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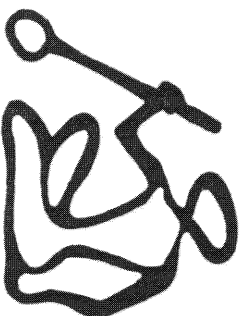
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# Van Ryn Opencast Project

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Nigel Gold Mining Company Pty Ltd  
Cultural Heritage Survey

January 2003



  
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## EXECUTIVE SUMMARY

As we know from legislation the surveying, capturing and management of heritage resources is an integral part of the greater management plan laid down for any major development or historic existing operation. With the proclamation of the National Heritage Resources Act 1999 (Act 25 of 1999) this process has been laid down in no uncertain terms. This legislation aims to underpin the existing legislation, which only addresses this issue at a glance, and gives guidance to developers and existing industries to the management of their Heritage Resources.

Archival research produced a few references to possible cultural resources on the property concerned. It is evident from documentation found that the Van Ryn Gold Mining Company was established during the time frame 1887 to 1890 (KAB, 1887). Reference to workings of the mine is found into the early 1960's.

During the survey two sites of significance were found. (Refer to section 6).

The possibility of impacts on the sites from mining is seen as **Medium negative** over the extent of the proposed mining area. This is due to the fact that it is accepted that the opencast operations will cause the destruction of all structures in its way. The areas in question fall outside of the mining areas.

Some of the sites present on the mining freehold have historic and industrial significance and if the intention of the client is to do further mining, mitigation work as described below will have to be done on the sites as indicated in the assessment below.

The following summarises the impacts and sites found:

Site No	Significance	Certainty	Duration	Mitigation
VA1	Medium negative	Definite	Short term	A
VA2	Medium negative	Definite	Short term	A

It is however important to note that further investigation into the position of the 'native burial ground', ie cemetery be conducted as to identify its position in relation to the current proposed mining operations.

The following is recommendations towards managing the heritage sites responsibly:

If mining development should continue in the direction of these heritage structures it would mean that these structures would have to be demolished. If this is the case further mitigation work would be required.

No further investigation is necessary due to the sites being outside the mining area or having no significance.

VA1 and VA2.

It must however be noted that if mining should impact on these sites some further research would be required.

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## 1. Introduction

Matakoma Consultants was contracted by Johan Fourie & Associates to conduct a Heritage Survey for inclusion in the Environmental Management Program for the proposed mining project of Nigel Gold Mining Company Pty Ltd.

The aim of the study is to identify all heritage sites, document and assess their importance within local, provincial and national context. From this we aim to assist the developer in managing the discovered heritage resource in a responsible manner to protect, preserve and develop them within the framework provided by the National Heritage Resources Act of 1999 (Act 25 of 1999).

During consultation Johan Fourie & Associates it was decided that the area of impact was that area to be commercially mined in the future, and extends from the Snake Road of ramp in the west to the Modderbee Prison in the east and thus the following area will be extensively surveyed. See **Appendix 1** for detailed maps of the study area.

The report outlines the approach and methodology utilised before and during the survey, which includes **Phase A** - Archival research and desktop study, **Phase B** - Physical surveying of the area on foot and vehicle; and **Phase - C**: Reporting the outcome of the study.

During the survey sites of cultural significance were identified. These sites were recorded by means of photos, GPS location and description. Possible impacts were identified and mitigation measures are proposed in the following report.

This report must also be submitted to SAHRA's provincial office for scrutiny.

## 2. Approach and Methodology

The aim of the study is to cover the area extensively to compile a register of heritage sites of the area, this was done by means of the following.

### 2.1 Phase A

The first phase comprised of an extensive desktop study gathering data to compile a background history of the area. The desktop study covered the following:

### *Archival Research*

Utilising data stored in the National as well as Transvaal Archives for information gathering. The aim being to extract data and information on the area in question, looking at archaeological sites, historical sites, graves, architecture, oral history and ethnographical information on the inhabitants of the area.

### *Information collection*

Data was further collected from the following sources to provide as far as possible a comprehensive account of the history of the area where possible.

#### *Local authorities*

SAHRA (Provincial and National)

Other data repositories: State Archives, Museums, etc.

### *Public consultation*

Consultation was also be done with the local communities and public to gather any further information on oral history, local history of area, graves, cemeteries, and monuments that is not available through the written media.

### *Aerial Photographical Survey*

Aerial photographs were utilised to identify possible places where archaeological sites might be located. Through our experience this has shown to be a useful tool during surveys.

## **2.2 Phase B**

### *Physical Surveying*

With the background and desktop study as database the aerial photographs and 1:50 000 maps of the area were consulted before undertaking the survey. The purpose of this was to identify topographical areas of possible historic and pre-historic activity. The proposed development area was be surveyed over a period of three days, by means of vehicle and extensive surveys on foot by two field surveyors. All sites and structures discovered both inside and bordering the proposed development area was be plotted on 1:50 000 maps and their GPS coordinates noted. 35 mm photographs on digital format was taken at all sites and site sketches made.

## **Working with legislation.**

It is very important that cultural resources be evaluated according to the National Heritage Recourse Act. In accordance with the act we have found the following:

- There are no cultural impacts on any communities in the area, as the communities that are now situated in the area are not related to the community that occurred there in the past.
- This site is classified as important based on evaluation of the National Heritage Recourses Act 1999 (Act No 25 of 1999) section 3 (3)(a),(3)(d), (3)(e) and (3)(f). (Refer to **Section 9** of this document for assessment)
- This site should be managed through using the National Heritage Recourses Act 1999 (Act No 25 of 1999) sections 4,5 and 6 and sections 39-47.
- As stated above these areas found on the property should be protected according to the laws of the National Heritage Recourses Act 1999 (Act No 25 of 1999) sections 33-38. (Refer to Appendix 2 for information on these sections of the Act)

## **Historical Background of area**

### **Historical Information**

Archival research produced a few references to possible cultural resources on the property concerned. It is evident from documentation found that the Van Ryn Gold Mining Company was established during the time frame 1887 to 1890 (KAB, 1887). Reference to workings of the mine is found into the early 1960's.

In 1914 the Van Ryn GMC applied for the establishment of a native burial ground on a portion of the farm Benoni No 10 in the mining district of Boksburg. This application was approved in November of 1931 and under RMT No 2649 (Prime Ministers Office, 1931).

## Assessment Criteria

This chapter describes the evaluation criteria used for the sites listed below.

The significance of archaeological sites was based on five main criteria:

- **site integrity** (i.e. primary vs. secondary context),
- **amount of deposit, range of features** (e.g., stonewalling, stone tools and enclosures),
- **uniqueness and**
- **potential to answer present research questions.**

Management actions and recommended mitigation, which will result in a reduction in the impact on the sites, will be expressed as follows:

- A- no further action necessary;
- B- mapping of the site and controlled sampling required;
- C- preserve site, or extensive data collection and mapping of the site; and
- D- preserve site

Impacts on these sites by mining will be evaluated as follows

### IMPACT

The potential environmental impacts that may result from mine activities.

### NATURE AND EXISTING MITIGATION

Natural conditions and conditions inherent in the project design that alleviate (control, moderate, curb) impacts. In the examination of an already operating mine, the definition of existing mitigation might be somewhat unclear. All management actions, which are presently implemented, are considered part of the project design and therefore mitigate against impacts.

### EVALUATION

#### Significance

The significance rating scale is as follows:

**VERY HIGH:** Of the highest order possible within the bounds of impacts, which could occur.



In the case of negative impacts, there would be no possible mitigation and/or remedial activity of offset the impact at the spatial or time scale for which it was predicted. In the case of positive impacts, there is no real alternative to achieving the benefit.

**HIGH:** Impacts of a substantial order. In the case of negative impacts, mitigation and/or remedial activity would be feasible but difficult, expensive, time-consuming or some combination of these.

In the case of positive impacts, other means of achieving this benefit would be feasible, but these would be more difficult, expensive, time-consuming or some combination of these.

**MODERATE:** Impact would be real but not substantial within the bounds of those, which could occur. In the case of negative impacts, mitigation and/or remedial activity would be both feasible and fairly easily possible. In the case of positive impacts, other means of achieving these benefits would be about equal, cost and effort.

**LOW:** Impact would be of low order and with little effect. In the case of negative impacts, mitigation and/or remedial activity would be either easily achieved or little would be required, or both. In case of positive impacts, alternative means of achieving this benefit would likely be easier, cheaper, more effective, less time-consuming, or some combination of these.

**VERY LOW:** Impact would be negligible. In the case of negative impacts, almost no mitigation and/or remedial activity would be needed, and any minor steps which might be needed would be easy, cheap and simple. In the case of positive impacts, alternative means would be almost all likely to be better, in one or a number of ways, than this means of achieving the benefit.

**NO EFFECT:** There would be no impact at all - not even a very low impact on the system or any of its parts.

### ***Certainty***

**DEFINITE:** More than 90% sure of a particular fact. Substantial supportive data exist to verify the assessment.

**PROBABLE:** Over 70% sure of a particular fact, or of the likelihood of impact occurring.

**POSSIBLE:** Only over 40% sure of a particular fact or of the likelihood of an impact occurring.

**UNSURE:** Less than 40% sure of a particular fact or likelihood of an impact occurring.

**Duration**

**SHORT TERM:** 0 to 5 years

**MEDIUM:** 6 to 20 years

**LONG TERM:** more than 20 years

**DEMOLISHED:** site will be demolished or is already demolished

**Example****Evaluation**

Significance	Certainty	Duration	Mitigation
high negative	> 90% sure	long: > 20 years	A

**Sites of Cultural Significance**

The whole of the surveyed area is strewn with the ruins of various mining operations that were conducted over the past 120 years. Due to the disturbed environment only a few places was identified to be of importance to include in the report.

**VA1**

The existing structure appears to have been part of a smelter or similar operation that would need a smoke stack to disperse of smoke generated during a combustion process.

The stack is constructed by brick masonry and is approximately 30 meters high. It is in a fairly well preserved condition. The south-eastern top part does however show signs of disintegration.

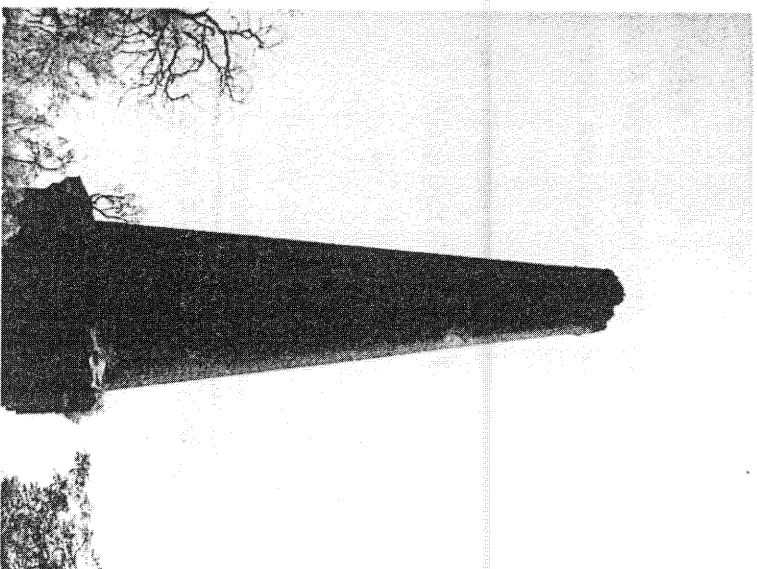
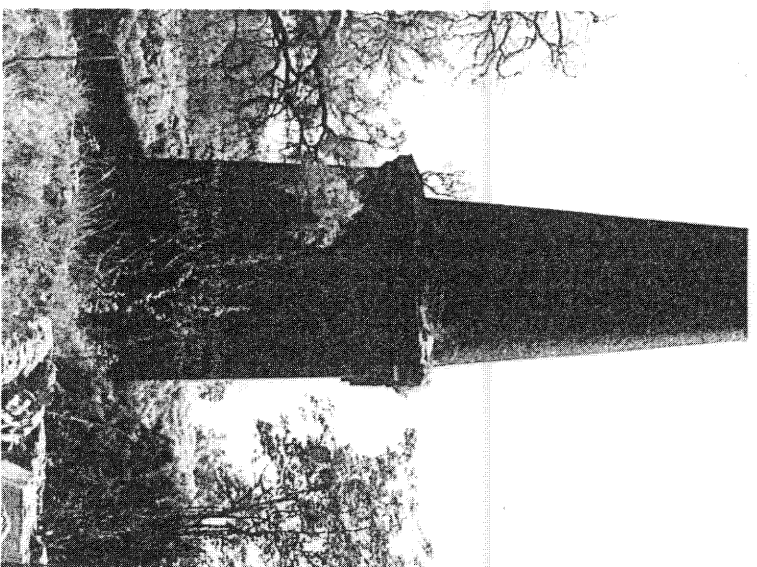


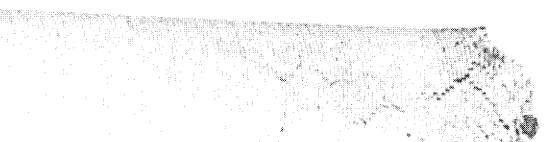
Figure 1



• Figure 2



Figure 3



• Figure 4

**Significance**

The site is not in danger of being destroyed by the proposed mining operations. But if the possibility of further activity in this area may arise further mitigation will have to be done.

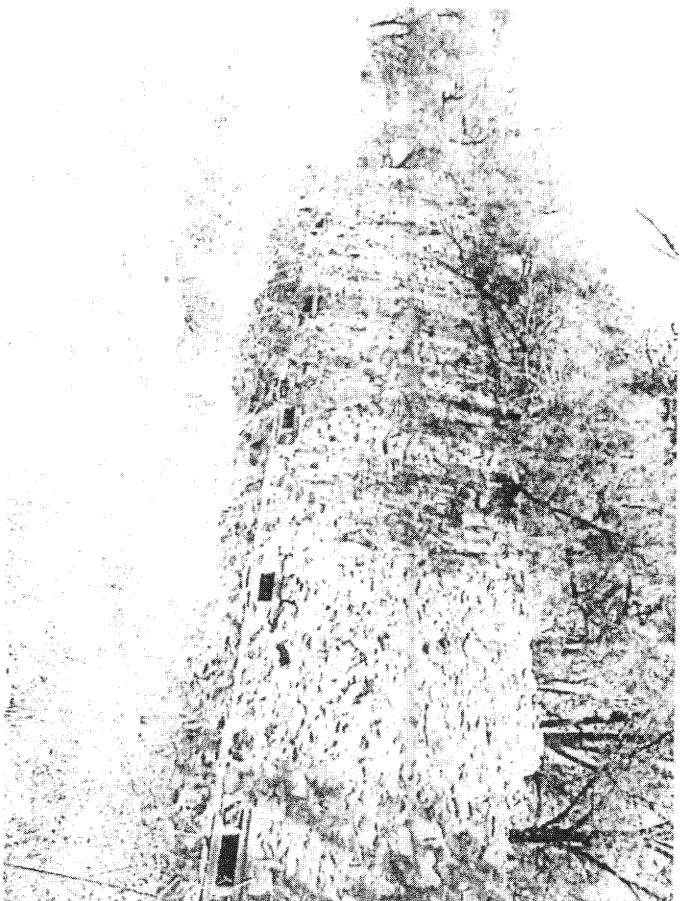
- This site is classified as important based on evaluation of the National Heritage Recourses Act 1999 (Act No 25 of 1999)
  - (a) its importance in the community, or pattern of South Africa's history,
  - (d) its importance in demonstrating the principal characteristics of a particular class of South Africa's natural or cultural places or objects;
  - (f) its importance in demonstrating a high degree of creative or technical achievement at a particular period;

**Impact Evaluation**

Significance	Certainty	Duration	Mitigation
Medium negative	Definite	Short term	A

**VAA2**

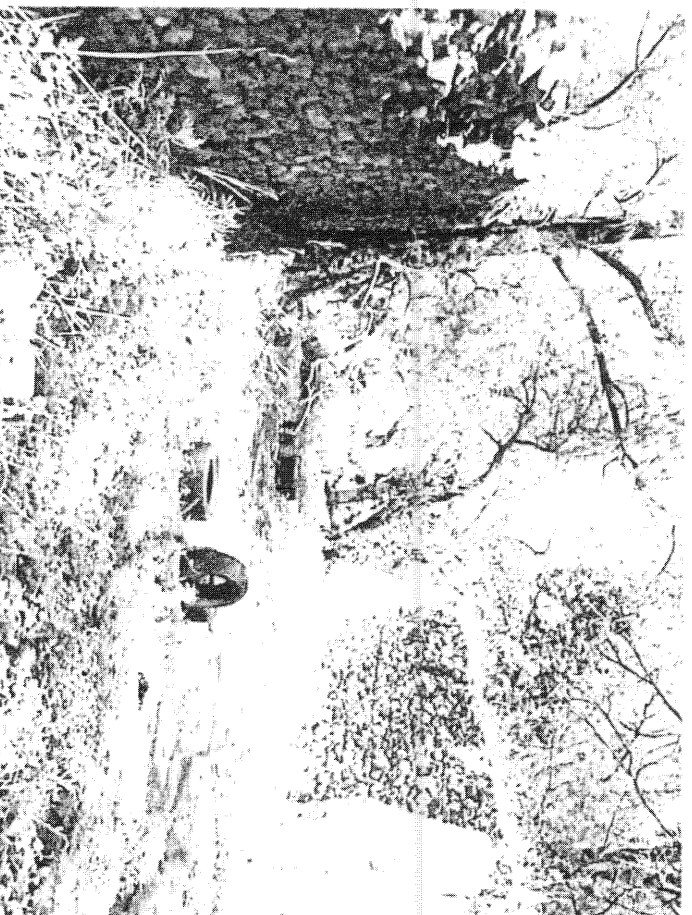
Consists of numerous ruins that seem to be part of the mining infrastructure established during mining operations of the Van Ryn Gold Mining Company. The photos only indicate one such a building in the larger mining complex. Overall mostly the only structures still visible are foundations of the buildings.



• Figure 5



• Figure 6



• Figure 7

### Significance

This site and it associated structures will not be affected by the mining operations at the moment, any further mining towards and around this site would require further mitigation.

- This site is classified as important based on evaluation of the National Heritage Recourses Act 1999 (Act No 25 of 1999)
  - (a) its importance in the community, or pattern of South Africa's history;
  - (d) its importance in demonstrating the principal characteristics of a particular class of South Africa's natural or cultural places or objects;
  - (f) its importance in demonstrating a high degree of creative or technical achievement at a particular period;

### Impact Evaluation

Significance	Certainty	Duration	Mitigation
Medium negative	Definite	Short term	A

## **7. Assumptions and Limitations**

Due to the nature of cultural remains that occur, in most cases, below surface, the possibility remains that some cultural remains may not have been discovered during the survey. Although Matakoma Consultants surveyed the area as thorough as possible, it is incumbent upon the developer to inform the relevant heritage agency should further cultural remains be unearthed or laid open during the process of development.

## **8. Legal and policy requirements**

In areas where there has not yet been a systematic survey to identify conservation worthy places, a permit is required to alter or demolish any structure older than 60 years. This will apply until a survey has been done and identified heritage resources are formally protected.

Archaeological and palaeontological sites and materials and meteorites are the source of our understanding of the evolution of the earth, life on earth and the history of people. In the new legislation, permits are required to damage, destroy, alter or disturb them. People who already possess material are required to register it.

The management of heritage resources are integrated with environmental resources and this means that before development takes place heritage resources are assessed and, if necessary, rescued.

In addition to the formal protection of culturally significant graves, all graves, which are older than 60 years and are not in a cemetery (such as ancestral graves in rural areas), are protected. The legislation protects the interests of communities that have interest in the graves: they may be consulted before any disturbance takes place.

The graves of victims of conflict and those associated with the liberation struggle will be identified, cared for, protected and memorials erected in their honour.

Anyone who intends to undertake a development must notify the heritage resource authority and if there is reason to believe that heritage resources will be affected, an impact assessment report must be compiled at the developer's cost. Thus developers will be able to proceed without uncertainty about whether work will have to be stopped if a heritage resource is discovered.

According to the National Heritage Act (Act 25 of 1999 section 32) it is stated that:



An object or collection of objects, or a type of object or a list of objects, whether specific or generic, that is part of the national estate and the export of which SAHRA deems it necessary to control, may be declared a heritage object, including –

- a) objects recovered from the soil or waters of South Africa, including archaeological and palaeontological objects, meteorites and rare geological specimens;
- b) visual art objects;
- c) military objects;
- d) numismatic objects;
- e) objects of cultural and historical significance;
- f) objects to which oral traditions are attached and which are associated with living heritage;
- g) objects of scientific or technological interest;
- h) books, records, documents, photographic positives and negatives, graphic material, film or video or sound recordings, excluding those that are public records as defined in section 1 (xiv) of the National Archives of South Africa Act, 1996 (Act No. 43 of 1996), or in a provincial law pertaining to records or archives; and
- i) any other prescribed category.

If it is necessary to refer to any of the above-mentioned objects, the National Heritage Act (Act 25 of 1999 Sections 31-38) are included in Appendix 2.

Under the new National Heritage Resources Act (Act No. 25 of 1999), provisions are made that deal with, and offer protection, to all historic and pre-historic cultural remains, including graves and human remains.

Graves younger than 60 years fall under Section 2(1) of the Removal of Graves and Dead Bodies Ordinance (Ordinance no. 7 of 1925) as well as the Human Tissues Act (Act 65 of 1983) and are the jurisdiction of the National Department of Health and the relevant Provincial Department of Health and must be submitted for final approval to the Office of the relevant Provincial Premier. This function is usually delegated to the Provincial MEC for Local Government and Planning, or in some cases the MEC for Housing and Welfare. Authorisation for exhumation and reinterment must also be obtained from the relevant local or regional council where the grave is situated, as well as the relevant local or regional council to where the grave is being relocated. All local and regional provisions, laws and by-laws must also be adhered to. In order to handle and transport human remains the institution conducting the relocation should be authorised under Section 24 of Act 65 of 1983 (Human Tissues Act).

Graves older than 60 years, but younger than 100 years fall under Section 36 of Act 25 of 1999 (National Heritage Resources Act) as well as the Human Tissues Act (Act 65 of 1983) and are the jurisdiction of the South African Heritage Resource Agency (SAHRA). The procedure for Consultation Regarding Burial



Grounds and Graves (Section 36(5) of Act 25 of 1999) is applicable to graves older than 60 years that are situated outside a formal cemetery administrated by a local authority. Graves in the category located inside a formal cemetery administrated by a local authority will also require the same authorisation as set out for graves younger than 60 years over and above SAHRA authorisation. If the grave is not situated inside a formal cemetery but is to be relocated to one, permission from the local authority is required and all regulations, laws and by-laws set by the cemetery authority must be adhered to.

Refer to **Appendix 2** for further information on legislation.

### Assessment and recommendations

As stated above these sites found on the property is protected under the National Heritage Recourses Act 1999 (Act No 25 of 1999) sections 33-38. (Refer to **Appendix 2** for information on these sections of the Act)

The possibility of impacts on the sites from mining is seen as **Medium negative** over the extent of the proposed mining area. This is due to the fact that it is accepted that the opencast operations will cause the destruction of all structures in its way. The areas in questions fall outside of the mining areas.

Some of the sites present on the mining freehold have historic and industrial significance and if the intention of the client is to do further mining, mitigation work as described below will have to be done on the sites as indicated in the assessment below.

The following summarises the impacts and sites found:

Site No	Significance	Certainty	Duration	Mitigation
VA1	Medium negative	Definite	Short term	A
VA2	Medium negative	Definite	Short term	A

It is however important to note that further investigation into the position of the 'native burial ground', ie cemetery be conducted as to identify its position in relation to the current proposed mining operations.

The following is recommendations towards managing the heritage sites responsibly:

If mining development should continue in the direction of these heritage structures it would mean that these structures would have to be demolished. If this is the case further mitigation work would be required.

No further Investigation is necessary due to the sites being **outside the mining area** or having **no significance**.  
VA1 and VA2.

It must however be noted that if mining should impact on these sites some further research would be required.

## 10. List of prepares

- Wouter Fourie, BA (Hon) Archaeology

## 11. Personal Communications

- Clive Brett, Survey Office, Department of Minerals and Energy, Pretoria
- Mauritz Naudé, Heritage Specialist, Northern Flagship Institute, National Cultural History Museum, Pretoria, Gauteng

## 12. References

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Pearson, Michael & McGowan, Barry. 2000. **Mining Heritage Places. Assessment Manual**. Australian Council of National Trusts and Australina Heritage Commission. Canberra

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