	1214.1	183.07.00	K - 48194.8	+ 23929.7
LM	857.7	78.43.30	L - 48260.8	+ 22617.4
MA	942.4	170.16.33	M - 47419.7	+ 22795.1
AN	10130.7	170.16.33	N - 45549.4	+ 11871.1
MO	7896.8	350.16.33	O - 49753.5	+ 30568.4
CP	3261.7	320.30.40	P - 53203.6	+ 23994.7
JQ	1410.1	349.01.40	Q - 48623.6	+ 26041.3
BR	785.9	219.46.30	R - 49871.4	+ 18719.6



Transvaal  
No. 426  
REGISTRARIE KANTOOR  
REGISTRARIE KANTOOR

Skaal 1: 25000

Die figuur ABCDEFGHJKLM

stel voor

129.3825

Morge grond, synde

\* Gedeelte 15 (n Gedeelte van Gedeelte C) van die plaas

ZOEKOP NR. 10

geleë in die DISTRIK Belfast

PROVINSIE TRANSCVAAL

Gemeet in Maart en April 1957

deur my

Landmeter.

Hierdie kaart is geheg aan Akte van Transport  
Nr. 1809/57 gedateer  
ten gunste van

Die oorspronklike kaart is Nr. A.1442/16  
geheg aan Akte van Transport  
Nr. 7143/1916

L.G. Lëer Nr. 4210/4/3850/57  
Meebstukke Nr. 831/57  
Kompilasie Nr. JS - 8 - B

Registateur van Aktes.

VORM 468/TRANSVAAL EUSROW 10294  
GEDRUK EN UITGEKOEK MET MAGTIGING L.G. TRANSCVAAL



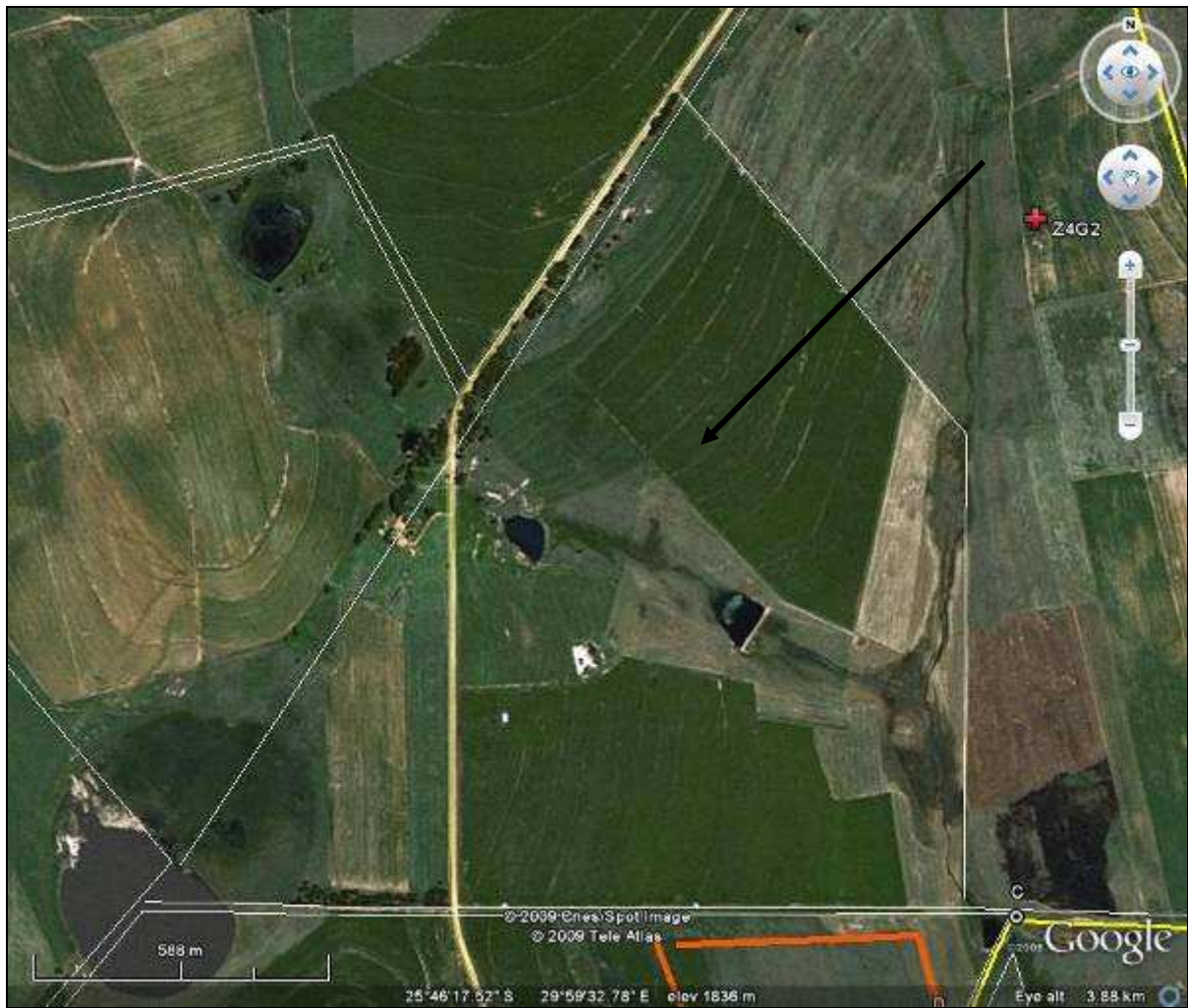
<b>Z15F FARMSTEAD</b>	
Feature name: Farmstead	
Type of feature: Building/structure	
Location/Area	Zoekop 15
GPS coordinates	25°47'14.60"S 29°58'46.90"E
References	None
NHRA protection status	None
Description: Modern farmstead	
Significance status (1)	1
Condition status and value (2)	2
Sensitivity assessment (1 x 2 = range = level)	2
Predicted impact	Adverse (Inside mining area)
Recommended management interventions to preserve feature or mitigate impact: Document before demolition. There are no compelling reasons to preserve this feature.	

Photo



**ZOEKOP PORTION 16**

There are no heritage resources on Portion 16.



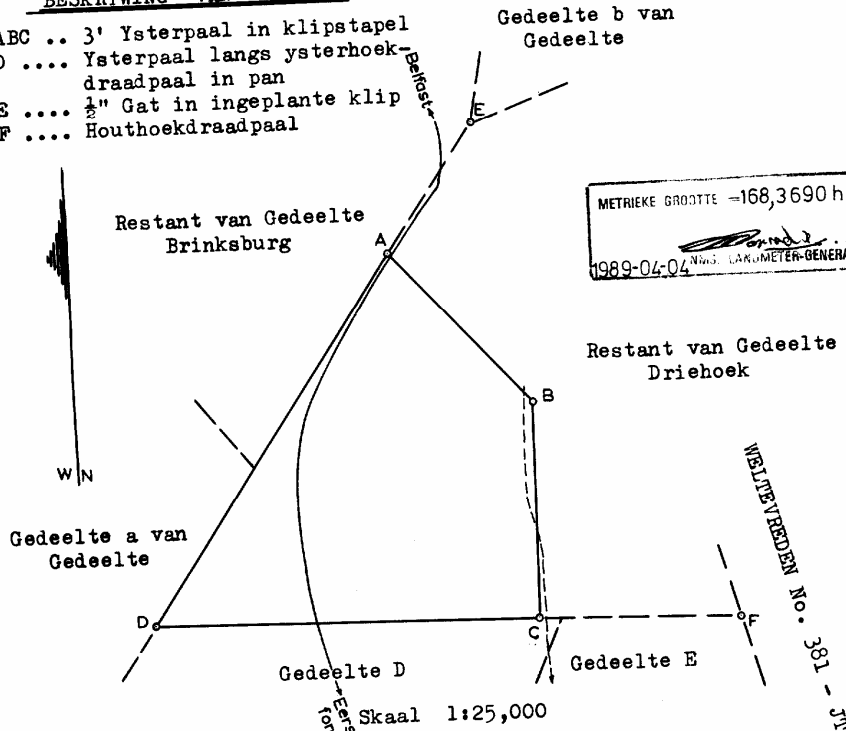
ONDERVERDELINGSKAART

Kaapse	SYB Voet	RIGTINGS HOEKE	KOORDINATE		Amp. Ben.
			Stelsel	Lo 31°	
		Konstante	+300000.0	+9000000.0	
AB	2889.1	317.59.50	A + 20511.6	+ 54261.7	
BC	3071.6	0.23.30	B + 18578.4	+ 56408.6	
CD	5407.6	91.15.40	C + 18599.4	+ 59480.1	
DA	6181.6	214.25.10	D + 24005.7	+ 59361.0	
AE	2183.4	214.25.10	E + 19277.4	+ 52460.5	
CF	2867.2	271.15.40	F + 15732.9	+ 59543.1	
		Winchester	Δ + 41258.5	+ 60513.7	
		Zoekop	Δ + 18169.2	+ 49083.2	

L.G. No. A  
1482/68  
Goedgekeur  
Landmeter-  
Generaal.  
2.8.1968

BESKRYWING VAN BAKENS

- ABC .. 3' Ysterpaal in klipstapel
- D .... Ysterpaal langs ysterhoek-  
draadpaal in pan
- E .... 1/2" Gat in ingeplante klip
- F .... Houthoekdraadpaal



Die figuur A.B.C.D.A  
stel voor 196.57<sup>06</sup> Morge  
Gedeelte 16 (n gedeelte van Gedeelte Driehoek) van die plaas  
ZOEKOP No. 426 - JS

Provincie Transvaal  
Opgemeet in Maart 1968 deur my R van Heerden  
Landmeter.

Hierdie kaart hoort by No. T 3357 / 1990 d.d. 1990-01-17 t.g.v. Registrateur van Aktes.	Die oorspronklike kaart is No. A.3127/13 Transport 2688/15 Grondbrief	Lêer 15 M.S. No. 408/68 Komp. JS-8B JT-7A
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Gepubliseer met Outoriteit — Die Morester Drukkery, Potgietersrus.