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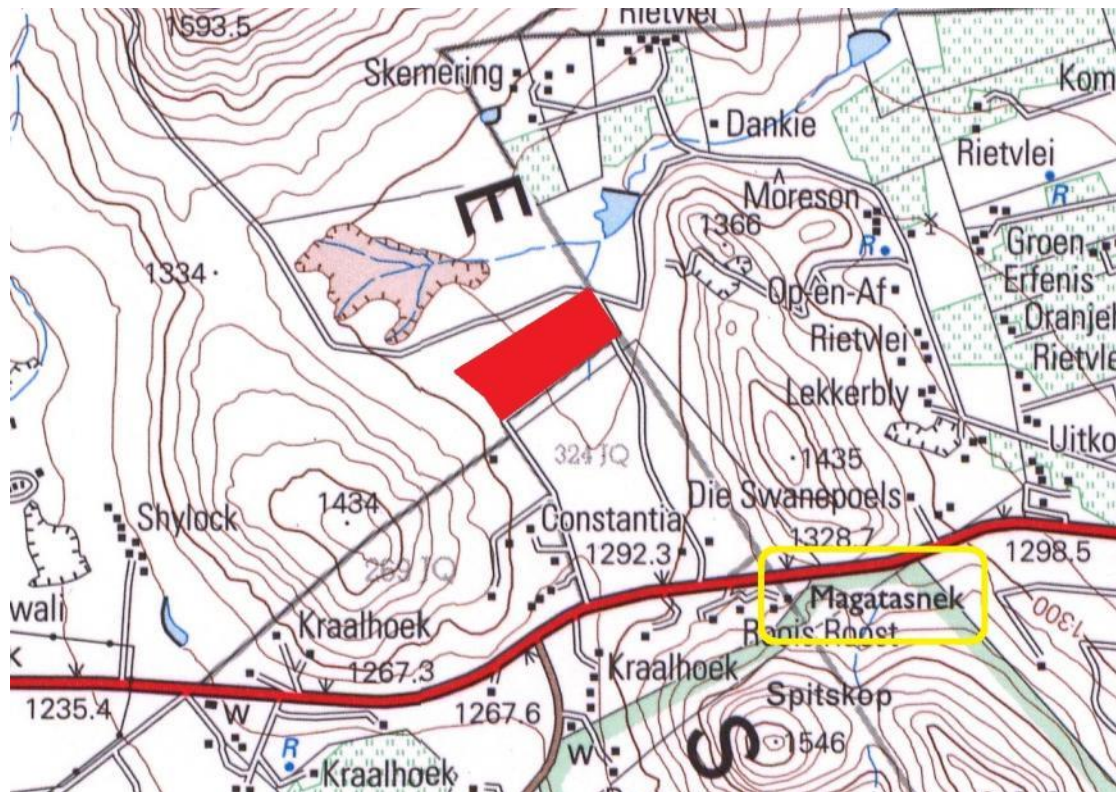
**1<sup>st</sup> Phase Heritage Impact Assessment**

**for the client,**

**GLENCORE ALLOYS SOUTH AFRICA – RIETVLEI SILICA MINE  
(PROJECT NUMBER: GLE-RIE-17-06-02)**

**on**

**Portion 103 of the farm Shylock 256**



**December 2018.**

**Report prepared by: -**

**SIDNEY MILLER.**

*B.Sc (Engineering) Civil, M. (Architecture) Conservation. Asapa member no 087.*

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**Fig. 01.** Above image shows the location of the farm “Rietvalley” on which most of Glencore Rietvlei Silica Mine’s activities are contained. From this it appears as if the old wagon road to Zeerust passed close to the site under investigation (White square) .(Jeppe’s Map of the Transvaal (sheet 5) of 1899.)

**1. Contact Details.**

**1.1. Developers.**

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 E-mail. Annah.Ngope@glencore.co.za.

**1.2. Consultants.**

a. Environment. <b>Shangoni Management Services (Pty.) Ltd.</b> Contact person. Marvin Grimett. Telephone. 012 807 7036. Fax. 012 807 1014. E-mail. marvin@shangoni.co.za.	b. Heritage. <b>Sidney Miller.</b> Contact person Sidney Miller. Telephone. 082 939 6536. E-mail sidneymears@gmail.com.
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**1.3. Type of Development.**

Mining.

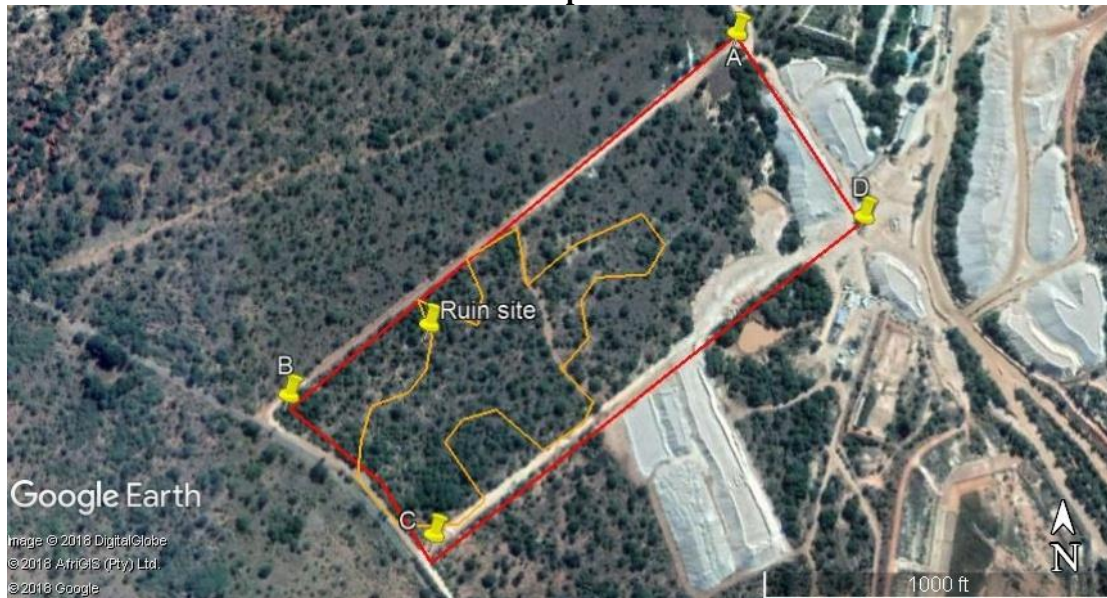
**1.4. Zoning of Site.**

Mining.

**1.5 Description of the site.**

Portion of the farm Rietvly 271 JQ.

**2. G.P.S. Coordinates of the beacons o the impact area.**



Description of beacon	Degrees south	Degrees east
Beacon A	25°37'32.46"	27° 7'51.44"
Beacon B	25°37'43.03"	27° 7'36.98"
Beacon C	25°37'47.05"	27° 7'41.57"
Beacon D	25°37'37.90"	27° 7'55.51"
Ruin site	25°37'41.02"S	27° 7'41.41"E

Fig. 02. Position of the site marked with yellow markers. (Google Earth image 2018.)

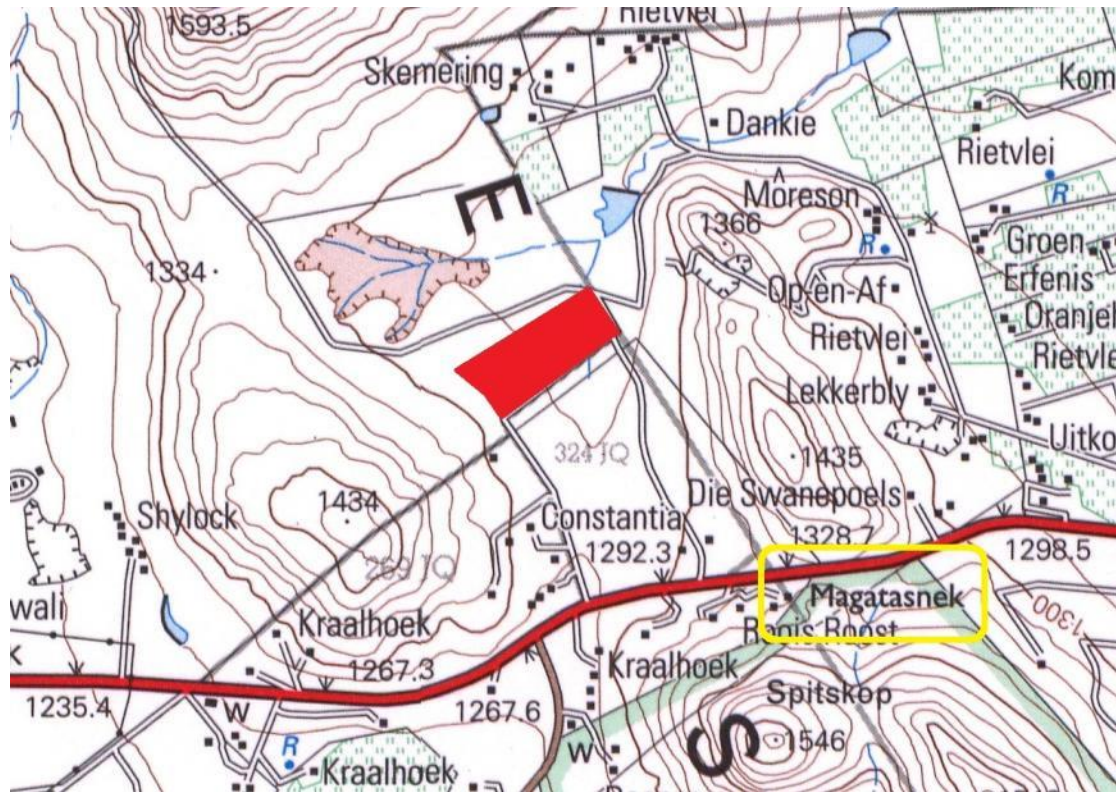


Fig. 03. Above is the position of the property (red rectangular) under investigation. (1 : 50 000 map 2527 CA Rustenburg.)

### 3. Executive Summary.

#### 3.1. Intent of Glencore Alloys.<sup>1</sup>

It is the intent of Glencore Alloys to clear approximately 12ha of vegetation to serve as a stockpile area.

#### 3.2 The project description.<sup>2</sup>

Glencore Alloys in their Rietvlei Silica Mine produces high-grade silica for the use as flux in many of the smelters of the surrounding platinum and chrome mines. As a secondary function sand is sold for normal construction purposes.

The proposed activity can be described as the use of this area as a stockpile premises. No mining is proposed.

#### 3.3. Historical milieu.<sup>3</sup>

Although there are a number of well known Stone Age sites in the area, such as the cradle of mankind only some 40 kilometres to the southeast, *there appear to be no Stone Age industry present on the site.*

Similarly there are indications of Early Iron Age remains recorded at Broederstroom near the Hartebeestpoort dam, and an intense habitation of Later Iron Age Peoples between Zeerust and Cullinan on the rim of the Bushveld Igneous Complex, but again there is no indication *of Iron Age impact on the site.*

<sup>1</sup> Information supplied by Shangoni Management Services, (Pty.) Ltd.

<sup>2</sup> Information supplied by Shangoni Management Services, (Pty.) Ltd.

<sup>3</sup> See section 8 of this report for full description of the archaeological and historical background of the general area..

Lastly, the pioneers that entered the Transvaal post 1836, and their continuous interaction with the local inhabitants, mainly the people of *chief's Mogale and Magata*<sup>4</sup>, are well documented, especially the occupation of the Magaliesberg range by the followers of Commandant Andries Hendrik Potgieter between 1840 and 1845, well described by Rex (1975), in his history of the Zeerust Hervormde Kerk. *There is no footprint of historical occupation of local Africans or European pioneer settlement on this site.*

### 3.4. Geological and vegetative milieu.<sup>5</sup>

The Magaliesberg, on which *Portion 103 of the farm Shylock 256* is located, are the result of the uplifting of the ancient Transvaal sediments through the event of the massive magma-flow that formed the Bushveld Igneous Complex some 800 million years ago. The erosion of these uplifted portions gave rise to the sedimentary formations containing the silica on the property, while to the north of the Magaliesberg mainly black turf soils are encountered. This erosion of the sedimentary formations created sandy loam soils, and with the prevailing topography and precipitation then gave rise to the flora generally known as Sourish Mixed Bushveld. *The geological and vegetative impact of the proposed stockpiling activity is very low.*

### 3.5. Summary of findings.<sup>6</sup>

It is clear from both the desktop study as well as the field-work that *Portion 103 of the farm Shylock 256* was not used for any historical or pre-historical purposes except for the small labourer's dwelling encountered that is not protected by the heritage Act of 1999.

## 4. Recommendation.

4.1. It is recommended that Glencore Alloys may proceed with the development of this site as a stockpile area.

4. 2. It is recommended that a local heritage consultant monitors the first clearance of vegetation of the site so as to evaluate possible sub-surface heritage remains.



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<sup>4</sup> N.B. The term Mogale or Ma-Magalie is the name of a senior chief that lived to the east of this area before the arrival of the pioneers in the 1840's. The spelling has been corrupted to Mohali, Mohale, Moghalies and Magalie in European literature. The history of the interaction between Magata and Paul Kruger is well documented

<sup>5</sup> See section 7 of this report.

<sup>6</sup> For full Summary and Recommendations see sections 12 and 13 of this report.

#### 4. Definitions.

The broad generic term *Cultural Heritage Resources* refers to any physical and spiritual property associated with past and present human use or occupation of the environment, cultural activities and history. The term includes sites, structures, places, natural features and material of paleontological, archaeological, historical, aesthetic, scientific, architectural, religious, symbolic or traditional importance to specific individuals or groups, traditional systems of cultural practice, belief or social interaction.

#### 5. Protected Sites in Terms of the National Heritage Act, Act. no. 25 of 1999.

The following are the most important sites and objects protected by the National Heritage Act:

- a. Structures or parts of structures older than 60 years
- b. Archaeological sites and objects
- c. Paleontological sites
- d. Meteorites
- e. Ship wrecks
- f. Burial grounds
- g. Graves of victims of conflict
- h. Public monuments and memorials
- i. Structures, places and objects protected through the publication of notices in the Gazette and Provincial Gazette
- j. Any other places or object which are considered to be of interest or of historical or cultural significance
- k. Geological sites of scientific or cultural importance
- l. Sites of significance relating to the history of slavery in South Africa
- m. Objects to which oral traditions are attached
- n. Sites of cultural significance or other value to a community or pattern of South African history

#### 6. Methodology.

**6.1.** The site was visited on the 11<sup>th</sup> of December 2018. First the demarcation of the site was pointed out by site manager Richard Vermaak. Then in company of Dr Pistorius (professional archaeologist) and junior environmental officer Mpho Gobuamang of Glencore Alloys, the site was inspected.

**6.2.** The site was traversed in the manner indicated by the GPS field track shown in *Fig. 04*.

**6.3.** Finds were recorded by GPS readings and photography.

**6.4.** The above information was recorded and collated in *section 9* of this report.

**6.5.** Background information concerning the geology and vegetation of the region was collected from reliable resources and is presented in *section 7* of this report.

**6.6.** Background information concerning the archaeology and historical milieu of the region was collected from reliable resources and is presented in *section 8* of this report.

**6.7.** In *sections 10 and 11* field ratings (SAHRA minimum standards May 2007) and statements of significance (SAHRA minimum standards May 2007) were attributed to the *finds as necessitated by individual situation*.

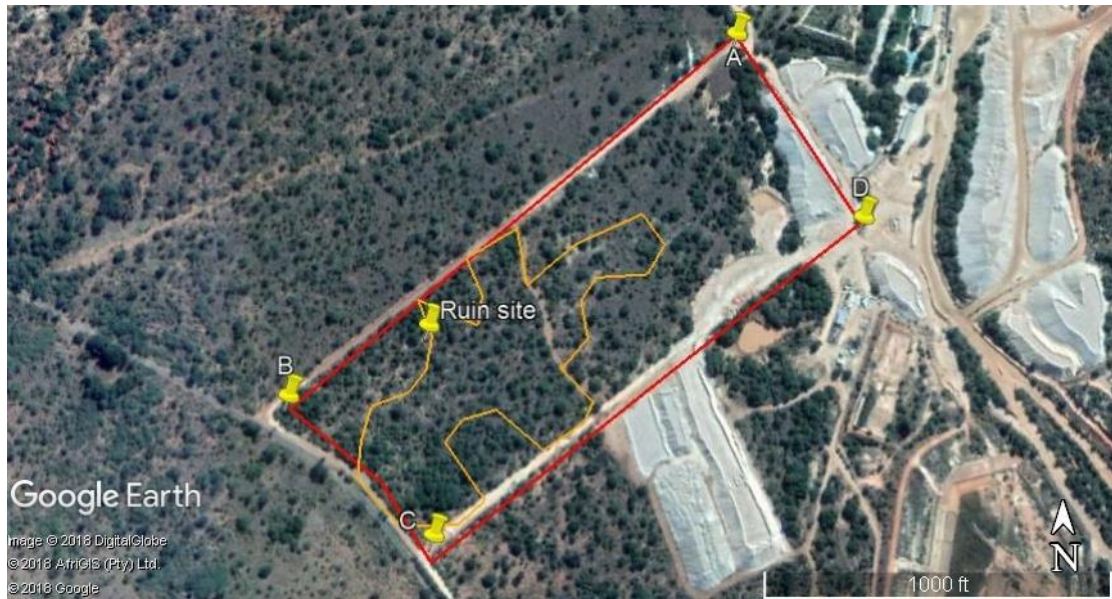
**6.8.** *Section 12* contains a summary of the research results with a recommendation in *section 13*.

**6.9.** The collective gist of the information collated in the report is summarised in the executive summary in *section 3*.

**6.10.** *Appendix 1* contains a declaration of independence by the author.

**6.11.** *Appendix 2* reflects the same information as contained in sections 10 and 11 of the report but evaluated against stipulations of the larger Environmental

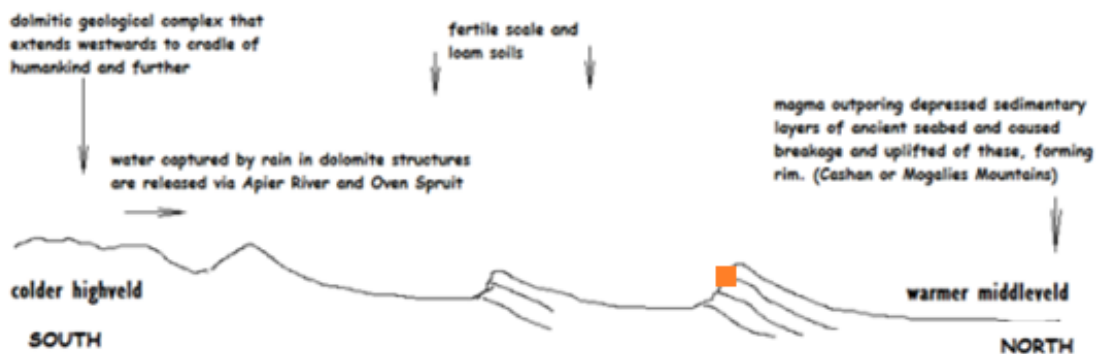
Impact Assessment in terms of risk before and after mitigation regarding Shangoni standards.



**Fig. 04.** Above is an image showing the route (marked in orange) undertaken during the on-foot survey of Portion 103 of the farm shylock 256. For the sites and material identified see individual site recordings in Section 9. (Google Earth image 2018.)

## 7. Environment.

### 7.1. The Geology of the Region.<sup>7</sup>



**Fig. 05.** The “up-liftments” were created by a mass magma outpouring that formed the “springbokvlakte”. The silica mine (orange square) is using sedimentary material from the old Transvaal Supergroup Complex. (Drawing, S.M. Miller, 2018.)

The site is located only a few kilometres to the northwest of Rustenburg in the Magaliesberg and is located on the southern edge of the Bushveld igneous complex, with a large dolomite formation some thirty kilometres to its south. The mine lies on the northern of the three ridges that were formed by uplifting owing to the massive magma outpouring to the north over the old Transvaal super group of sedimentary formations.<sup>8</sup> This uplifting brought to the surface the complex geological formations that was formed in the basin of an ancient ocean floor

<sup>7</sup> See McCarthy & Rubidge, 2005, pages 122 to 125, 128 and 140 for full description.

<sup>8</sup> See figure 5.

some two billion years ago. The Bushveld igneous complex's impact can be followed from Thabazimbi to Rustenburg to Tshwane and onwards to Steelpoort and Burgersfort where a wide variety of minerals such as chrome and platinum are mined.

## 7.2. The Vegetation of the Region.



**Fig. 06.** Portion 103 of the farm Shylock 256 is located on the intersection of three different veldt type zones as illustrated above. Owing to the small size of the property it is classed as being situated in veldt zone 19. (Acocks, 1988.)<sup>9</sup>

According to Acocks one may encounter at least three of his Veldt Types (types 13, 19 and 20) on and around the site under investigation.

On the slope of the Magaliesberg one encounters what he refers to as type 19, Sourish Mixed Bushveld. This is apparently more clearly defined than the Mixed Bushveld. It occupies the gentle slopes of mountains between the sour types and the mixed types. It is rather more open savannah with *Acacia caffra* the dominant tree species. Other trees and shrubs that occur is the *Acacias karroo, robusta, tortilus and gerrardii*, *Rhus gueinzii*, *Grewia spp*, *Peltophorum africanum*, *Pappea capensis*, *Dichrostachys cinerea*, *Dombeya rotundifolia*, *Combretum zeyheri*, *Sclerocarya birrea*, *Ziziphus mucronata* and *Burkea africana*. Grass species include *Cymbopogon*, *Themeda*, *Elionurus*, *Heteropogon*, *Aristida*, *Eragrostis*, *Brachiaria*, *Anthephora*, *aristida* and *Panicum*.

All of the above is providential for grazing for game and usable for humans in the form of fruit and timber. Inserted in this, from the west and north is Acocks veldt type 13, and specifically type 13a, the Norite Black Turfveld. This turf derivative from the lavas of the Bushveld Igneous Complex and is rather rich in minerals and has a clay structure that supports a much larger vegetative family than the previous category. As the Veldt Type 13a does not directly influence the site under investigation its plant types are not included. It is mentioned because it had supported a large game population that was a source for the human settlers to the north and west of the property under investigation.

The next veldt type is Type 20, Acocks's Sour Bushveld. He mentions that it occurs in patches on the slopes, on termitaria, and in sheltered kloofs (especially of the Magaliesberg), and in areas of near-forest development. For the full complement of tree and grass species refer to page 56 in Acocks. Ironically, as Acocks points out, in this group the grasses,

<sup>9</sup> The author is aware of the updated version of Acocks's work by Mucina & Rutherford, 2010, but for the purposes of this publication Acocks version is preferred by the present author.



although floristically rich, are particularly useless for grazing purposes. Similarly the trees, although varied and prolific, are not specifically useful to humans.

## 8. Archaeological and Historical Background.

### 8.1. Stone Age.<sup>10</sup>

Although there is no well known type site located on or around Rustenburg there is general evidence of the use of the area during the formative years of humankind in the form of scatterings of stone tools. The environment has not changed markedly during the last three million years and therefore the limestone formations in the Cradle of Humankind captured evidence of early hominine activity, similar to the sites. In the suburb of Wonder Boom South, in Tshwane next to the large water reservoir adjacent to Voortrekkers Road the young Edwin Hanish discovered a large deposit of Early Stone Age Tools. To archaeologists this demonstrated the prolonged use of the region.

Regarding the Later Stone Age there does not appear to be much evidence of the hunter gatherers utilising the area, except at caves at the fountains and at Wonderboom. To the south-east, around Hekpoort and Skeerpoort there occur many petroglyphs that does shows the warmer areas around the Crocodile (Oorie) River were utilised by Later Stone Age people during the last 10 000 years. *Regarding Portion 103 of the farm Shylock 256, it expected that no Stone Age remains may be encountered.*

### 8.2. Iron Age.<sup>11</sup>

#### 8.2.1. Early Iron Age remains.

The only Early Iron Age remains known in the greater region is the Broederstroom village site, at the Hartebeespoortdam and the Melville Koppies smelting site in Johannesburg excavated by Professor Mason from the Department of Archaeology of WITS. *As these sites are extremely rare in this region, it is rather unlikely that material from the same period will be found on Portion 103 of the farm Shylock 256.*

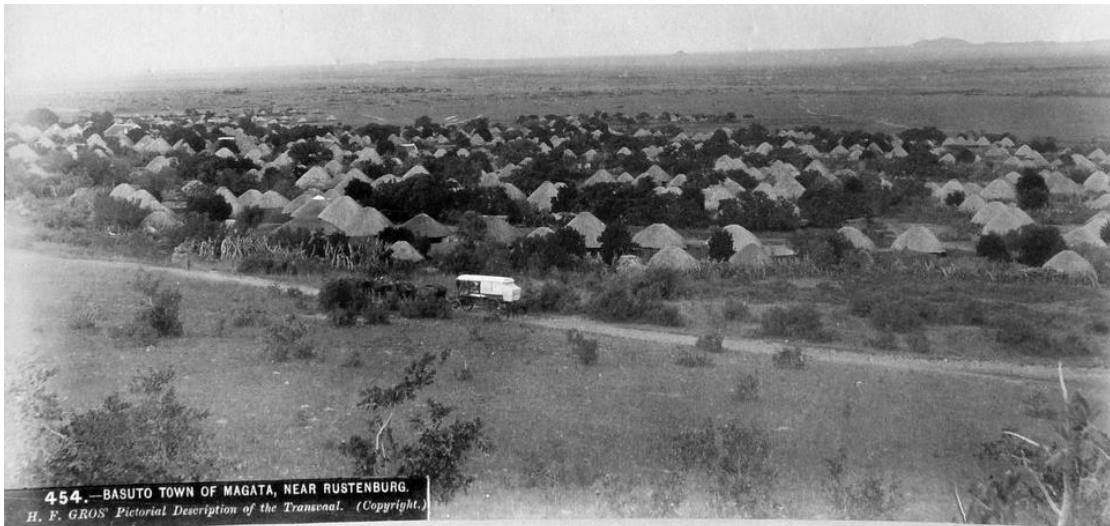
#### 8.2.2. Later Iron Age remains.

From the fifteenth century onwards we find a diverse population on the Magaliesberg and on the southern rim of the Bushveld Igneous Complex. Towards the west up to Zeerust one finds the ancestors of the Sotho/Tswana language groups and to the east past Tshwane the ancestors of Nguni/ Ndebele Speakers. From the eighteenth century onwards stone walled villages arose and cultural materials developed that distinguished the language groups one from another. Owing to population pressure in the human landscape we also then find shared landscapes that may have been caused by either civil or belligerent interaction. In the second and third decades of the nineteenth century the appearance of renegades like Mzilikazi in the landscape brings an abrupt halt to normal African life in the region.<sup>12</sup> Many hundreds of remains from this period can be seen in non urbanised areas between Rustenburg and Middleburg showing the intense occupation of the southern rim of the Bushveld Igneous Complex. Where Rustenburg is located today is no exception. On amongst others, the farms Roodewal (to the south) and Celonskraal (to the west), dating back three centuries, the remains of stone-walled villages of impressive dimensions can be observed. Even with the arrival of the white pioneers in 1840 powerful chiefs such as Mogale was in residence just to the east of Rustenburg. Similarly the well known chief Magata, a contemporary and neighbour of Paul was living just to the north of Rustenburg in 1885. *Regarding Portion 103 of the farm Shylock 256 it expected that no Later Iron Age remains may be found.*

<sup>10</sup> See Mason, R. 1969. *Prehistory of the Transvaal.*

<sup>11</sup> See Huffman, T. 2007. *Handbook to the Iron Age. The Archaeology of Pre- Colonial Farming Societies in Southern Africa.*

<sup>12</sup> See Wallis, J. P. R. (Editor.) 1976. *The Matabele Journals of Robert Moffat. 1829-1860. Vol. I.*



454.—BASUTO TOWN OF MAGATA, NEAR RUSTENBURG.  
H. F. GROS' Pictorial Description of the Transvaal. (Copyright.)

**Fig. 07.** Magata's Capital as documented circa 1885 by Gros. This site is located only a few kilometres to the north of the site under investigation. (Photo 454 of H.F. Gros's 1885 Pictorial Description of the Transvaal .)



**Fig. 08.** Jeppe's Map of the Transvaal captures a lot of information regarding the Iron Age occupation of the region. Celonskraal 646 and Roodewal 752 represent but two of Later Iron Age sites older than three hundred years in the area. Zephanjes 905, Rankanye 333, Kookfontein 337 (Magata Stad) and Magata.s Hoek 282 represent contemporary occupation with White Pioneers during the latter part of the nineteenth century.

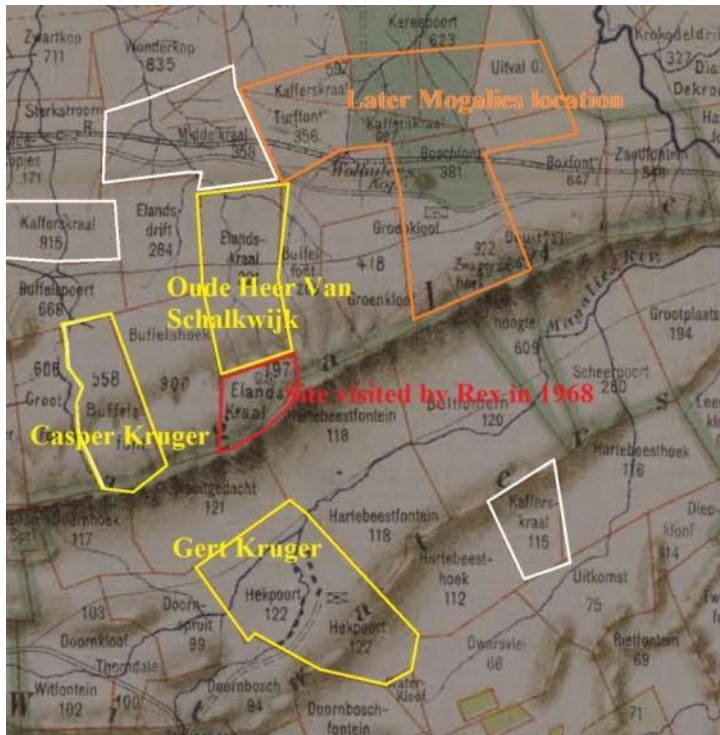
Buffelshoek 10 was the farm of Commandant General A.H Potgieter in 1844-1855 and Boekenhoutfontein 336 was the farm of President Paul Kuger.

(Sheet 4 of Jeppe's 1899 Map of The Transvaal.)

### 8.3. Historical Period.<sup>13</sup>

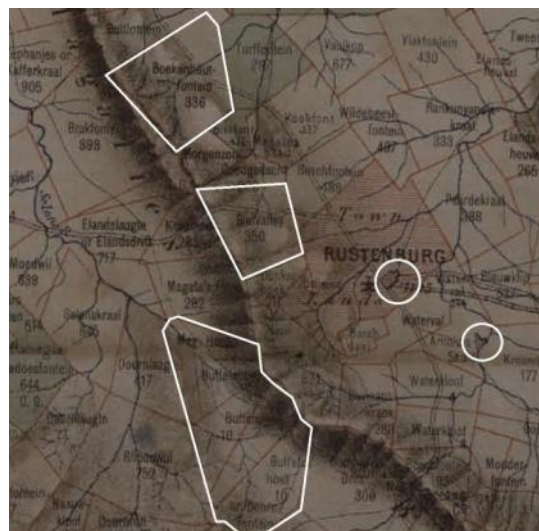
#### 8.3.1. Moghaliesbergdorp. (Not to be confused with the *modern Magaliesberg* situated 60 kilometres southeast of Rustenburg near the Cradle of Humankind)

The possible existence of the “*third town in the Transvaal*” is based more on conjecture than fact. It is extensively discussed by *Rex (1979: 91)* of which we reproduce a summary here. As this is the only source that the present author consulted we have to rely on Rex’s extremely well researched and respected volume on the subject of the founding history of the Dutch Reformed Church in Zeerust, Northwest Province.



**Figure 09.** Left are the locations of Hekpoort (122), Buffelsfontein(588) and Elandsdraai(221) on *Jeppe’s 1899 Map of the Transvaal, sheet 5*. These sites are all mentioned by *Rex (1971)* in connection with *Moghaliesberg Dorp*. *Rex* describes a site on Elandsdraai (197) that he was taken to by *Mr. Van Schalkwijk* in 1968 where he could identify the remains of an encampment, which he believes to be the elusive *Moghaliesbergdorp*. (*Rex 1971: 94.*) Note that on the 1979 map 2527DC HEKPOORT (1979) Groenkloof 464JQ is flanked to the east by *Mogaleslokasie (Bopeng.)* The author has also identified Voortrekker (?) cemeteries in the region (2013) that are indicated on 1:50000 maps of the area.

**Figure 10.** Right is the Rustenburg Town lands in *Jeppe’s 1899 Map of the Transvaal, sheet 4*. Buffelshoek no10 was the *property of Com. Gen. A.H. Potgieter* and *Rietvalley* belonged to *P.J. Riekert*. These are also both potential sites of the illusive *Moghaliesberg Dorp* mentioned by *Rex (1971)* where a large number of *Potgieter’s* followers congregated circa 1844. Here can also be seen the location of the farm *Boekenhoutfontein (336)*, of *Paul Kruger* and *Magates Stad* of which little is known.



As in much of the early history of the Transvaal, the volatile Commandant General A. H. Potgieter and his restless followers plays an important role in this narration. As a point of departure *Rex* tells us that after the expulsion of Mzilikazi and his appropriation of the land

<sup>13</sup>See *Potgieter, F. J. 1959. Die Vestiging van die Blanke in die Transvaal. (1837 – 1886.)*

between Marico and the Cashan Mountain area was soon occupied after 1840 by a number of families that was not content to stay in the Potchefstroom district. He, **Rex**, (1979: 90), firmly places Commandant General A. H. Potgieter on the farm **Buffelshoek**, south of the Cashan Mountain then in 1842, adjacent to the modern Olifantsnek-Dam. Rex describes a large cemetery adjacent to the ruin of the Potgieter dwelling.

Apparently to his (north)-west were located the families Kruger, Eloff, and Robbertse, and to his east the families of Van Rooyen, Basson, Kruger, Van Staden, Grobler, Kloppers, Erasmus, and Bronkhorst. To the north of the mountain Rex places the families Grobler, Riekert, Van Der Westhuizen, Schutte, Malan, Harmse, Barnard, Kruger, Van Wyk, Engelbrecht, Van Staden, Schoeman, Pretorius, and Ras.<sup>14</sup>

Although **Rex** points out the viability of these regions for crop production and animal husbandry, we have to assume that this was not the actual intent of Potgieter and these followers to permanently locate here, as we know that he was continually still exploring the desire to link up with the two Portuguese ports on the East Coast. However, as normal survival and exploitation by these settlers of the period dictated, we know that hunting possibly were still the foundation for their lingering in this region.

To illustrate this reality, **Rex** relates a description of **Henry Methuen** regarding the countenance of these *settlers* in the Cashan Mountain area, and through Methuen we have a firm reference to the existence of **Moghaliesberg Dorp**. Methuen writes the following description of an observation in October 1844: -

*...the emigrant Boers make constant shooting excursions up the Mariqua, for elephant and hippopotamus ivory, which accounts for the latter animals being so scarce and wild... ...we encountered a party of emigrant Boers, with their wagons, they were returning to their town Mahaliesberg in the Cashan Mountains, and during the excursion they shot seventy one elephants, of which they killed nineteen shortly before our arrival...*

Methuen carries on to describe the physical prowess of these men, one of whom being a son of the Commandant General. He also implies that a number of these have in fact visited Delagoa Bay (**Maputo**) where they apparently procured ammunition of superior quality. Whether this was true or not is not relevant, but it again underlines the general mindset of the Boers regarding the East Coast ports. However the case may be the largest portion of these *settlers* had relocated from the area in 1845 towards the east where Andries Ohrigstad were to form the new axis in the continuous drama surrounding the settler story of white South African pioneers.

A second possible site for the illusive Moghaliesberg Dorp (**Rex 1979: 94**) is apparently **Buffelshoek no 10**, the property of Com. Gen. Potgieter, or the adjacent farm **Commissiedrift**. This option is supported owing to a **large cemetery** that is located adjacent to the: -

*...eertydse opstal van komdt. Potgieter...*<sup>15</sup>

Whether this was observed by Rex is not clear, but he emphatically states that there was buried an uncommonly large number of people of the region at that period, including **one of the deceased wives** of Potgieter. A second possible site for the illusive **Moghaliesberg** was visited by Rex and was accompanied by one **Oden Heer Van Schalkwyk**, to an elevated portion of the farm Elandskraal 321. There he was shown the apparent gathering place of a

<sup>14</sup> *Rex does not associate these names with specific farms such as was done by Gronum, but we know for instance that the Erasmus and Bronkhorst families from 1842 onwards settled on Wonderboom and other farms surrounding the modern day Tshwane metro.*

<sup>15</sup> *...the old dwelling of Comdt. Potgieter...*

large contingent of *Voortrekkers* as a place of *refuge*. Rex remarks that even after 130 years (*as an untrained archaeologist*), he could identify human occupation and activities associated with the early pioneers. He continues his narrative by stating that the evidence observed by him does not constitute *a town*, but only appeared as *a congregation site of a community*.<sup>16</sup>

But he gives us direct instructions to investigate the *site on Elandskraal 197*, not very far from the dwellings of *Casper Kruger*, on *Buffelsfontein*, and of *Gert Kruger* on *Hekpoort*. We know that Rex was an excellent historian and well versed in the interpretation of archival material, and perhaps one must honor his *lay-person* observations.

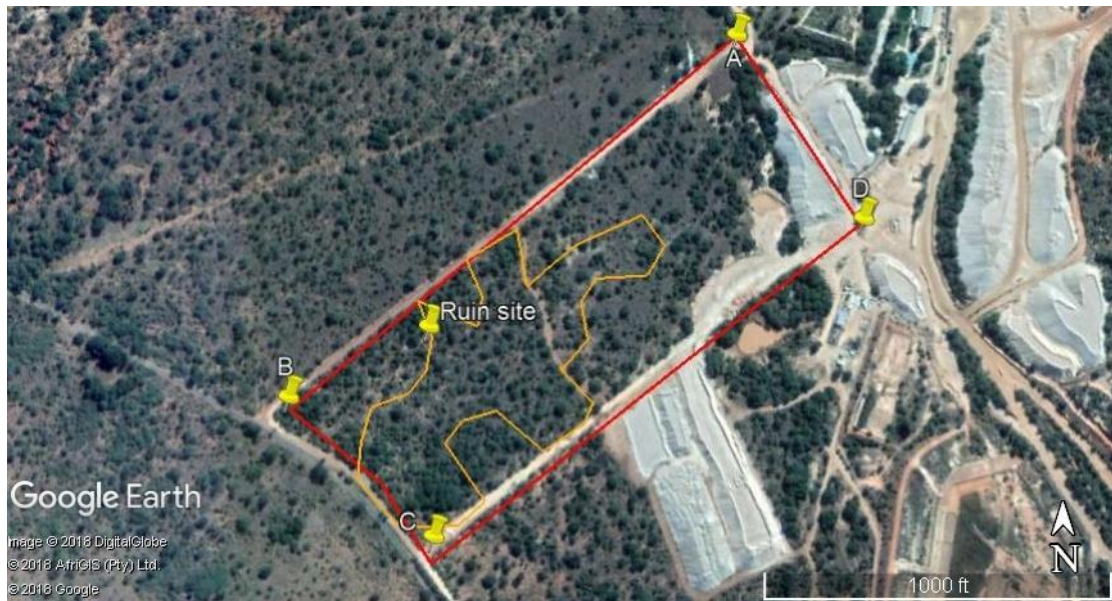
It is known that a large portion of the Magaliesberg population that were recorded by Rex, evacuated the region in 1845 with Commandant General A.H. Potgieter, and some of the names of these re-surface in the disasters of Andries Ohrigstad, Lydenburg as well as in the eventual founding of Schoemansdal. On the other hand, many of the family names that Rex associated as occupants of land in the Magaliesberg region did not clearly vanish from the local or archival horizon. The Kruger -, Eloff -, Erasmus - and Bronkhorst factions appears to have happily occupied the Cashan region while letting Potgieter doing the legwork for them until the establishment of Schoemansdal where he also passed away not long after in 1852 at the age of sixty.

The importance in *Moghaliesberg Dorp* though lies in the fact that it again illustrates that before any town could be founded after official decree the eventual inhabitants had to be encamped in the vicinity of the intended town both for its official survey into plots of land and the establishment of elementary services such as roads and a water supply. *Regarding Portion 103 of the farm Shylock 256 it expected that no Historic cultural remains may be found.*

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<sup>16</sup> *What he means by this is not clear.*

**9. The Documentation of Data of Portion 103 of the farm Shylock 256.**



Description of site	Degrees south	Degrees east
<b>Flag - Ruin site: Late 20<sup>th</sup> century labourers' quarter.</b>	<b>25°37'41.02"S</b>	<b>27° 7'41.41"E</b>

*Fig. 11.* Above is an image showing the route (marked in orange) undertaken during the on-foot survey of Portion 103 of the farm Shylock 256. The yellow marker, “Ruin site”, indicate the location where modern cultural material was encountered. (Google Earth image 2018.)

**9.1 Environment.**



*Fig. 12.* The typical vegetation of the site looking north-east from the middle of the site towards the existing stock-pile area (S.M. Miller, December 2018.)



**Figs. 13 and 14.** The typical grasses of the site and a calf possibly killed the night before the site inspection. (S.M. Miller, December 2018.)

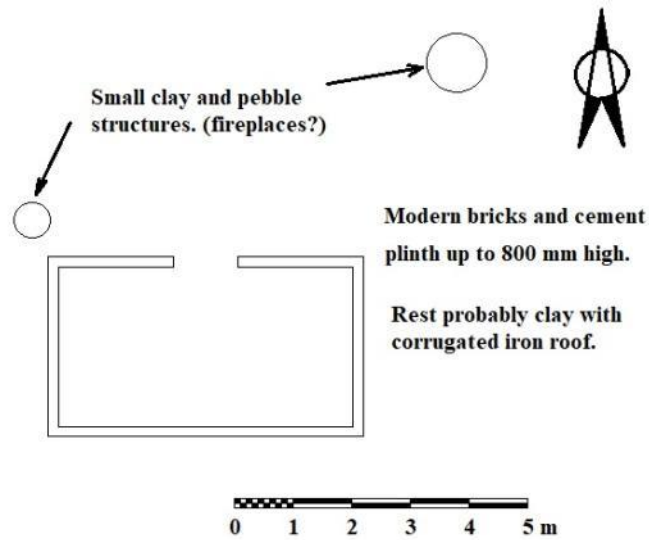
## 9.2 Cultural remains.



**Fig. 15.** Above can be seen the collapsed walls of a modern labourers' type dwelling. Factory made bricks and modern cement mortar and other cultural remains date this structure within the last thirty years. (S.M. Miller, December 2018.)



**Figs. 16 and 17.** Above can be seen the factory made bricks of the dwelling and evidence that the wall was 110 mm thick built with modern cement mortar. (S.M. Miller, December 2018.)



**Fig. 18.** Above is an estimated rendering of the footprint of the structure. (S.M. Miller, December 2018.)



**Figs. 19 and 20.** Left. This piece of corrugated iron cut at a angle suggests that the structure was covered by a hipped roof. Right. Barbed wire tied in a loop suggest that the roof structure consisted of wooden poles tied together with wire. (S.M. Miller, December 2018.)



**Figs. 21 and 22.** Left. Modern glass wine bottle Right. Modern top of an aluminium cold drink tin. The fact that the can was opened by a removable key suggests a date between 1970 and 1990. (S.M. Miller, March 2018.)





**Fig. 23.** Above is a twenty litre metal drum with improvised handle that probably served as a water container. (S.M. Miller, December 2018.)



**Fig. 23.** Left is one of the two pebble and clay platforms in front of the dwelling. The purpose of these is unknown. (S.M. Miller, December 2018.)

**10. Field Rating. (SAHRA minimum standards May 2007.)**

No.	description	Rating according to minimum standards may 07
1	Flag - Ruin site: Late 20 <sup>th</sup> century labourers' quarters	1. Not applicable as this site falls outside of the protection of the National Heritage Act, regarding the 60 year rule.

**11. Statements of Significance. (SAHRA minimum standards May 2007.)**

No.	description	Rating according to minimum standards may 2007
1	Flag - Ruin site: Late 20 <sup>th</sup> century labourers' quarters	1. Not applicable as this site falls outside of the protection of the National Heritage Act, regarding the 60 year rule.

## 12. Summary

### 12.1. Intent of Glencore Alloys.<sup>17</sup>

It is the intent of Glencore Alloys to clear approximately 12ha of vegetation to serve as a stockpile area.

### 12.2 The project description.<sup>18</sup>

Glencore Alloys in their Rietvlei Silica Mine produces high-grade silica for the use as flux in many of the smelters of the surrounding platinum and chrome mines. As a secondary function sand is sold for normal construction purposes.

The proposed activity can be described as the use of this area as a stockpile premises. No mining is proposed.

### 12.3. Historical milieu.<sup>19</sup>

Although there are a number of well known Stone Age sites in the area, such as the cradle of mankind only some 40 kilometres to the southeast, *there appear to be no Stone Age industry present on the site.*

Similarly there are indications of Early Iron Age remains recorded at Broederstroom near the Hartebeestpoort dam, and an intense habitation of Later Iron Age Peoples between Zeerust and Cullinan on the rim of the Bushveld Igneous Complex, but again there is no indication *of Iron Age impact on the site.*

Lastly, the pioneers that entered the Transvaal post 1836, and their continuous interaction with the local inhabitants, mainly the people of *chief's Mogale and Magata*<sup>20</sup>, are well documented, especially the occupation of the Magaliesberg range by the followers of Commandant Andries Hendrik Potgieter between 1840 and 1845, well described by Rex (1975), in his history of the Zeerust Hervormde Kerk. *There is no footprint of historical occupation of local Africans or European pioneer settlement on this site.*

### 12.4. Geological and vegetative milieu.<sup>21</sup>

The Magaliesberg, on which portion 103 of the farm shylock 256 is located, are the result of the uplifting of the ancient Transvaal sediments through the event of the massive magma-flow that formed the Bushveld Igneous Complex some 800 million years ago. The erosion of these uplifted portions gave rise to the sedimentary formations containing the silica on the property, while to the north of the Magaliesberg mainly black turf soils are encountered. This erosion of the sedimentary formations created sandy loam soils, and with the prevailing topography and precipitation then gave rise to the flora generally known as Sourish Mixed Bushveld. *The geological and vegetative impact of the proposed stockpiling activity is very low.*

### 12.5. Summary of findings.

It is clear from both the desktop study as well as the field-work that *Portion 103 of the farm Shylock 256* was not used for any historical or pre-historical purposes except for the small labourer's dwelling encountered that is not protected by the heritage Act of 1999.

<sup>17</sup> Information supplied by Shangoni Management Services, (Pty.) Ltd.

<sup>18</sup> Information supplied by Shangoni Management Services, (Pty.) Ltd.

<sup>19</sup> See section 8 of this report for full description.

<sup>20</sup> N.B. The term *Mogale* or *Ma-Magalie* is the name of a senior chief that lived to the east of this area before the arrival of the pioneers in the 1840's. The spelling has been corrupted to *Mohali, Mohale, Moghalies* and *Magalie* in European literature. The history of the interaction between Magata and Paul Kruger is well documented

<sup>21</sup> See section 7 of this report.

### **13. Recommendation.**

**13.1.** It is recommended that Glencore Alloys may proceed with the development of this site as a stockpile area.

**13. 2.** It is recommended that a local heritage consultant monitors the first clearance of vegetation of the site so as to evaluate possible sub-surface heritage remains.



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### **Guidelines**

- SAHRA. Mar. 2006 and edtd May 2007. *Guideline*:- Minimum standards for the Archaeological & Paleontological Components of Impact Assessment Reports

### **Legislation**

- Act 25 of 1999:- The National Heritage Act

## **Appendix 1: Declaration of Independence.**

I, Sidney Mears Miller (ID 5412135029082) declare that:

- I act as an independent environmental practitioner in this application;
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favorable to the applicant;
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting environmental impact assessments, including knowledge of the National Heritage Resources Act (No 25 of 1999) and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, regulations and all other applicable legislation;
- I will take into account, to the extent possible, the matters listed in regulation 8 of the regulations when preparing the application and any report relating to the application;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- I will ensure that information containing all relevant facts in respect of the application is distributed or made available to interested and affected parties and the public and that participation by interested and affected parties is facilitated in such a manner that all interested and affected parties will be provided with a reasonable opportunity to participate and to provide comments on documents that are produced to support the application;
- I will ensure that the comments of all interested and affected parties are considered and recorded in reports that are submitted to the competent authority in respect of the application, provided that comments that are made by interested and affected parties in respect of a final report that will be submitted to the competent authority may be attached to the report without further amendment to the report;
- I will keep a register of all interested and affected parties that participated in a public participation process;
- I will provide the competent authority with access to all information at my disposal regarding the application, whether such information is favorable to the applicant or not;
- all the particulars furnished by me in this form are true and correct;
- will perform all other obligations as expected from an environmental assessment practitioner in terms of the Regulations;
- I realize that a false declaration is an offence in terms of regulation 71 and is punishable in terms of section 24F of the Act.

### **Disclosure of Vested Interest**

I do not have and will not have any vested interest (either business, financial, personal or other) in the proposed activity AND OR proceeding other than remuneration for work performed in terms of the Environmental Impact Assessment Regulations,



**SIDNEY MEARS MILLER.**

**Appendix 2: Declaration of indemnity.**

The author hereby declares that the mitigation of accidental disclosure of sub-surface heritage remains will be for the account of the client.

This stems from the reality that sub-surface heritage remains can normally not be detected during field-work.

If sub-surface heritage remains are encountered during the life of the project, then a heritage consultant or the Provincial Heritage Agency should be contacted and the issue mitigated according to the National Heritage Act, Act 25 of 1999.



**SIDNEY MEARS MILLER.**

**Appendix 3.** Cultural heritage risk assessment.

Not applicable





. **Appendix 2.**

Cultural heritage risk assessment.

Environmental impact, extent, duration, significance and degree to which impact has caused irreplaceable loss	Risk rating (before mitigation)			Environmental objective	Degree to which impact can be reversed and the supporting mitigatory action plan	Timeframe	Responsibility	Risk rating (after mitigation)		
	Probability	Magnitude	Severity					Probability	Magnitude	Severity
<b>ENVIRONMENTAL COMPONENT:</b> Archaeology and heritage										
<b>ACTIVITY:</b> Development of a processing plant for the manufacture of melamine prefabricated kitchen cupboards on portion R/20 of the farm Uitzicht (Alias Rietvalei) 314JR										
<b>PROJECT PHASE APPLICABILITY:</b> Construction phase										
<p><u>Field rating:</u></p> <p>1. Not applicable as this site falls outside of the protection of the National Heritage Act.</p> <p>2. Clearance and excavations to be monitored.</p> <p><u>Statement of significance:</u> Not applicable as the site is not protected by the National Heritage Act.</p> <p><u>Impact description:</u> Proposed activity will not impact on any protected heritage remains</p> <p>Degree to which impact will cause irreplaceable</p>	1	1	L	No objective for preservation as no protected heritage remains appears to occur on site	<p><u>Degree to which impact can be reversed:</u> None.</p> <p><u>Mitigation:</u></p> <p>Clearance and excavation to be monitored</p> <p>It is recommended that a Heritage Consultant monitors the first clearance of the proposed site and excavation of foundations so as to ensure that heritage material that may be located</p>	Commence during construction phase	ECO/ Environmental manager	1	1	L

Environmental impact, extent, duration, significance and degree to which impact has caused irreplaceable loss	Risk rating (before mitigation)			Environmental objective	Degree to which impact can be reversed and the supporting mitigatory action plan	Timeframe	Responsibility	Risk rating (after mitigation)		
	Probability	Magnitude	Severity					Probability	Magnitude	Severity
loss: Not applicable.					below present ground level could be documented in the unlikely event if any does occur.					