

**Heritage impact assessment for the
PROPOSED RECLAMATION OF THE HISTORICAL LINDUM TAILINGS FACILITY,
RANDFONTEIN, GAUTENG PROVINCE**

HERITAGE IMPACT ASSESSMENT FOR THE PROPOSED RECLAMATION OF THE HISTORICAL LINDUM TAILINGS FACILITY, RANDFONTEIN, GAUTENG PROVINCE

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Declaration:

I, J.A. van Schalkwyk, declare that I do not have any financial or personal interest in the proposed development, nor its developers or any of their subsidiaries, apart from the provision of heritage assessment and management services.



J A van Schalkwyk (D Litt et Phil)
Heritage Consultant
February 2013

EXECUTIVE SUMMARY

HERITAGE IMPACT ASSESSMENT FOR THE PROPOSED RECLAMATION OF THE HISTORICAL LINDUM TAILINGS FACILITY, RANDFONTEIN, GAUTENG PROVINCE

Prime Resources (Pty) Ltd has been appointed by Gold One International Limited (Rand Uranium Pty Ltd) to amend the Randfontein surface operations Environmental Management Programme (EMP) for the proposed reclamation of the historical Lindum Tailings Facility in terms of Section 102 on the Mineral and Petroleum Resources Development Act, No. 28 of 2002 (MPRDA).

In accordance with Section 38 of the NHRA, an independent heritage consultant was appointed by **Prime Resources** to conduct a Heritage Impact Assessment (HIA) to determine if any sites, features or objects of cultural heritage significance occur within the boundaries of the area where it is planned to develop the project.

The following sites, features and objects of cultural significance were identified:

- The tailings dump under consideration here is in all probability older than 60 years as it is already indicated on the 1944 version of the 1:50 000 topocadastral map. Therefore the following is proposed:
 - There is sufficient documentation (maps and aerial photographs) of the tailings dam to conclude that this features is documented in full and that no further mitigation would be required.
- Some structures of unknown function were identified in the study area. At this stage it is unclear if the proposed development would have an impact on the identified structures. Therefore the following is proposed:
 - If there is no direct impact it is recommended that the structures are fenced off with a buffer zone of at least 15m from the outer edge of the structures;
 - If there is a direct impact, the structures should be documented in full, i.e. detailed maps should be drawn as well as a full photographic record made. Once this has been done, an application for the destruction of the features can be applied for from SAHRA.

Therefore, from a heritage point of view it is recommended that the proposed development be allowed to continue on acceptance of the above proposed mitigation measures. It is also recommended that should archaeological sites or graves be exposed during construction work, it must immediately be reported to a heritage practitioner so that an investigation and evaluation of the finds can be made.



J A van Schalkwyk
Heritage Consultant
February 2013

TECHNICAL SUMMARY

Property details						
Province	Gauteng					
Magisterial district	Randfontein					
District municipality	West Rand					
Topo-cadastral map	2627BA					
Closest town	Randfontein					
Farm name						
Portions/Holdings						
Coordinates	Centre point					
	No	Latitude	Longitude	No	Latitude	Longitude
	1	S 26.18189	E 27.71548			

Development criteria in terms of Section 38(1) of the NHR Act	Yes/No
Construction of road, wall, power line, pipeline, canal or other linear form of development or barrier exceeding 300m in length	NO
Construction of bridge or similar structure exceeding 50m in length	No
Development exceeding 5000 sq m	Yes
Development involving three or more existing erven or subdivisions	No
Development involving three or more erven or divisions that have been consolidated within past five years	No
Rezoning of site exceeding 10 000 sq m	No
Any other development category, public open space, squares, parks, recreation grounds	No

Development	
Description	Reclamation of a gold mine tailings facility
Project name	Lindum TSF Reclamation Project

Land use	
Previous land use	Mining
Current land use	Mining

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GLOSSARY OF TERMS AND ABBREVIATIONS

TERMS

Study area: Refers to the entire study area as indicated by the client in the accompanying Fig. 1 & 2.

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

Early Stone Age	2 000 000 - 150 000 Before Present
Middle Stone Age	150 000 - 30 000 BP
Late Stone Age	30 000 - until c. AD 200

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

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

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

ABBREVIATIONS

ADRC	Archaeological Data Recording Centre
ASAPA	Association of Southern African Professional Archaeologists
BP	Before Present
CS-G	Chief Surveyor-General
EIA	Early Iron Age
ESA	Early Stone Age
LIA	Late Iron Age
LSA	Later Stone Age
HIA	Heritage Impact Assessment
MSA	Middle Stone Age
NASA	National Archives of South Africa
NHRA	National Heritage Resources Act
PHRA	Provincial Heritage Resources Agency
SAHRA	South African Heritage Resources Agency

HERITAGE IMPACT ASSESSMENT FOR THE PROPOSED RECLAMATION OF THE HISTORICAL LINDUM TAILINGS FACILITY, RANDFONTEIN, GAUTENG PROVINCE

1. INTRODUCTION

Prime Resources (Pty) Ltd has been appointed by Gold One International Limited (Rand Uranium Pty Ltd) to amend the Randfontein surface operations Environmental Management Programme (EMP) for the proposed reclamation of the historical Lindum Tailings Facility in terms of Section 102 on the Mineral and Petroleum Resources Development Act, No. 28 of 2002 (MPRDA).

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

In accordance with Section 38 of the NHRA, an independent heritage consultant was appointed by **Prime Resources** to conduct a Heritage Impact Assessment (HIA) to determine if any sites, features or objects of cultural heritage significance occur within the boundaries of the area where it is planned to develop the project.

This HIA report forms part of the Environmental Impact Assessment (EIA) as required by the EIA Regulations in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) and is intended for submission to the South African Heritage Resources Agency (SAHRA).

2. TERMS OF REFERENCE

This report does not deal with development projects outside of or even adjacent to the study area as is presented in Section 5 of this report. The same holds true for heritage sites, except in a generalised sense where it is used to create an overview of the heritage potential in the larger region.

2.1 Scope of work

The scope of work for this study consisted of:

- Conducting of a desk-top investigation of the area, in which all available literature, reports, databases and maps were studied.
- A visit to the proposed development area.

The objectives were to

- Identify possible archaeological, cultural and historic sites within the proposed development area;
- Evaluate the potential impacts of construction, operation and maintenance of the proposed development on archaeological, cultural and historical resources;
- Recommend mitigation measures to ameliorate any negative impacts on areas of archaeological, cultural or historical importance.

2.2 Limitations

- None at present.

Table 1: Applicable category of heritage impact assessment study and report.

Type of study	Aim	SAHRA involved	SAHRA response
Heritage Impact Assessment	The aim of a full HIA investigation is to provide an informed heritage-related opinion about the proposed development by an appropriate heritage specialist. The objectives are to identify heritage resources (involving site inspections, existing heritage data and additional heritage specialists if necessary); assess their significances; assess alternatives in order to promote heritage conservation issues; and to assess the acceptability of the proposed development from a heritage perspective.	Provincial Heritage Resources Authority	Comments on built environment and decision to approve or not
	<p>The result of this investigation is a heritage impact assessment report indicating the presence/ absence of heritage resources and how to manage them in the context of the proposed development.</p> <p>Depending on SAHRA's acceptance of this report, the developer will receive permission to proceed with the proposed development, on condition of successful implementation of proposed mitigation measures.</p>	SAHRA Archaeology, Palaeontology and Meteorites Unit	Comments and decision to approve or not

3. HERITAGE RESOURCES

3.1 The National Estate

The NHRA (No. 25 of 1999) defines the heritage resources of South Africa which are of cultural significance or other special value for the present community and for future generations that must be considered part of the national estate to include:

- places, buildings, structures and equipment of cultural significance;
- places to which oral traditions are attached or which are associated with living heritage;
- historical settlements and townscapes;
- landscapes and natural features of cultural significance;
- geological sites of scientific or cultural importance;
- archaeological and palaeontological sites;
- graves and burial grounds, including-

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

3.2 Cultural significance

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

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

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

A matrix was developed whereby the above criteria were applied for the determination of the significance of each identified site (see Appendix 1). This allowed some form of control over the application of similar values for similar identified sites.

4. STUDY APPROACH AND METHODOLOGY

4.1 Extent of the Study

This survey and impact assessment covers the area as presented in Section 5 and as illustrated in Figures 1 & 3.

4.2 Methodology

4.2.1 Preliminary investigation

4.2.1.1 Survey of the literature

A survey of the relevant literature was conducted with the aim of reviewing the previous research done and determining the potential of the area. In this regard, various anthropological, archaeological, historical sources and heritage impact assessment reports were consulted – Handley 2004; Hocking 1986; Praagh 1906; Van Schalkwyk 2009; Wilson & Anhaeusser 1998)

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

4.2.1.2 Data bases

The *Heritage Atlas Database*, the *Environmental Potential Atlas*, the *Chief Surveyor General (CS-G)* and the *National Archives of South Africa (NASA)* were consulted.

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

4.2.1.3 Other sources

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

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

4.2.2 Field survey

The area that had to be investigated was identified by **Prime Resources** by means of maps. As this a very dangerous type environment, the site was surveyed only on the periphery. In any case, it is highly unlikely that any sites, features or objects of cultural significance are expected to occur on the tailings dam.

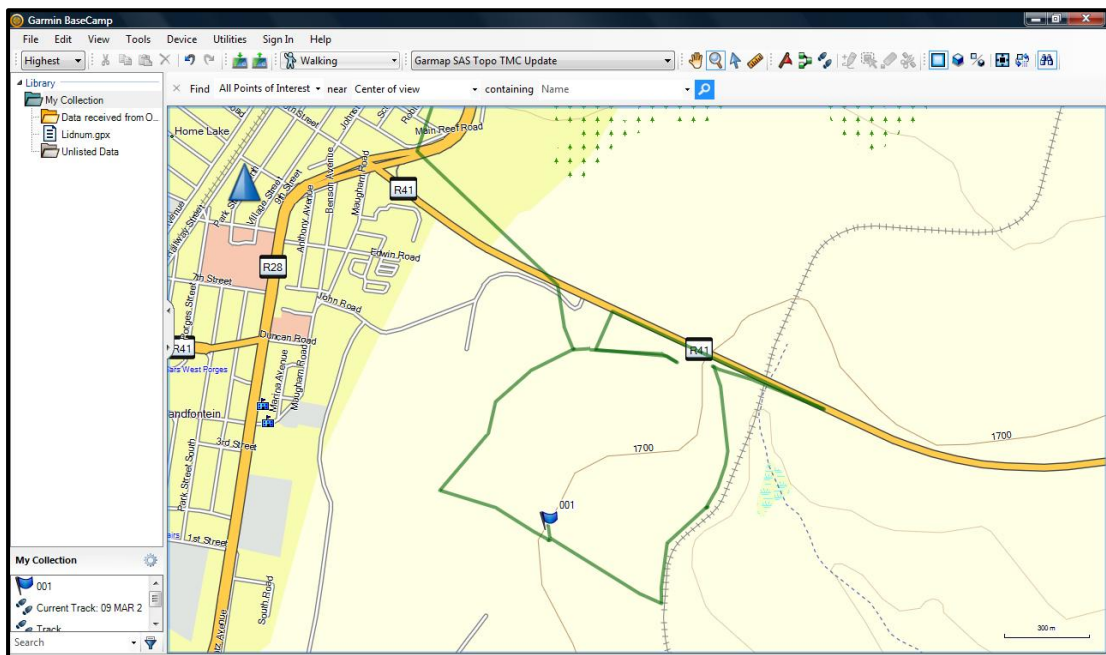


Fig. 1. Track log of the site visit.

5. DESCRIPTION OF THE AFFECTED ENVIRONMENT

5.1 Site location and description

The site is located to the east of the town of Randfontein, more specifically south of the R41 and approximately one kilometre east of the R28. On the eastern side the site is bordered by a railway line (Fig. 2). A hospital that originated as a mine compound during the 1930s is located on the western side. For more information, please see the Technical Summary presented above (p. iii).

The geology of the region is made up of quartzite and the topography is described as slightly undulating plains. The Wonderfontein Spruit passes approximately 4 km east of the study area. The original vegetation is classified as Rocky Highveld Grassland, but has been mostly replaced by exotic trees and grasses.

For many years this area has been subjected to intense mining, industrial and urban development. This would in all probability have destroyed any heritage sites and features dating to the pre-colonial past that might have occurred here.



Fig. 4. Views over the study area.



Fig. 5. Aerial view of the study area.
(Photo: Google Earth)

5.2 Project description

The following information on the project was supplied by Prime Resources Environmental Consultants:

The Lindum Tailing Storage Facility (TSF) is an historic TSF associated with the Gold One International Limited (Rand Uranium Pty Ltd) Randfontein Surface Operations (Gold One) and which is no longer utilised for the deposition of mining residues.

The Lindum TSF facility covers approximately 20 Ha and contains approximately 6 million dry tons of tailings. Conventional hydraulic mining methods are to be used to reclaim the Lindum TSF.

Hydraulic mining entails the use of high pressure streams of recycled process water to erode the tailings in sections washing the material, as a slurry, downwards to a central channel draining to a sump constructed in the low point of the TSF. In the case of the Lindum TSF the low point will be located in the south eastern corner of the TSF. The material is then passed through a screen to ensure that no large objects are included in the slurry. Once the required density of tailings material is obtained within the sump, the slurry is then to be pumped to the Cooke plant along an existing pipeline for processing.

The resultant tailings material generated during the above process will be deposited initially on the existing Cooke TSF and latterly into existing disused open cast pits in and around Randfontein, which deposition forms part of the existing Cooke Optimisation Project (COP). The disturbed footprint of the Lindum TSF can then also be rehabilitated.

Supporting infrastructure for the project includes an existing 5 km access road linking the Lindum TSF to the Cooke Plant. The aforementioned pipeline which will be utilised follows the same route as the access road and existing pipe route. A recycled process water supply pipeline will be available for the purposes of providing water for hydraulic mining activities which is planned to be installed as part of the COP. Process water for this project will be sourced predominantly from excess fissure water from the Cooke Shafts as well as recycled water from the Tailings Dams and or pits. Power will be teed off from an upgraded existing mine overhead line from an existing mine substation just to the north west of the Lindum TSF.

The extent of the proposed Reclamation Project is limited to the immediate vicinity of existing TSF (and on land owned by Gold One). The cultural and heritage study will be confined to the area associated with the Lindum TSF. The balance of activities, infrastructure etc. including the delivery pipeline, processing at the Cooke Plant, final tails deposition etc. form part of the greater COP and are thus considered outside the scope of the proposed reclamation project.

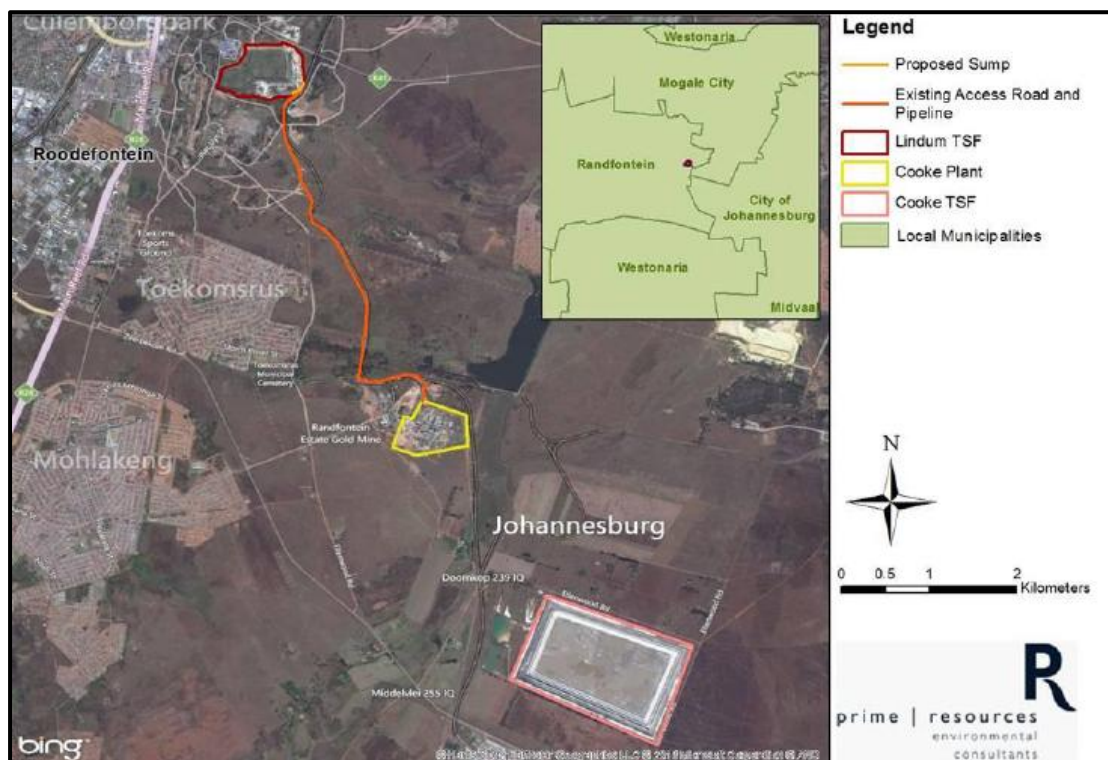


Fig. 6. Layout of the proposed operations.
(Map supplied by Prime Resources)

5.3 Regional overview

The aim of this section is to present an overview of the history of the larger region in order to eventually determine the significance of heritage sites identified in the study area, within the context of their historic, aesthetic, scientific and social value, rarity and representivity – see Section 3.2 and Appendix 1 for more information.

Stone Age

The larger Mogale City area has been inhabited by different hominids since early Pliocene times, but it was only from about 2.5 million years ago that they started to produce stone tools, effectively beginning the Early Stone Age (ESA). During Middle Stone Age (MSA) times (c. 150 000 - 30 000 BP), people became more mobile, occupying areas formerly avoided.

Late Stone Age (LSA) people had even more advanced technology than the MSA people and therefore succeeded in occupying even more diverse habitats. Also, for the first time we now get evidence of people's activities derived from material other than stone tools. Ostrich eggshell beads, ground bone arrowheads, small bored stones and wood fragments with incised markings are traditionally linked with the LSA. A number of sites dating to this period have been studied by Wadley (1987) in the Magaliesberg area. In the case of the LSA people,

they have also left us with a rich legacy of rock art, which is an expression of their complex social and spiritual beliefs.

Iron Age

Iron Age people started to settle in southern Africa c. AD 300, with one of the oldest known sites at Broederstroom, dating to AD 470, located south of Hartebeespoort Dam just outside of the WHS area. Having only had cereals (sorghum, millet) that need summer rainfall, Early Iron Age (EIA) people did not move outside this rainfall zone, and neither did they occupy the central interior highveld area (Huffman 1993).

The occupation of the region by Iron Age communities did not start much before the 1500s. Due to climatic fluctuations, bringing about colder and drier conditions, people were forced to avoid this area. Following a dry spell that ended just before the turn of the millennium the climate became better again until about AD 1300. This coincided with the arrival of the ancestors of the present day Sotho-, Tswana- and Nguni-speakers in southern Africa, forcing them to avoid large sections of the interior.

Historic period

Originally the trekkers who settled in the region occupied themselves with farming. After the discovery of gold on the Witwatersrand, exploration also started in this area, e.g. the well-known Harry and Fred Struben were exploring in the Sterkfontein area during 1884. One of the oldest gold mines was established in 1874 at Blaauwbank and another in 1891 on the farm Kromdraai. By this time the fossil-bearing caves were already known and lime quarrying started about 1895. However, it was more than forty years later, in 1936, that Robert Broom first identified the remains of a number of fossil hominids.

During the Anglo-Boer War, a number of skirmishes took place in the area. The biggest battle was in the vicinity of Krugersdorp at Nooitgedacht (Magaliesberg range) on 13 December 1900. Krugersdorp was captured in June 1900 by Gen. Hunter.

Gold was originally discovered in the Krugersdorp area in 1887. Amalgamation of early mining activities led to the establishment of four principal gold mines, namely East Champ D'Or, Luipardsvlei Estates, West Rand Consolidated and Randfontein Estates. The study area formed part of the Randfontein Estates

5.4 Identified heritage sites

Based on the above sources and the field visit, the following heritage sites, features and objects were identified in the proposed development area (Fig. 9):

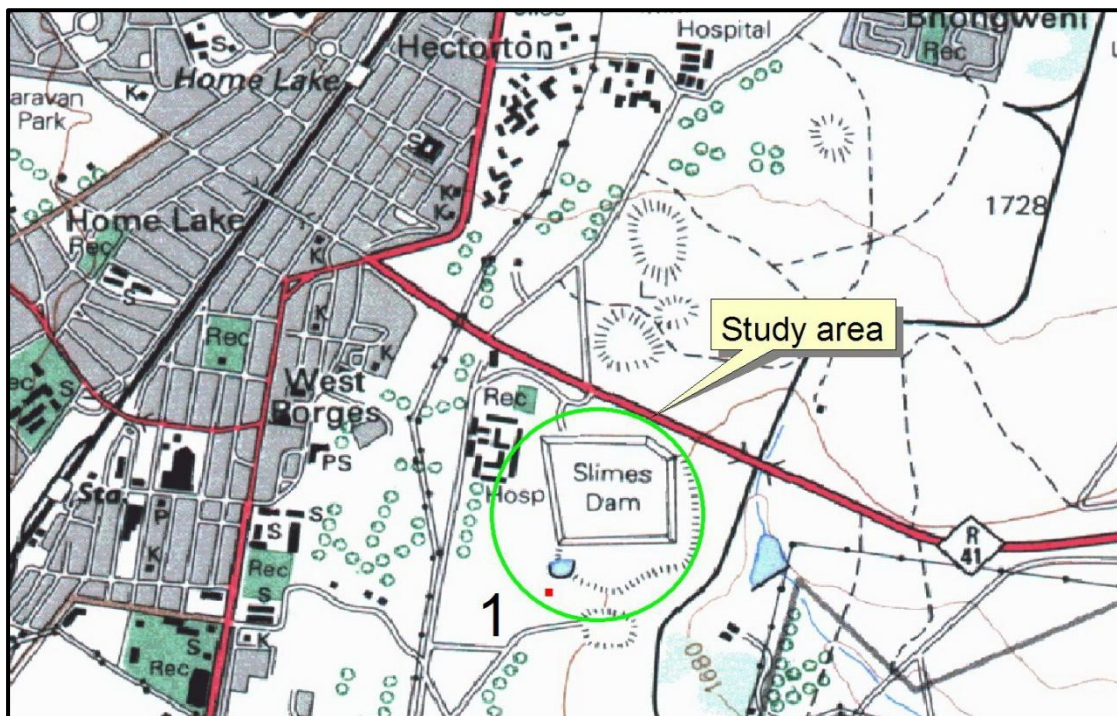


Fig. 7. Location of the identified sites.
(Map 2627BA: Chief Surveyor-General)

5.4.1 Stone Age

No sites, features or objects of cultural significance dating to the Stone Age were identified in the study area.

5.4.2 Iron Age

No sites, features or objects of cultural significance dating to the Iron Age were identified in the study area.

5.4.3 Historic period

The following sites and features were identified in the study area:

- Tailings dump

NHRA Category	Buildings, structures, places and equipment of cultural significance
Protection status	General Protection - Section 34: Structures older than 60 years

Location	S 26.18291	E 27.71576
Description	The tailings dump under consideration here is in all probability older than 60 years as it is already indicated on the 1944 version of the 1:50 000 topocadastral map. At what point in time it was started could not be ascertained, nor the date when last it received tailings. However, the layout on the 1944 map and the contemporary aerial photograph differ significantly from each other, indicating that it has changed over time.	

Significance	Medium on a regional level – Grade III
Mitigation	
There is sufficient documentation (maps and aerial photographs) of the tailings dam to conclude that this features is documented in full and that no further mitigation would be required.	



Fig. 8. Views of the tailings dump.

- Stone built structures that possibly can be related to some past mining activities

NHRA Category	Buildings, structures, places and equipment of cultural significance
Protection status	
General Protection - Section 34: Structures older than 60 years	

Location	No. 1	S 26.18540	E 27.71386
Description			
A number of large semi-circular structures were identified to occur on the southern side of the study area. They are constructed from large pieces of dressed stone, kept in place with concrete. The function of these structures is unknown. Because of their location of the edge of the tailings dam, it is deduced that they predate the tailings dam and are therefore older than 60 years. This seems to be confirmed by the fact that the tailings dam is older than 60 years, based on the fact that it is indicated on the 1944 1:50 000 cadastral map.			
Significance	Medium on a regional level – Grade III		
Mitigation			
At this stage it is unclear if the proposed development would have an impact on the identified structures. Therefore the following is proposed:			
<ul style="list-style-type: none"> • If there is no direct impact it is recommended that the structures are fenced off with a buffer zone of at least 15m from the outer edge of the structures; • If there is a direct impact, the structures should be documented in full, i.e. detailed maps should be drawn as well as a full photographic record made. Once this has been done, an application for the destruction of the features can be applied for from SAHRA. 			



Fig. 9. Different views of the structures.

6. SITE SIGNIFICANCE AND ASSESSMENT

6.1 Heritage assessment criteria and grading

The NHRA stipulates the assessment criteria and grading of archaeological sites. The following categories are distinguished in Section 7 of the Act:

- **Grade I:** Heritage resources with qualities so exceptional that they are of special national significance;
- **Grade II:** Heritage resources which, although forming part of the national estate, can be considered to have special qualities which make them significant within the context of a province or a region; and
- **Grade III:** Other heritage resources worthy of conservation on a local authority level.

The occurrence of sites with a Grade I significance will demand that the development activities be drastically altered in order to retain these sites in their original state. For Grade II and Grade III sites, the applicable of mitigation measures would allow the development activities to continue.

6.2 Statement of significance

Based on current information regarding sites in the surrounding area, all sites expected to occur in the study region are judged to have **Grade III significance** and therefore would not prevent the proposed development for continuing after the implementation of the proposed mitigation measures and its acceptance by SAHRA.

6.3 Impact Assessment

Impact analysis of cultural heritage resources under threat of the proposed development, are based on the present understanding of the development.

- The tailings dump under consideration here is in all probability older than 60 years as it is already indicated on the 1944 version of the 1:50 000 topocadastral map. Therefore the following is proposed:

- There is sufficient documentation (maps and aerial photographs) of the tailings dam to conclude that this features is documented in full and that no further mitigation would be required.
- Some structures of unknown function were identified in the study area. At this stage it is unclear if the proposed development would have an impact on the identified structures. Therefore the following is proposed:
 - If there is no direct impact it is recommended that the structures are fenced off with a buffer zone of at least 15m from the outer edge of the structures;
 - If there is a direct impact, the structures should be documented in full, i.e. detailed maps should be drawn as well as a full photographic record made. Once this has been done, an application for the destruction of the features can be applied for from SAHRA.

7. CONCLUSIONS

The aim of this survey was to locate, identify, evaluate and document sites, objects and structures of cultural significance found within the area of the proposed development, to assess the significance thereof and to consider alternatives and plans for the mitigation of any adverse impacts.

The following sites, features and objects of cultural significance were identified:

- The tailings dump under consideration here is in all probability older than 60 years as it is already indicated on the 1944 version of the 1:50 000 topocadastral map. Therefore the following is proposed:
 - There is sufficient documentation (maps and aerial photographs) of the tailings dam to conclude that this features is documented in full and that no further mitigation would be required.
- Some structures of unknown function were identified in the study area. At this stage it is unclear if the proposed development would have an impact on the identified structures. Therefore the following is proposed:
 - If there is no direct impact it is recommended that the structures are fenced off with a buffer zone of at least 15m from the outer edge of the structures;
 - If there is a direct impact, the structures should be documented in full, i.e. detailed maps should be drawn as well as a full photographic record made. Once this has been done, an application for the destruction of the features can be applied for from SAHRA.

Therefore, from a heritage point of view it is recommended that the proposed development be allowed to continue on acceptance of the above proposed mitigation measures. It is also recommended that should archaeological sites or graves be exposed during construction work, it must immediately be reported to a heritage practitioner so that an investigation and evaluation of the finds can be made.

8. REFERENCES

8.1 Data bases

Chief Surveyor General
Environmental Potential Atlas, Department of Environmental Affairs and Tourism.
Heritage Atlas Database, Pretoria.
National Archives of South Africa

8.2 Literature

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Wilson, M.G.C. & Anhaeusser, C.R. 1998. *The Mineral Resources of South Africa*. Sixth Edition. Handbook 16. Pretoria: Council for Geosciences.

8.3 Maps and aerial photographs

1: 50 000 Topocadastral maps: 2627BA
Google Earth

APPENDIX 1: CONVENTIONS USED TO ASSESS THE SIGNIFICANCE OF HERITAGE RESOURCES

Significance

According to the NHRA, Section 2(vi) the **significance** of heritage sites and artefacts is determined by its aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technical value in relation to the uniqueness, condition of preservation and research potential. It must be kept in mind that the various aspects are not mutually exclusive, and that the evaluation of any site is done with reference to any number of these.

Matrix used for assessing the significance of each identified site/feature

1. Historic value				
Is it important in the community, or pattern of history				
Does it have strong or special association with the life or work of a person, group or organisation of importance in history				
Does it have significance relating to the history of slavery				
2. Aesthetic value				
It is important in exhibiting particular aesthetic characteristics valued by a community or cultural group				
3. Scientific value				
Does it have potential to yield information that will contribute to an understanding of natural or cultural heritage				
Is it important in demonstrating a high degree of creative or technical achievement at a particular period				
4. Social value				
Does it have strong or special association with a particular community or cultural group for social, cultural or spiritual reasons				
5. Rarity				
Does it possess uncommon, rare or endangered aspects of natural or cultural heritage				
6. Representivity				
Is it important in demonstrating the principal characteristics of a particular class of natural or cultural places or objects				
Importance in demonstrating the principal characteristics of a range of landscapes or environments, the attributes of which identify it as being characteristic of its class				
Importance in demonstrating the principal characteristics 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.				
7. Sphere of Significance		High	Medium	Low
International				
National				
Provincial				
Regional				
Local				
Specific community				
8. Significance rating of feature				
1.	Low			
2.	Medium			
3.	High			

APPENDIX 2. RELEVANT LEGISLATION

All archaeological and palaeontological sites, and meteorites are protected by the National Heritage Resources Act (Act no 25 of 1999) as stated in Section 35:

(1) Subject to the provisions of section 8, the protection of archaeological and palaeontological sites and material and meteorites is the responsibility of a provincial heritage resources authority: Provided that the protection of any wreck in the territorial waters and the maritime cultural zone shall be the responsibility of SAHRA.

(2) Subject to the provisions of subsection (8)(a), all archaeological objects, palaeontological material and meteorites are the property of the State. The responsible heritage authority must, on behalf of the State, at its discretion ensure that such objects are lodged with a museum or other public institution that has a collection policy acceptable to the heritage resources authority and may in so doing establish such terms and conditions as it sees fit for the conservation of such objects.

(3) Any person who discovers archaeological or palaeontological objects or material or a meteorite in the course of development or agricultural activity must immediately report the find to the responsible heritage resources authority, or to the nearest local authority offices or museum, which must immediately notify such heritage resources authority.

(4) No person may, without a permit issued by the responsible heritage resources authority-

- (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 which assist in the detection or recovery of metals or archaeological and palaeontological material or objects, or use such equipment for the recovery of meteorites.

In terms of cemeteries and graves the following (Section 36):

(1) Where it is not the responsibility of any other authority, SAHRA must conserve and generally care for burial grounds and graves protected in terms of this section, and it may make such arrangements for their conservation as it sees fit.

(2) SAHRA must identify and record the graves of victims of conflict and any other graves which it deems to be of cultural significance and may erect memorials associated with the grave referred to in subsection (1), and must maintain such memorials.

(3) No person may, without a permit issued by SAHRA or a provincial 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, 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 equipment, or any equipment which assists in the detection or recovery of metals.

(4) SAHRA or a provincial heritage resources authority may not issue a permit for the destruction or damage of any burial ground or grave referred to in subsection (3)(a) unless it is satisfied that the applicant has made satisfactory arrangements for the exhumation and re-interment of the contents of such graves, at the cost of the applicant and in accordance with any regulations made by the responsible heritage resources authority.