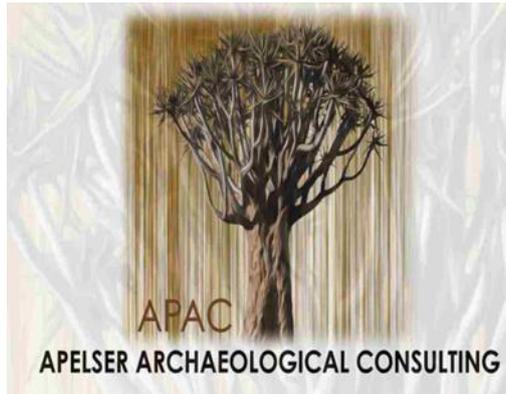


# **Appendix G4:**

Phase 1 Heritage Impact  
Assessment Report



Comprehensive and Professional Solutions for all Heritage Related Matters  
**CK 2006/014630/23** **VAT NO.: 4360226270**

**PHASE 1 HIA REPORT FOR THE PROPOSED  
KROON'S GOURMET CHICKEN HATCHERY  
ON VARIOUS PORTIONS OF THE FARM HARTEBESTFONTEIN 445JQ  
MADIBENG LOCAL MUNICIPALITY, NORTHWEST PROVINCE**

For:

***Bokamoso Landscape Architects & Environmental Consultants CC  
PO Box 11375  
Maroelana  
0161***

REPORT: **APAC019/23**

by:

***A.J. Pelser  
Accredited member of ASAPA***

***March 2019***

**P.O.BOX 73703  
LYNNWOOD RIDGE  
0040  
Tel: 083 459 3091  
Fax: 086 695 7247  
Email: [apac.heritage@gmail.com](mailto:apac.heritage@gmail.com)**

Member: AJ Pelser BA (UNISA), BA (Hons) (Archaeology), MA (Archaeology) [WITS]

©Copyright

**APELSE ARCHAEOLOGICAL CONSULTING**

**The information contained in this report is the sole intellectual property of APELSE Archaeological Consulting. It may only be used for the purposes it was commissioned for by the client.**

**DISCLAIMER:**

**Although all efforts are made to identify all sites of cultural heritage (archaeological and historical) significance during an assessment of study areas, the nature of archaeological and historical sites are as such that it is always possible that hidden or subterranean sites, features or objects could be overlooked during the study. APELSE Archaeological Consulting can't be held liable for such oversights or for costs incurred as a result thereof.**

**Clients & Developers should not continue with any development actions until SAHRA or one of its subsidiary bodies has provided final comments on this report. Submitting the report to SAHRA is the responsibility of the Client unless required of the Heritage Specialist as part of their appointment and Terms of Reference**

A handwritten signature in black ink, appearing to be 'A. El' or similar, located below the disclaimer text.

## SUMMARY

APelser Archaeological Consulting (APAC) was appointed by Bokamoso Landscape Architects and Environmental Consultants CC to conduct a Phase 1 Heritage Impact Assessment (HIA) for the proposed Kroon's Gourmet Chickens Hatchery. The proponent is Kroon's Gourmet Chickens (Pty) Ltd.

The proposed hatchery will be located on one of the following sites:

Site 1 which is located on Portion 107 of the Farm Hartebeestfontein 445 JQ; Site 2 which is located on Portion 322 of the Farm Hartebeestfontein 445 JQ and Site 3 which is located on Portion 33 and 168 of the Farm Hartebeestfontein 445 JQ.

Background research indicates that there are a number of cultural heritage (archaeological and historical) sites and features in the larger geographical area within which the study area falls. There are no known sites in the specific study areas although the assessment did identify some sites, features or material of cultural heritage (archaeological and/or historical) origin or significance in the area. This report discusses the results of both the background research and physical assessment.

**From a Cultural Heritage point of view it is recommended that the proposed development be allowed to continue, taking into consideration the recommendations put forward at the end of the report.**

## CONTENTS

1. INTRODUCTION .....	5
2. TERMS OF REFERENCE .....	5
3. LEGISLATIVE REQUIREMENTS .....	5
4. METHODOLOGY .....	8
5. DESCRIPTION OF THE AREA .....	9
6. DISCUSSION .....	12
7. CONCLUSIONS AND RECOMMENDATIONS .....	29
8. REFERENCES .....	31
APPENDIX A: DEFINITION OF TERMS: .....	32
APPENDIX B: DEFINITION/ STATEMENT OF HERITAGE SIGNIFICANCE .....	33
APPENDIX C: SIGNIFICANCE AND FIELD RATING: .....	34
APPENDIX D: PROTECTION OF HERITAGE RESOURCES: .....	35
APPENDIX E: HERITAGE IMPACT ASSESSMENT PHASES .....	36

## **1. INTRODUCTION**

APelser Archaeological Consulting (APAC) was appointed by Bokamoso Landscape Architects and Environmental Consultants CC to conduct a Phase 1 Heritage Impact Assessment (HIA) for the proposed Kroon's Gourmet Chickens Hatchery. The proponent is Kroon's Gourmet Chickens (Pty) Ltd.

The proposed hatchery will be located on one of the following sites:

Site 1 which is located on Portion 107 of the Farm Hartebeestfontein 445 JQ; Site 2 which is located on Portion 322 of the Farm Hartebeestfontein 445 JQ and Site 3 which is located on Portion 33 and 168 of the Farm Hartebeestfontein 445 JQ.

Background research indicates that there are a number of cultural heritage (archaeological and historical) sites and features in the larger geographical area within which the study area falls. There are no known sites in the specific study areas although the assessment did identify some sites, features or material of cultural heritage (archaeological and/or historical) origin or significance in the area.

The client indicated the location and the boundaries of the various study areas (farm portions) and the assessment concentrated on these specific portions.

## **2. TERMS OF REFERENCE**

The Terms of Reference for the study was to:

1. Identify all objects, sites, occurrences and structures of an archaeological or historical nature (cultural heritage sites) located on the portion of land that will be impacted upon by the proposed development;
2. Assess the significance of the cultural resources in terms of their archaeological, historical, scientific, social, religious, aesthetic and tourism value;
3. Describe the possible impact of the proposed development on these cultural remains, according to a standard set of conventions;
4. Propose suitable mitigation measures to minimize possible negative impacts on the cultural resources; and
5. Review applicable legislative requirements.

## **3. LEGISLATIVE REQUIREMENTS**

Aspects concerning the conservation of cultural resources are dealt with mainly in two acts. These are the National Heritage Resources Act, 1999 (Act No. 25 of 1999) and the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended.

### 3.1. The National Heritage Resources Act

According to the above-mentioned act the following is protected as cultural heritage resources:

- a. Archaeological artifacts, structures and sites older than 100 years
- b. Ethnographic art objects (e.g. prehistoric rock art) and ethnography
- c. Objects of decorative and visual arts
- d. Military objects, structures and sites older than 75 years
- e. Historical objects, structures and sites older than 60 years
- f. Proclaimed heritage sites
- g. **Grave yards and graves older than 60 years**
- h. Meteorites and fossils
- i. Objects, structures and sites of scientific or technological value.

The National Estate includes the following:

- 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 features of cultural significance
- e. Geological sites of scientific or cultural importance
- f. Sites of Archaeological and palaeontological importance
- g. **Graves and burial grounds**
- h. Sites of significance relating to the history of slavery
- i. Movable objects (e.g. archaeological, palaeontological, meteorites, geological specimens, military, ethnographic, books etc.)

A Heritage Impact Assessment (HIA) is the process to be followed in order to determine whether any heritage resources are located within the area to be developed as well as the possible impact of the proposed development thereon. An Archaeological Impact Assessment (AIA) only looks at archaeological resources. An HIA must be done under the following circumstances:

- a. The construction of a linear development (road, wall, power line, canal etc.) exceeding 300m in length
- b. The construction of a bridge or similar structure exceeding 50m in length
- c. Any development or other activity that will change the character of a site and exceed 5 000m<sup>2</sup> or involve three or more existing erven or subdivisions thereof
- d. Re-zoning of a site exceeding 10 000 m<sup>2</sup>
- e. Any other category provided for in the regulations of the South African Heritage Resources Agency (SAHRA) or a provincial heritage authority

## **Structures**

Section 34 (1) of the mentioned act states that no person may demolish any structure or part thereof which is older than 60 years without a permit issued by the relevant provincial heritage resources authority.

A structure means any building, works, device or other facility made by people and which is fixed to land, and includes any fixtures, fittings and equipment associated therewith.

Alter means any action affecting the structure, appearance or physical properties of a place or object, whether by way of structural or other works, by painting, plastering or the decoration or any other means.

## **Archaeology, palaeontology and meteorites**

Section 35(4) of this act deals with archaeology, palaeontology and meteorites. The act states that no person may, without a permit issued by the responsible heritage resources authority (national or provincial)

- a. destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or any meteorite;
- b. destroy, damage, excavate, remove from its original position, collect or own any archaeological or palaeontological material or object or any meteorite;
- c. trade in, sell for private gain, export or attempt to export from the Republic any category of archaeological or palaeontological material or object, or any meteorite; or
- d. bring onto or use at an archaeological or palaeontological site any excavation equipment or any equipment that assists in the detection or recovery of metals or archaeological and palaeontological material or objects, or use such equipment for the recovery of meteorites.
- e. alter or demolish any structure or part of a structure which is older than 60 years as protected.

**The above mentioned may only be disturbed or moved by an archaeologist, after receiving a permit from the SAHRA. In order to demolish such a site or structure, a destruction permit from the SAHRA will also be needed.**

## **Human remains**

Graves and burial grounds are divided into the following:

- a. ancestral graves
- b. royal graves and graves of traditional leaders
- c. graves of victims of conflict
- d. graves designated by the Minister
- e. historical graves and cemeteries
- f. human remains

In terms of Section 36(3) of the National Heritage Resources Act, no person may, without a permit issued by the relevant heritage resources authority:

- a. destroy, damage, alter, exhume or remove from its original position or otherwise disturb the grave of a victim of conflict, or any burial ground or part thereof which contains such graves;
- b. 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; or
- c. bring onto or use at a burial ground or grave referred to in paragraph (a) or (b) any excavation, or any equipment which assists in the detection or recovery of metals.

Human remains that are less than 60 years old are subject to provisions of the Human Tissue Act (Act 65 of 1983) and to local regulations. Exhumation of graves must conform to the standards set out in the **Ordinance on Excavations (Ordinance no. 12 of 1980)** (replacing the old Transvaal Ordinance no. 7 of 1925).

Permission must also be gained from the descendants (where known), the National Department of Health, Provincial Department of Health, Premier of the Province and local police. Furthermore, permission must also be gained from the various landowners (i.e. where the graves are located and where they are to be relocated to) before exhumation can take place.

Human remains can only be handled by a registered undertaker or an institution declared under the **Human Tissues Act, 1983 (Act No. 65 of 1983 as amended)**.

### **3.2. The National Environmental Management Act**

This act states that a survey and evaluation of cultural resources must be done in areas where development projects, that will change the face of the environment, will be undertaken. The impact of the development on these resources should be determined and proposals for the mitigation thereof are made.

Environmental management should also take the cultural and social needs of people into account. Any disturbance of landscapes and sites that constitute the nation's cultural heritage should be avoided as far as possible and where this is not possible the disturbance should be minimized and remedied.

## **4. METHODOLOGY**

### **4.1. Survey of literature**

A survey of available literature was undertaken in order to place the development area in an archaeological and historical context. The sources utilized in this regard are indicated in the bibliography.

## **4.2. Field survey**

The field assessment section of the study was conducted according to generally accepted HIA practices and aimed at locating all possible objects, sites and features of heritage significance in the area of the proposed development. The location/position of all sites, features and objects is determined by means of a Global Positioning System (GPS) where possible, while detail photographs are also taken where needed.

## **4.3. Oral histories**

People from local communities are sometimes interviewed in order to obtain information relating to the surveyed area. It needs to be stated that this is not applicable under all circumstances. When applicable, the information is included in the text and referred to in the bibliography.

## **4.4. Documentation**

All sites, objects, features and structures identified are documented according to a general set of minimum standards. Co-ordinates of individual localities are determined by means of the Global Positioning System (GPS). The information is added to the description in order to facilitate the identification of each locality.

## **5. DESCRIPTION OF THE AREA**

The proposed hatchery will be located on one of the following sites:

Site 1 which is located on Portion 107 of the Farm Hartebeestfontein 445 JQ; Site 2 which is located on Portion 322 of the Farm Hartebeestfontein 445 JQ and Site 3 which is located on Portion 33 and 168 of the Farm Hartebeestfontein 445 JQ.

The three sites are situated within the area of Jurisdiction of the Madibeng Local Municipality, in the North West Province. The proposed sites are surrounded by agricultural land and urban developments. Portion 107 is situated approximately 5km north of the Hartebeestpoort Dam and the R511 runs along the northern boundary of the site. Portion 322 is situated approximately 6km to the north of the Hartebeestpoort Dam and is situated approximately 200m to the north-east of the R511 road. Portions 33 and 168 are situated approximately 4.8km to the north of the Hartebeestpoort Dam and approximately 1.2km south west of the R511 road.

The topography of all three sites is relatively flat with no rocky ridges or outcrops present. The vegetation (grass and tree cover) was fairly dense during the assessment, and this made visibility difficult. Sections of all three of the sites would have been used in the past for some agricultural purposes (ploughing/crop growing and livestock grazing). Residential settlement in the study areas (homesteads/farmsteads) would also have had some impact and if any cultural heritage (archaeological and/or historical) sites, features or material of significance or origin did exist here in the past it would have been disturbed or destroyed to

some degree. This being said some sites were identified during the fieldwork and will be discussed in the next sections.



Figure.1: General location of the three study areas (Google Earth 2019).



Figure.2: Closer view of Site 1 (Google Earth 2019).



Figure.3: Closer view of Site 2 (Google Earth 2019).



Figure.4: Closer view of Site 3 (Google Earth 2019).

## 6. DISCUSSION

The Stone Age is the period in human history when lithic (stone) material was mainly used to produce tools. In South Africa the Stone Age can basically be divided into three periods. It is however important to note that dates are relative and only provide a broad framework for interpretation. A basic sequence for the South African Stone Age (Lombard et.al 2012) is as follows:

Earlier Stone Age (ESA) up to 2 million – more than 200 000 years ago  
Middle Stone Age (MSA) less than 300 000 – 20 000 years ago  
Later Stone Age (LSA) 40 000 years ago – 2000 years ago

It should also be noted that these dates are not a neat fit because of variability and overlapping ages between sites (Lombard et.al 2012: 125).

The closest known Stone Age sites in the larger area are found in the so-called Magaliesberg Research Area. It consists of a number of sites including rock shelters such as Jubilee Shelter and Kruger Cave south of Brits. These sites date back to the Middle and Later Stone Age and include rock engravings (Bergh 1999: 4 – 5).

**There are no known Stone Age sites (including rock art) in the area, and none was found during the survey.**

The Iron Age is the name given to the period of human history when metal was mainly used to produce metal artifacts. In South Africa it can be divided in two separate phases (Bergh 1999: 96-98), namely:

Early Iron Age (EIA) 200 – 1000 A.D.  
Late Iron Age (LIA) 1000 – 1850 A.D.

Huffman (2007: xiii) however indicates that a Middle Iron Age should be included. His dates, which now seem to be widely accepted in archaeological circles, are:

Early Iron Age (EIA) 250 – 900 A.D.  
Middle Iron Age (MIA) 900 – 1300 A.D.  
Late Iron Age (LIA) 1300 – 1840 A.D.

Late Iron Age sites have been identified in the larger geographical area within which the study area falls. In a band stretching roughly from Brits in the east to Zeerust in the west many Iron Age sites have been discovered previously (Bergh 1999: 7-8). These all belong to the Later Iron Age (Bergh 1999: 8-9). A copper smelting site was identified along the Hex River to the northwest of the surveyed area (Bergh 1999: 8). The closest Earlier Iron Age site is located at Broederstroom near Brits (Bergh 1999: 6).

During earlier times the area was settled by the Fokeng. In the 19th century this group inhabited this area with other Tswana groups including the Kwena and the Po (Bergh 1999:

9-10). During the difaqane these people moved further to the west, but they returned later on (Bergh 1999: 11).

According to the research of Tom Huffman the following Iron Age traditions could be present in the area: (a) the Mzonjani facies of the Urewe tradition (Broederstroom) dating to AD450 – AD750 (b) Olifantspoort facies of the same tradition AD1500 – AD1700 (c) Uitkomst facies of Urewe AD1650 – AD1820 and (d) Buispoort facies of Urewe dating to around AD1700 - AD1840 (Huffman 2007: 127; 171; 191 & 203).

**No Iron Age sites, features or cultural material was identified during the assessment of the study area.**

The historical age started with the first recorded oral histories in the area. It includes the moving into the area of people that were able to read and write. Early travelers have moved through this part of the North West Province. This included David Hume in 1825, Robert Scoon and William McLuckie in 1829 and Dr. Robert Moffat and Reverend James Archbell in 1829 (Bergh 1999: 12, 117-119).

Hume again moved through this area in 1830 followed by the expedition of Dr. Andrew Smith in 1835 (Bergh 1999: 13, 120-121). In 1836 William Cornwallis Harris visited the area. The well-known explorer Dr. David Livingstone passed through this area between 1841 and 1847 (Bergh 1999: 13, 119-122).

The area also saw some action during the Anglo-Boer War (1899-1902), with a number of skirmishes between the Boer and British forces (Bergh 1999: 51; 54).

**Some sites from the recent historical time-period were identified in the area during the assessment.**

The oldest map for the Farm Hartebeestfontein 445 JQ (for Portion 1) that could be obtained from the database of the Chief Surveyor General dates to 1916 ([www.csg.dla.gov.za](http://www.csg.dla.gov.za) – CSG Document 10G6TK01). It shows that the farm was then numbered as No.5 and that it was located in the District of Pretoria and in the Crocodile River Ward. The whole of the farm was given by Deed to Jacobus Steenkamp on the 10<sup>th</sup> of April-1874, with Portion 1 surveyed in November 1916. A 1928 map for Portion 33 shows that it was surveyed in June 1927 (CSG Document 10G6V901). Portions 107, 168 and 322 (maps dating to 1951, 1984 and 2007 respectively) were surveyed in 1947, 1951, 1984 and 2007 (CSG Documents 10G2EO01; 10GLG701 & 10173461). No historical sites or features could be identified on any of these maps.

file 4445/2

S.G. No A. 2555/16

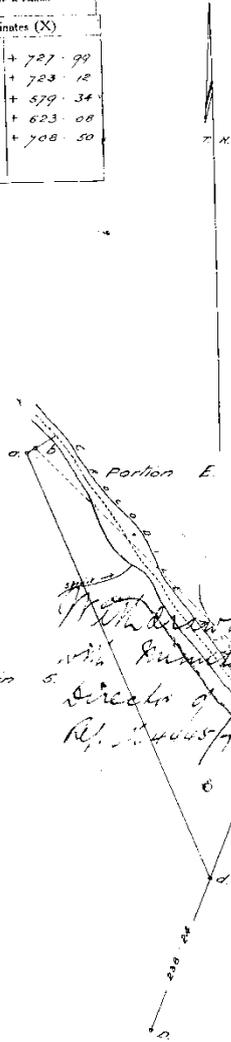
Form B5. DIAGRAM FORM FOR A SUB-DIVISION OF A FARM OR PORTION OF A FARM.

Sides.	Angles.	(Y) Co-ordinates (X)
a-b 5.83	$\alpha$ 107.15.30	$\alpha$ + 675.37 + 727.99
b-c 209.75	$\beta$ 99.50.00	$\beta$ + 670.57 + 723.12
c-d 121.99	$\gamma$ 113.42.50	$\gamma$ + 525.86 + 579.34
d-a 283.51	$\delta$ 42.43.40	$\delta$ + 411.98 + 623.08
		$D$ + 189.58 + 708.50

Recd Area = 20 Morgen 335 Sq Roods

a-b River = 180.0.0  
a-c River = 180.0.0

Remaining Extent

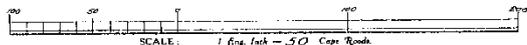


Portion E of Hartbeestfontein 5

of Port F.

Indemnity in accordance  
with Statute Act 11/1/18  
Directors of Deeds Office  
R. J. ...  
Hartbeestfontein 5  
11/1/18

Transvaal Deeds Office  
Now registered under  
No. 445  
REPUBLIC OF SOUTH AFRICA  
REGISTERED SURVEYOR JQ



The above Figure lettered a-b-c-d-a represents  
of 36 Morgen 36 Square Roods of Land, being Portion 1 of Portion F of the Farm

# HARTEBESTFONTEIN N<sup>o</sup> 5.

as appears on the Diagram S. G. No. A 1140/1896 framed by Surveyor H. D. v. Wilgen in Aug. 1895 - Jan 1896 relating to Deed of Transfer No. 54/1893 dated 10.4.1893 made in favour of Jacobus Sleankamp situate in the District of Freetown Ward Crocodile River Province of Transvaal and bounded as indicated above.

The beacons were pointed out by B. C. van Maarseveen and have been properly erected according to Law. Surveeyed in November 1916 by me, Geo. apathud, Land Surveyor.

No. 2555 Examined. The numeral data of this Diagram are sufficiently consistent.  
*J. H. de lauder*  
Examiner of Diagrams.  
Surveyor-General's Office.  
Pretoria.

Approved  
*W. H. ...*  
Surveyor-General.

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

Figure.5: A 1916 map of Portion 1 ([www.csg.dla.gov.za](http://www.csg.dla.gov.za)).

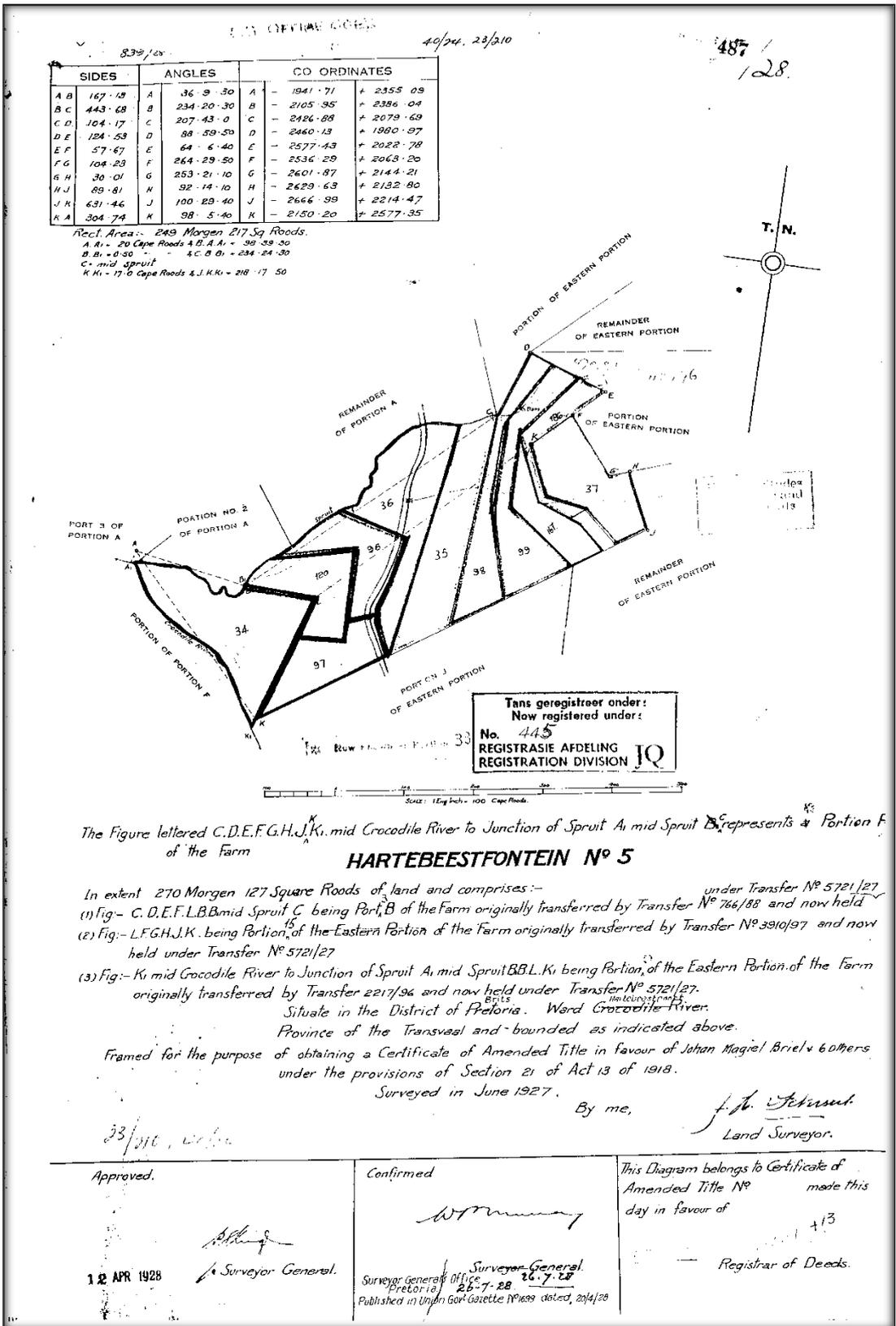


Figure.6: A 1928 map of Portion 33 ([www.csg.dla.gov.za](http://www.csg.dla.gov.za)).

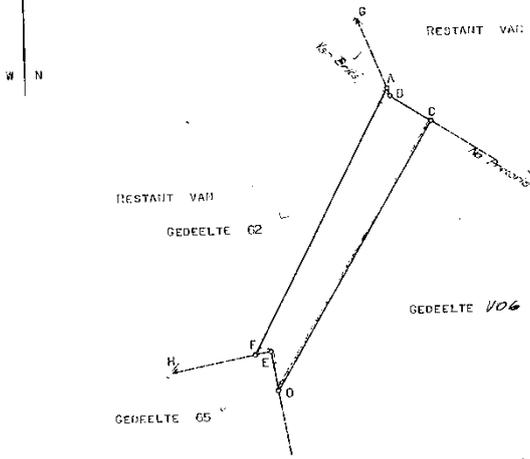
L.G. Nr. A. 1300/51

Goedgekeur

*L. J. van der Merwe*  
Landmeter-generaal.

DESKRYWING VAN BAKKENS  
A B C D E F G HOEKEERLOPE ONDER KLIPSTAFELS

	SYE Kaapse Voet.	RIGTINGS- HOEKE	y	KO-ORDINATE.	x
AB	60.0	337.14.10	A	- 75076.6	+ 24720.7
BC	404.8	302.13.30	B	- 75099.8	+ 24784.0
CD	2020.8	30.30.00	C	- 75442.2	+ 24999.9
DE	326.8	168.00.20	D	- 74112.0	+ 27258.1
EF	132.5	79.00.20	E	- 74049.7	+ 28937.3
FA	2515.7	207.22.50	F	- 73919.6	+ 28962.6
AG	587.8	157.14.10	G	- 74840.1	+ 24186.6
BH	467.5	79.00.20	H	- 73460.7	+ 27051.7



Tans geregistreer onder:  
Now registered under:  
No. 113  
REGISTRASIE AFDELING  
REGISTRATION DIVISION JQ

DE GED-  
VANA VER-  
WAGING N. (S) VAN WET NO. 13  
VAN 1951

\* Nou bekend as Gedeelte 107  
En gedrewe deur No. 85  
Skaal 1 : 10000

Die figuur A B C D E E  
11.0000 Morge grond, synde

GEDEELTE 107 (1<sup>ste</sup> GEDEELTE VAN GEDEELTE 62)

stel voor  
van die plaas

geleë in die DISTRIK BRITS

HARTEBEESTFONTEIN N. R. S.

PROVINSIE TRANSVAAL.

Gemeet in JANUARIE - APRIL 1947 EN  
FEBRUARIE 1951

deur my *J. K. van der Merwe*  
Landmeter.

Hierdie kaart is gegee aan Akte van  
Nr. godsteer  
ten gunste van  
Registateur van Aktes.

Die oorspronklike kaart is Nr. 17124/47  
gegee aan  
Nr.

L.G. Leter Nr. 1300/51  
Meetstukke Nr. 376/51  
Kompilering Nr. JQ 6 D 13

Figure.7: A 1951 map of Portion 107 ([www.csg.dla.gov.za](http://www.csg.dla.gov.za)).

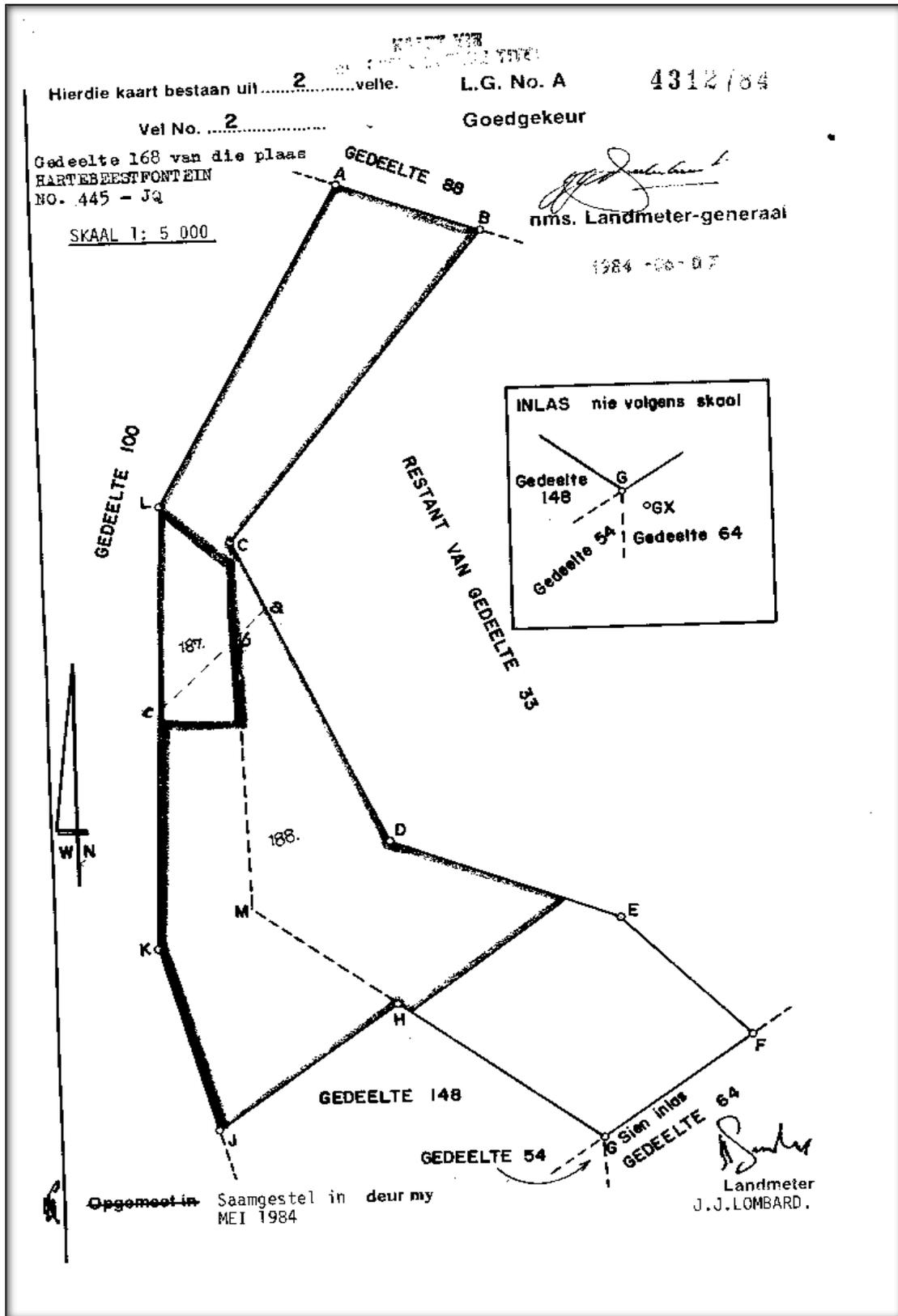


Figure.8: A 1984 map of Portion 168 ([www.csg.dla.gov.za](http://www.csg.dla.gov.za)).

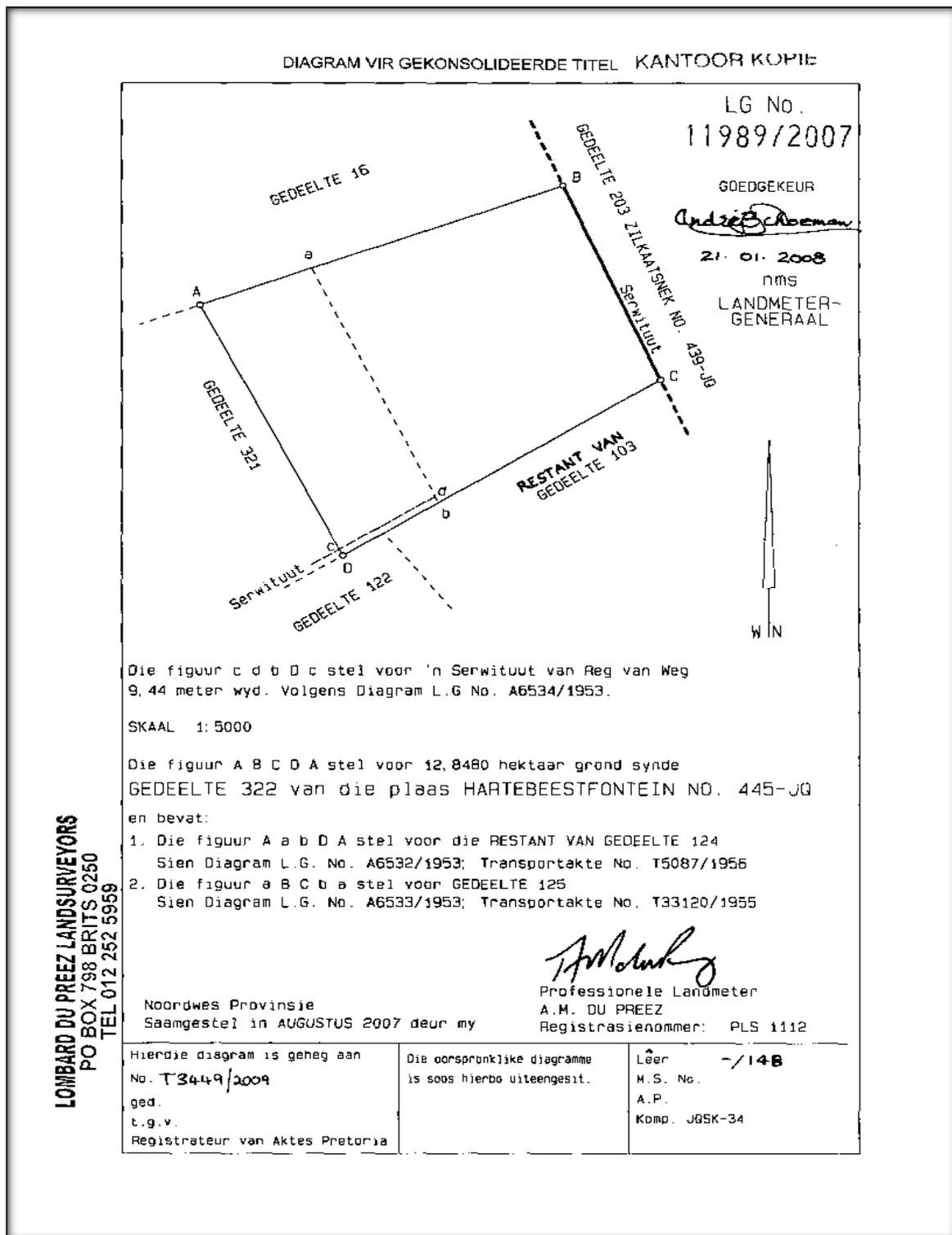


Figure.9: A 2007 map for Portion 322 ([www.csg.dla.gov.za](http://www.csg.dla.gov.za)).

### Results of the Assessment of the three proposed development sites

The three alternative development areas were assessed separately to see if any possible sites, features or material of cultural heritage origin or significance are located on them. At

the end the least preferred of the sites (in terms of) development versus impact on heritage) will be determined.

**Site 1: Portion 107 of the Farm Hartebeestfontein 445 JQ**

The current homestead and related structures on the site has no cultural heritage value and probably dates between the 1960's/70's and more recently. Only one (1) other site was located on the property and this is represented by the ruins of a stone and cement constructed structure. It is also less than 60 years of age and it is of no historical significance.

**GPS Location of ruins:** S25 41 11.20 E27 51 34.50

**Cultural Significance:** Low

**Heritage Significance:** None

**Field Ratings:** General protection C (IV C): Phase 1 is seen as sufficient recording and it may be demolished (Low significance).

**Mitigation:** None required.



**Figure.10: View of homestead on Site 1 (Portion 107).**



**Figure.11: Another view of the homestead.**



**Figure.12: One of the outbuildings on the property.**



**Figure.13: Another smaller structure.**



**Figure.14: Small recent structure on Portion 107.**



Figure.15: Ruins of structure on the property.



Figure.16: Location of ruins on Site 1 (Google Earth 2019).

**Site 2: Portion 322 of the Farm Hartebeestfontein 445 JQ**

No sites, features or material of any cultural heritage significance were identified in the study area during the assessment. The homestead and related structures here are all of recent age (not older than 60 years of age) and not of any significance.



**Figure.17: Partial view of homestead on Site 2.**

**Site 3: Portions 33 and 168 of Hartebeestfontein 445JQ**

The homesteads on the portions are also recent and are of no heritage significance. Only one (1) other site was identified close to the proposed development area (the footprint indicated on aerial images of the area). It is not located within this footprint. The site is represented by between thirty (30) and (50) graves, although the dense vegetation made determining the correct number difficult. Only two (2) of the graves have formal headstones with inscriptions, with a third 3<sup>rd</sup> one demarcated with cement with the headstone missing. The other graves are all stone-packed.

The two graves with headstones indicated the deceased as (1) Joseph Ramogotjie, who was born in 1870 and who died in 1953 and (2) difficult to read, but the person seemed to have been born in 1922 and passed away in 1945. Both these graves are therefore older than 60 years of age and protected by the National Heritage Resources Act. It is assumed that the other (as yet unknown) graves also date to more than 60 years ago.

Graves always carry a High Cultural Heritage Significance rating and should preferably be protected and not impacted by any development. The best practice would be to steer clear of the grave site and fence it in to ensure its protection. The site should then be managed

through a Heritage Management Plan. Although the site is located (based on the footprint of the Site 3 area) outside of direct impact, there could be some indirect impacts on it as a result of the proposed development. It is therefore recommended that the site be properly cleaned, the graves on it recorded in detail and a Graves Register be drafted and the site fenced-in properly.

Finally, if the development cannot avoid the grave site then the option to exhume and relocate the graves does exist. This will entail detailed and extensive social consultation to try and locate any possible descendants of the deceased and to obtain consent for the exhumations and relocations. Once this has been done various permits will have to be obtained before the work is conducted.

**Approximate GPS Location of Grave Site:** S25 41 12.85 E27 50 55.98

**Cultural Significance:** High – Graves always carry a High Significance rating

**Heritage Significance:** Grade III: Other heritage resources of local importance and therefore worthy of conservation.

**Field Ratings:** Local Grade IIIB: should be included in the heritage register and may be mitigated (High/Medium significance).

**Mitigation:** Clean site and document graves. Fence-in and protect and include in a Graves Management Plan. Normally if graves cannot be protected in situ and is to be negatively impacted then they could be exhumed and relocated after detailed consultation with possible descendants have been concluded and permits have been obtained from various local, provincial and National government departments.



**Figure 18:** View of the grave site with some of the stone-packed graves visible.



**Figure 19: The headstone of the grave of Joseph Ramogotjie.**



Figure 20: This headstone was difficult to read but the person passed away in 1945.



Figure 21: A third grave with formal dressing. The headstone is missing.



**Figure 22: View of recent homestead in the study area.**



**Figure 23: Aerial view showing location of the Grave Site (Google Earth 2019).**

Vegetation was very dense during the assessment and made visibility difficult. This aspect should be kept in mind. It should also be noted that although all efforts are made to cover a total area during any assessment and therefore to identify all possible sites or features of cultural (archaeological and/or historical) heritage origin and significance, that there is always the possibility of something being missed. This will include low stone-packed or unmarked graves. This aspect should be kept in mind when development work commences and if any sites (including graves) are identified then an expert should be called in to investigate and recommend on the best way forward.

## **7. CONCLUSIONS AND RECOMMENDATIONS**

In conclusion it is possible to say that the Phase 1 HIA for the proposed Kroon's Gourmet Chickens Hatchery was completed successfully. The proponent is Kroon's Gourmet Chickens (Pty) Ltd. The proposed hatchery will be located on one of the following sites: Site 1 on Portion 107 of the Farm Hartebeestfontein 445 JQ; Site 2 on Portion 322 of Hartebeestfontein 445 JQ and Site 3 on Portion 33 and 168 of the Farm Hartebeestfontein 445 JQ.

Background research indicates that there are a number of cultural heritage (archaeological and historical) sites and features in the larger geographical area within which the study area falls. There are no known sites in the specific study areas.

Only 1 site of cultural heritage origin and significance was identified during the assessment of the 3 areas. This is a grave site located close to Site 3 (Portions 33 and 168 of the Farm Hartebeestfontein 445 JQ). The site is represented by between 30 and 50 graves, although the dense vegetation made determining the correct number difficult. Only 2 of the graves have formal headstones with inscriptions, with a 3rd one demarcated with cement with the headstone missing. The other graves are all stone-packed. The two graves with headstones indicated the deceased as (1) Joseph Ramogotjie, who was born in 1870 and who died in 1953 and (2) difficult to read, but the person seemed to have been born in 1922 and passed away in 1945. Both these graves are therefore older than 60 years of age and protected by the National Heritage Resources Act. It is assumed that the other (as yet unknown) graves also date to more than 60 years ago.

Graves always carry a High Cultural Heritage Significance rating and should preferably be protected and not impacted by any development. The best practice would be to steer clear of the grave site and fence it in to ensure its protection. The site should then be managed through a Heritage Management Plan. Although the site is located (based on the footprint of the Site 3 area) outside of direct impact, there could be some indirect impacts on it as a result of the proposed development. It is therefore recommended that the site be properly cleaned, the graves on it recorded in detail and a Graves Register be drafted and the site fenced-in properly. Finally, if the development cannot avoid the grave site then the option to exhume and relocate the graves does exist. This will entail a detailed and extensive social consultation to try and locate any possible descendants of the deceased and to obtain consent for the exhumations and relocations. Once this has been done various permits will have to be obtained before the work is conducted.

From a Cultural Heritage Point of View Sites 1 and 2 would be the most preferred for the proposed development, as there would be no impacts on any archaeological and/or historical sites, features or material. Site 3, with the Grave Site in close proximity, would be the least preferred. However, if the development is to take place on Site 3 then the graves can be exhumed and relocated after all due processes have been followed and the relevant permits have been obtained.

***Finally, it should be noted that although all efforts are made to locate, identify and record all possible cultural heritage sites and features (including archaeological remains) there is always a possibility that some might have been missed as a result of grass cover and other factors. The subterranean nature of these resources (including low stone-packed or unmarked graves) should also be taken into consideration. Should any previously unknown or invisible sites, features or material be uncovered during any development actions then an expert should be contacted to investigate and provide recommendations on the way forward.***

## 8. REFERENCES

General, Closer Views of Study Area Locations & Sites Found: Google Earth 2019.

Bergh, J.S. (red.). 1999. **Geskiedenisatlas van Suid-Afrika. Die vier noordelike provinsies**. Pretoria: J.L. van Schaik.

Huffman, T.N. 2007. Handbook to the Iron Age: **The Archaeology of Pre-Colonial Farming Societies in Southern Africa**. Scottsville: University of KwaZulu-Natal Press.

Knudson, S.J. 1978. **Culture in retrospect**. Chicago: Rand McNally College Publishing Company.

Lombard, M., L. Wadley, J. Deacon, S. Wurz, I. Parsons, M. Mohapi, J. Swart & P. Mitchell. 2012. **South African and Lesotho Stone Age Sequence Updated (I)**. South African Archaeological Bulletin 67 (195): 120–144, 2012.

Republic of South Africa. 1999. **National Heritage Resources Act** (No 25 of 1999). Pretoria: the Government Printer.

Republic of South Africa. 1998. **National Environmental Management Act** (no 107 of 1998). Pretoria: The Government Printer.

Chief Surveyor General Database ([www.csg.dla.gov.za](http://www.csg.dla.gov.za)): Documents (1) 10G6TK01 (2) 10G6V90 (3) 10G2EO01 (4) 10GLG701 & (5) 10173461

## **APPENDIX A: DEFINITION OF TERMS:**

**Site:** A large place with extensive structures and related cultural objects. It can also be a large assemblage of cultural artifacts, found on a single location.

**Structure:** A permanent building found in isolation or which forms a site in conjunction with other structures.

**Feature:** A coincidental find of movable cultural objects.

**Object:** Artifact (cultural object).

(Also see Knudson 1978: 20).

## **APPENDIX B: DEFINITION/ STATEMENT OF HERITAGE SIGNIFICANCE**

**Historic value:** Important in the community or pattern of history or has an association with the life or work of a person, group or organization of importance in history.

**Aesthetic value:** Important in exhibiting particular aesthetic characteristics valued by a community or cultural group.

**Scientific value:** Potential to yield information that will contribute to an understanding of natural or cultural history or is important in demonstrating a high degree of creative or technical achievement of a particular period

**Social value:** Have a strong or special association with a particular community or cultural group for social, cultural or spiritual reasons.

**Rarity:** Does it possess uncommon, rare or endangered aspects of natural or cultural heritage.

**Representivity:** Important in demonstrating the principal characteristics of a particular class of natural or cultural places or object or a range of landscapes or environments characteristic of its class or of human activities (including way of life, philosophy, custom, process, land-use, function, design or technique) in the environment of the nation, province region or locality.

## **APPENDIX C: SIGNIFICANCE AND FIELD RATING:**

### **Cultural significance:**

- Low: A cultural object being found out of context, not being part of a site or without any related feature/structure in its surroundings.
- Medium: Any site, structure or feature being regarded less important due to a number of factors, such as date and frequency. Also any important object found out of context.
- High: Any site, structure or feature regarded as important because of its age or uniqueness. Graves are always categorized as of a high importance. Also any important object found within a specific context.

### **Heritage significance:**

- Grade I: Heritage resources with exceptional qualities to the extent that they are of national significance
- Grade II: Heritage resources with qualities giving it provincial or regional importance although it may form part of the national estate
- Grade III: Other heritage resources of local importance and therefore worthy of conservation

### **Field ratings:**

- i. National Grade I significance: should be managed as part of the national estate
- ii. Provincial Grade II significance: should be managed as part of the provincial estate
- iii. Local Grade IIIA: should be included in the heritage register and not be mitigated (high significance)
- iv. Local Grade IIIB: should be included in the heritage register and may be mitigated (high/medium significance)
- v. General protection A (IV A): site should be mitigated before destruction (high/medium significance)
- vi. General protection B (IV B): site should be recorded before destruction (medium significance)
- vii. General protection C (IV C): phase 1 is seen as sufficient recording and it may be demolished (low significance)

## **APPENDIX D: PROTECTION OF HERITAGE RESOURCES:**

### **Formal protection:**

National heritage sites and Provincial heritage sites – Grade I and II

Protected areas - An area surrounding a heritage site

Provisional protection – For a maximum period of two years

Heritage registers – Listing Grades II and III

Heritage areas – Areas with more than one heritage site included

Heritage objects – e.g. Archaeological, palaeontological, meteorites, geological specimens, visual art, military, numismatic, books, etc.

### **General protection:**

Objects protected by the laws of foreign states

Structures – Older than 60 years

Archaeology, palaeontology and meteorites

Burial grounds and graves

Public monuments and memorials

## **APPENDIX E: HERITAGE IMPACT ASSESSMENT PHASES**

1. Pre-assessment or Scoping Phase – Establishment of the scope of the project and terms of reference.
2. Baseline Assessment – Establishment of a broad framework of the potential heritage of an area.
3. Phase I Impact Assessment – Identifying sites, assess their significance, make comments on the impact of the development and makes recommendations for mitigation or conservation.
4. Letter of recommendation for exemption – If there is no likelihood that any sites will be impacted.
5. Phase II Mitigation or Rescue – Planning for the protection of significant sites or sampling through excavation or collection (after receiving a permit) of sites that may be lost.
6. Phase III Management Plan – For rare cases where sites are so important that development cannot be allowed.

# **Appendix G5:**

Desktop Study for the Availability  
of Civil Engineering Services



**DESKTOP STUDY FOR THE AVAILABILITY  
OF CIVIL ENGINEERING SERVICES FOR  
VARIOUS PROPOSED PROPERTIES,  
MADIBENG**

Report Number :	2607/01
Revision Number :	1
Date :	APRIL 2019
Design Engineer :	J. JANSEN VAN RENSBURG
Project Leader :	J. JANSEN VAN RENSBURG
<b>APPROVED FOR RELEASE</b>	
 .....	<b>3 MAY 2019</b>
<b>SIGNATURE</b>	<b>DATE</b>

**PRETORIA**

2<sup>nd</sup> Floor Building 88A  
Tijger Vallei Office Park  
Silverlakes, 0081

PO Box 11211  
**SILVER LAKES**  
0054

☎ : (012) 809 0010  
Fax : (012) 809 1435  
Email : [johan@vipconsulting.co.za](mailto:johan@vipconsulting.co.za)



---

## TABLE OF CONTENTS

	PAGE
1. INTRODUCTION	1
1.1 TERMS OF REFERENCE	1
1.2 DEVELOPER	1
1.3 LOCALITY AND EXTENT	1
1.4 LOCAL AUTHORITY	1
2. PHYSICAL PROPERTIES	3
2.1 TOPOGRAPHY	3
2.2 CLIMATE	3
3. BULK INFRASTRUCTURE	3
3.1 BULK WATER SUPPLY	3
3.2 BULK SANITATION	4
3.3 ACCESS ROUTES	4
3.4 STORMWATER	4
3.5 ELECTRICITY SUPPLY	5
4. INTERNAL INFRASTRUCTURE	5
4.1 WATER SUPPLY	5
4.2 SANITATION	5
4.3 ROADS	5
4.4 STORMWATER	5
4.5 ELECTRICITY SUPPLY	5
5. SOLID WASTE MANAGEMENT	5
6. CONCLUSION	6

### FIGURES

FIGURE 1	: Locality Plan	2
----------	-----------------	---

### TABLES

TABLE 6.1	: Most favourable area	6
-----------	------------------------	---

## 1. INTRODUCTION

### 1.1 TERMS OF REFERENCE

VIP Consulting Engineers (Pty) Ltd has been appointed by Bokamoso Consulting as Consulting Civil Engineers for the preliminary planning of the Kroon chicken hatchery in the Ana Agricultural Holding area, Madibeng.

The appointment currently only includes:

- A Desktop study for the availability of Civil Engineering infrastructure for 3 areas (4 Properties),

### 1.2 DEVELOPER

The developer of the proposed Kroon chicken hatchery is Kroon's Gourmet Chickens (Pty) Ltd.

The information of the developer is as follows :

Physical address: 84, R513 Brits Road  
Wildebeesthoek  
**PRETORIA**  
0082

Postal address: PO Box 48657  
Hercules  
**PRETORIA**  
0030

Telephone number: (012) 504 2128

Fax number: (012) 361 5150

### 1.3 LOCALITY AND EXTENT

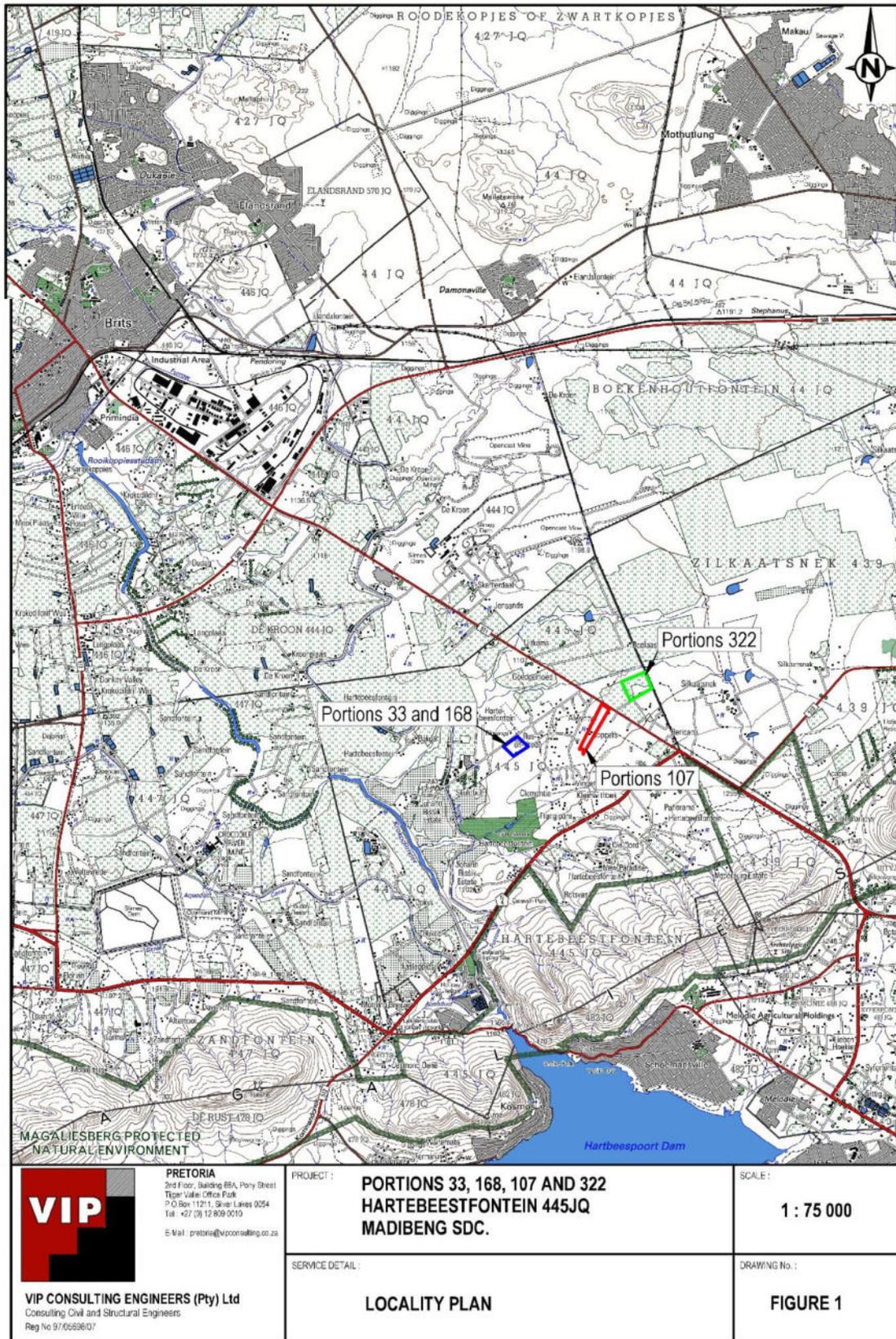
The proposed sites are situated approximately 10 km south east of Brits, in the Ana A.H. area.

The locality of the proposed sites is shown on **Figure 1**.

### 1.4 LOCAL AUTHORITY

The proposed development falls within the area of jurisdiction of the Madibeng Local Municipality.

The entire civil engineering infrastructure required for the proposed development will be installed to the required standards of the Madibeng Local Municipality.



## **2. PHYSICAL PROPERTIES**

### **2.1 TOPOGRAPHY**

Portions 33 and 168 of the the farm Hartebeestfontein 445 JQ is square in shape, with a gradual slope towards the Northwestern corner with spares short veld grass and some medium sized and large trees near the existing two houses in the eastern corner. It is currently used as a Smallholding. There is no watercourse running through these portions.

Portion 107 of the the farm Hartebeestfontein 445 JQ is rectangular in shape, with a gradual slope towards the Northeastern boundary with spares short veld grass and some medium sized trees in the northern portion and large trees near the existing two houses. It is currently used as a Smallholding. There is no watercourse running through this portion.

Portion 322 of the the farm Hartebeestfontein 445 JQ is square in shape, with a gradual slope towards the Northern boundary with spares short veld grass and some medium sized trees in the southern portion and large trees near the existing two houses. It is currently used as a Smallholding. There is no watercourse running through this portion, but the northern boundary is near an existing watercourse.

### **2.2 CLIMATE**

The Brits – Pretoria area generally has moderate temperatures with typically dry and cold Winters. Frost is common during the winter seasons. The mean annual precipitation is in the region of 550mm on average per year. Precipitation generally occurs in the form of conventional thunderstorms that deliver up to 90 percent of the annual rainfall during the warmer summer months (October to March of successive years). The rainfall usually occurs in the form of thunderstorms in summer.

## **3. BULK INFRASTRUCTURE**

### **3.1 BULK WATER SUPPLY**

The Madibeng Local Municipality and Rand water confirmed that there is currently no bulk water supply in this area although the Zilkaatsnek Reservoir (constructed in 2008) is approximately 4 Km Southeast of the portions.

The water supply to these sites will have to be by means of boreholes only as there are no municipal water supply sources available in the area. Depending on the yield of the boreholes, elevated storage tanks may also be required

As all of the portions have an existing dwelling unit, we assume that there are already boreholes on all of the portions.

The quality and yield of each individual portion may differ, but only testing would indicate which site have superior supply of water.

Water from the different boreholes would be tested and compared against the DWA drinking water standards and the SANS 241-1:2011 Drinking Water Guideline in order for Madibeng to approve.

### 3.2 BULK SANITATION

The Madibeng Local Municipality confirmed there is no bulk sewer infrastructure including Waste Water Treatment Works in the area.

We therefore propose that for all of the portions one of the following solutions would suffice. Depending on the discharge we would propose one of the following:

- A purification plant that consist of a package plant. The plant will be constructed on the lowest portion of each portion. Water from the purification plant can be used as irrigation water for the gardens, which will be pumped to the dedicated areas.
- A conservancy tank that will be emptied on a weekly basis. The tank will be constructed on the lowest portion of each portion.
- A septic tank with fin drains that can be emptied if required. This option may only be viable if the Effluent generated is equivalent to a dwelling unit. The tank will be constructed on the lowest portion of each portion.

In terms of the purification plant, conservancy tank and septic tank the most suitable area would be Portions 33 and 168 as well as Portion 107 as the lowest point is near the access roads for easy disposal of the effluent.

During the detail design phase, the best options would be indicated to the client.

### 3.3 ACCESS ROUTES

Access to Portions 33 and 168 will be from the existing surfaced provincial road(R511) via a 500m informal surfaced road and a 680m informal gravel road. Currently no upgrades are proposed on the existing roads, but this might change depending on the rezoning and traffic impact study.

Access to Portion 107 will be directly from the existing surfaced provincial road(R511). Currently no upgrades are proposed on the existing roads, but this might change depending on the rezoning and traffic impact study.

Access to Portion 322 will be from the existing surfaced provincial road(R511) via a 260m informal gravel road. Currently no upgrades are proposed on the existing roads, but this might change depending on the rezoning and traffic impact study.

### 3.4 STORMWATER

Portions 33 and 168 has no formal Stormwater infrastructure or natural watercourse on the site that might create erosion issues. There is a Stormwater pipe culvert at the access road onto the R511

Portion 107 has no formal Stormwater infrastructure or natural watercourse on the site that might create erosion issues. There is a Stormwater pipe culvert at the access road onto the R511

Portion 322 has no formal Stormwater infrastructure or natural watercourse on the site that might create erosion issues. There is however a natural watercourse that borders the northern boundary of the portion and a Floodline determination might be required. There is a Stormwater pipe culvert at the access road onto the R511.

### **3.5 ELECTRICITY SUPPLY**

As all of the portions have an existing dwelling unit, the electricity connection point is at the access road.

Eskom could not confirm whether or not they have additional capacity available for each individual site. We would require the Account or ID number of the owner in order for them to confirm the availability of additional capacity.

## **4. INTERNAL INFRASTRUCTURE**

### **4.1 WATER SUPPLY**

The Site Development Plan (SDP) will ultimately determine whether there is a difference in cost between the various portions under investigation, but in general a square property will yield the most cost effective water distribution network due to the distances between the discharge points. Therefore, the most suitable areas would be Portions 33 and 168 as well as Portion 322.

### **4.2 SANITATION**

The Site Development Plan (SDP) will ultimately determine whether there is a difference in cost between the various portions under investigation, but in general a square property will yield the most cost effective sewer distribution network due to the distances between the discharge points. Therefore, the most suitable areas would be Portions 33 and 168 as well as Portion 322.

### **4.3 ROADS**

The Site Development Plan (SDP) will ultimately determine whether there is a difference in cost between the various portions under investigation, but in general a square property will yield the most cost effective roads network due to the distances between the different facilities on site. Therefore, the most suitable areas would be Portions 33 and 168 as well as Portion 322.

### **4.4 STORMWATER**

The Site Development Plan (SDP) will ultimately determine whether there is a difference in cost between the various portions under investigation, but in general a square property will yield the most cost effective Stormwater network due to the distances between the different facilities on site. Therefore, the most suitable areas would be Portions 33 and 168 as well as Portion 322.

### **4.5 ELECTRICITY SUPPLY**

The Site Development Plan (SDP) will ultimately determine whether there is a difference in cost between the various portions under investigation, but in general a square property will yield the most cost effective electricity distribution network due to the distances between the different facilities on site. Therefore, the most suitable areas would be Portions 33 and 168 as well as Portion 322.

## **5. SOLID WASTE MANAGEMENT**

The solid waste generated from the convenience store and other on-site amenities will be accumulated and stored on site in the prescribed bins provided by a Contracted Private Waste Removal Company. These bins will be collected at regular intervals and or on request and disposed

of at registered landfill facility with the required capacity. Chemicals and hazardous waste will be catered for according to the prescribed requirements in legislation.

**6. CONCLUSION**

The conclusion can be best illustrated by table 6.1, where green indicates favourable, yellow indicates average and red indicates least favourable.

**TABLE 6.1** : Most favourable area

Description of Service	Portions 33 and 168	Portion 107	Portion 322	Comments
Bulk Water (3.1)	Yellow	Yellow	Yellow	No Municipal Bulk – only boreholes with tanks
Bulk Sewer (3.2)	Red	Red	Red	No Municipal Bulk
Plant/Tank position	Yellow	Green	Red	Ptn 322 Access road not near Plant/Tank
Bulk Roads (3.3)	Red	Green	Yellow	Ptn's 33 & 168 furthest away from R511
Bulk Stormwater (3.4)	Green	Green	Yellow	Ptn 322 may require a floodline certification
Bulk Electricity (3.5)	Yellow	Yellow	Yellow	Capacity for additional Electricity is uncertain
Internal Water (4.1)	Green	Yellow	Green	Ptn 107 due to property shape may be expensive
Internal Sewer (4.2)	Green	Yellow	Green	Ptn 107 due to property shape may be expensive
Internal Roads (4.3)	Green	Yellow	Green	Ptn 107 due to property shape may be expensive
Internal Stormwater (4.4)	Green	Yellow	Green	Ptn 107 due to property shape may be expensive
Internal Electricity (4.5)	Green	Yellow	Green	Ptn 107 due to property shape may be expensive
Solid waste management (5)	Yellow	Yellow	Yellow	

Although the internal layout of the facilities may have an influence on the cost effectiveness of the services to be installed, in general Portion 107 may be the least favorable due to the property shape.

We trust that the Desktop Study will meet your expectation. We still remain open for any proposals or feedback regarding the Desktop Study.



**J JANSEN VAN RENSBURG Pr Tech Eng  
 DIRECTOR**