



HERITAGE STATEMENT

FOR

LYCASTE SAND DUMP 4/A/6 DUMP

ERGO (PTY) LTD

FEBRUARY 2012



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DIGBY WELLS
ENVIRONMENTAL

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Name	Responsibility	Signature	Date
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Johan Nel <i>CRM Unit Manager</i>	1 st Review		January 2012

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EXECUTIVE SUMMARY

Ergo Mining (Pty) Ltd (Ergo), a wholly owned subsidiary of Ergo Mining Operations (Pty) Ltd (Ergo Mining Operations) (previously DRDGOLD South African Operations (Pty) Limited) is currently involved in the reclamation operations in the East Rand. Digby Wells Environmental (Digby Wells) has been tasked with conducting an Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP) Amendment Report for submission to the DMR for the reclamation activities on the Lycaste Sand Dump 4/A/6 (Lycaste).

This Report focuses on the reclamation of Lycaste in Boksburg, just to the East of the Knights reclamation plant. The terms of reference for the report included the provision of a Heritage Statement in line with relevant legislation and international best practice. In this regard, a Heritage Statement was created including a desktop survey of relevant published and unpublished literature, a survey of archival and public databases, a review of other baseline reports detailing heritage resources from the area, and a review of cartographic material relating to possible heritage resources in or near the project area.

A review of the history of mining in Johannesburg revealed that following the discovery of gold on the Witwatersrand in 1886, several farms were declared public digging, including the farm Driefontein, covering what is now northern Germiston and Boksburg. The first chamber of mines was declared in 1887, followed by the creation of the second and current chamber in December 1889. Tensions between the ZAR and the cosmopolitan population of the fledgling city of Johannesburg led to the failed Jameson raid in 1895, and eventually the second Anglo Boer War in 1899.

Following the end of the war, the gold fields came under the control of the Union of South Africa, and extensive industrial gold mining became the norm across the Witwatersrand. Lycaste was created from the mining activities at the Balmoral Mine, one of the founding companies of the Chamber of Mines. The site was zoned for mining use in 1905, and was in continual use from 1908 to 1952. According to this information, the mine dump itself qualifies as an archaeological artefact.

The Archival and Cartographic Surveys both revealed little additional information. The cartographic survey did not show any structures on the mine dump of heritage interest. The records of the Surveyor General's office did not show information for the farm Driefontein before 2001, and the archival search found no information relevant to Lycaste. One baseline report was found documenting a burial ground for Chinese migrant workers who were employed along the Rand during a labour crisis in the early years of the 20th century. The burial ground is situated 1.5 km to the north of the project area.

Certain knowledge gaps were identified. These included the subterranean nature of archaeological deposits, the difficulty of identifying them without excavation, the difficulty in identifying intangible heritage resources, and the possibility of pre-existing heritage resources underneath the mine dump and the lack of a site visit due to safety concerns for the specialists.

In conclusion, Lycaste mine dump is shown to be a significant marker of the history of Johannesburg and more broadly South Africa. The dump itself is old enough to be considered for protective status, while the intangible heritage relating to the site could be broader than previously realised. These are all sensitive issues relating to the reclamation of the dump.

Preliminary recommendations:

- A Letter of Recommendation for Exemption of a Heritage Impact Assessment is requested;
 - No archaeological heritage resources were identified that will be negatively impacted on by the proposed project; and
 - The Lycaste Sand Dump 4/A/6 has been altered and changed by to the extent that it's heritage value is low to negligible.

TABLE OF CONTENTS

1	INTRODUCTION.....	1
1.1	PROJECT DESCRIPTION.....	1
1.2	REGIONAL SETTING.....	1
2	TERMS OF REFERENCE.....	5
3	KNOWLEDGE GAPS.....	5
4	EXPERTISE OF THE SPECIALIST	5
5	AIMS AND OBJECTIVES	5
6	METHODOLOGY	6
7	RESULTS AND DISCUSSIONS	6
7.1	HISTORICAL CONTEXT.....	6
7.2	REVIEW OF IMPACT ASSESSMENT REPORTS.....	6
7.3	ARCHIVAL SURVEY	7
8	PRELIMINARY RECOMMENDATIONS.....	7
9	CONCLUSION.....	7
10	REFERENCES.....	8

LIST OF FIGURES

Figure 1-1:	Regional setting for the project area.....	2
Figure 1-2:	Local setting for the project area	3
Figure 1-3:	Topographical setting for the project area.....	4

LIST OF APPENDICES

Appendix A: CV of Specialist

1 INTRODUCTION

Digby Wells Environmental (Digby Wells) has been tasked with compiling an Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP) Amendment Report to the DMR. Included in the Scope of Work (SoW) of the EIA is the compiling of a Heritage Statement to determine the extent of identifiable heritage resources in the project area and assess the necessity for a Phase 1 Impact Assessment as determined by the relevant heritage resource agency.

1.1 Project Description

Ergo Mining (Pty) Ltd (Ergo), a wholly owned subsidiary of Ergo Mining Operations (Pty) Ltd (ErgoMining Operations) (previously DRDGOLD South African Operations (Pty) Limited) is currently reclaiming a number of sand dumps and slimes dams that were deposited as tailings during past gold mining operations in the Witwatersrand area. The slimes are either mechanically or hydraulically reclaimed and transported to one of Crown Gold Recoveries' three processing plants i.e. Crown, City Deep and Knights.

1.2 Regional Setting

The project area is located in northeast of the suburb of Delmore and south of the Lilianton industrial area, Boksburg. Table 1-1 below provides relevant geographical details and illustrated in the figures provided.

Table 1-1: Details of Lycaste Geographical Location

Province	Gauteng		
Local Authority	Ekurhuleni Metropolitan Municipality		
Property	Remaining Extent of the farm Grootvaly 124 IR Portion 6 of the farm Grootvaly 124 IR Portion 13 of the farm Grootvaly 124 IR Portion 192 of the farm Geduld 123 IR		
Closest town	Boksburg	1:50 000 map no.	2628 AA Johannesburg

Figure 1-1: Regional setting for the project area

Figure 1-2: Local setting for the project area

Figure 1-3: Topographical setting for the project area

2 TERMS OF REFERENCE

Ergo requested Digby Wells to undertake a heritage study on the Lycaste as part of specialist investigations necessary for the EIA. The purpose of this study was to provide a baseline Heritage Resources Pre-assessment submitted as a Heritage Statement. The following legislation was considered for this study:

- National Environmental Management Act, 1998 (Act No. 107 of 1998)(NEMA), with particular reference to Sections 2(4)(a)(iii), 23(2)(b), 24(1)(c) and 24(7)(b);
- National Heritage Resources Act, 1999 (Act No. 25 of 1999)(NHRA), with particular reference to Sections 28, 33, 34, 35, 36, 37 and 38;
- South African Heritage Resources Agency (SAHRA) Minimum Standards for Archaeological and Palaeontological Components of Impact Assessments, 2009; and
- SAHRA Assessment and Mitigation of Archaeological and Paleaontological Heritage Resources as Prerequisites for Mining and Prospecting, 2006

3 KNOWLEDGE GAPS

Several knowledge gaps were identified in the completion of this report including the following areas.

- The subterranean nature of archaeological deposits. Because archaeological deposits are below the surface of the ground, many are only identified when they are disturbed, and are not obvious on the surface.
- Intangible Heritage. Intangible heritage refers to heritage that is not apparent on the landscape. This can include events, cultural significance among select areas of society, and aesthetics connected to specific places. In this regard, the mine dumps of Johannesburg mean many things to different people, and are symbolic of the economic history of the city and its surrounding satellite settlements.
- Pre-existing heritage resources. Because of the way in which mine dumps are constructed, any undocumented structures, or heritage sites that were on the landscape before the construction of the mine dump could be exposed during reclamation. Refer for instance to a recent case of an unknown cemetery found beneath another of the Crown mine dumps (Smillie 2011).

4 EXPERTISE OF THE SPECIALIST

A CV and declaration of independence is attached in Appendix A.

5 AIMS AND OBJECTIVES

The aims and objectives of this Heritage Statement was to:

- Identify potential heritage resources in the proposed project area;
- Determine historical contexts within which potential heritage resources may occur;
- Identify potential cultural landscape based on natural features and topography;
- Recommend preliminary measures that will prevent and/or minimise potential impacts on cultural resources and landscape.

6 METHODOLOGY

Within the Heritage Statement attempts were made to identify heritage resources that do or may occur within the specific project areas and the general surrounding area. This provided historical context within which heritage resources can be assessed in terms of significance and severity of impacts. The CRP can be divided into the following components:

Desktop study that included:

- A literature review of published and unpublished research;
- Surveys of various databases;
- Review of archival documents; and
- Review of available assessment reports relevant to the current study.

Cartographic surveys that included:

- Historical maps;
- Topographical maps – 1: 50 000 and 1: 250 000 scale;
- Aerial photography; and
- Satellite imagery.

Additionally, this Heritage Statement has been completed as supplementary information that will accompany the Notice of Intent to Develop (NID) that will be submitted to the South African Heritage Resources Agency (SAHRA).

7 RESULTS AND DISCUSSIONS

7.1 Historical Context

Lycaste is located just north of the city of Germiston (part of the Greater Johannesburg Metropolitan Area). Germiston was formed around a large railway yard, as it was situated at the convergence of several prominent railway lines: a north-south line from Cape Town through Kimberly to Pretoria, and an eastern line into what is today Mpumalanga. Germiston was founded as a municipality in 1905, and was declared a city in 1950. The town was named after the childhood home of John Jack, one of two prospectors who discovered gold on the farm Elandsfontein in 1886. The town was well positioned as an industrial centre due to its location – accessibility to mineral resources and transport facilities. A large gold refinery was also established in Germiston to refine ores from the the Witwatersrand mines.

According to DRD Gold Lycaste is the result of mining operations of the the Balmoral Gold Mining Company (Ltd). This mine was in operation from 1908 and closed down in 1952, after which the dump also fell into disuse.

7.2 Review of Impact Assessment Reports

The SAHRA Report Mapping Database was consulted to determine whether any heritage studies have been undertaken in the general vicinity of Lycaste that could provide some further baseline information. Only one study was identified, that focused on a cemetery 1.5 km north of the project area (Schoeman & Van Doornum, 2001). This study identified Chinese migrant workers'.

7.3 Archival Survey

A survey of the South African National Archives Database was done. General records related to the Balmoral Mine were found, but no specific sources related to the 4A6 dump. Furthermore, no records were found to exist on the Chief Surveyor-General database for the land on which the dump is located prior to 2001.

8 PRELIMINARY RECOMMENDATIONS

Preliminary recommendations:

- A Letter of Recommendation for Exemption of a Heritage Impact Assessment is requested;
 - No archaeological heritage resources were identified that will be negatively impacted on by the proposed project; and
 - The Lycaste Sand Dump 4/A/6 has been altered and changed by to the extent that it's heritage value is low to negligible.

9 CONCLUSION

Reclamation of the Lycaste will ultimately destroy the dump. No archaeological heritage were identified or expected to occur in the project area. However, the dump may be considered as part of historical cityscapes and mining heritage. This possible significance should be weighed against potential social, economic and environmental benefits.

10 REFERENCES

Published References

Buxton, E 1931. The Jameson Raid. *Journal of the Royal African Society* Vol. 30, No. 119 pp. 113-118.

Du Plooy, J 2005. The West rand during the Anglo Boer War. <http://wrhc.co.za/documents/earlykruger.pdf>. Accessed 01/12/2011.

Lang, J 1986. *Bullion Johannesburg: Men, Mines and the Challenge of Conflict*. Jonathan Ball Publishing, Johannesburg.

Smillie, S 2011. Experts work on mystery Skeletons. In *The Star (Online Edition)*. <http://www.iol.co.za/the-star/experts-work-on-mystery-skeletons-1.1107290>

Walker, E. A 1940. The Jameson Raid. *Cambridge Historical Journal* 6(3): 283-306.

Unpublished References and persons consulted

Schoeman, M.H. & van Doornum, B. 2001. *Archaeological Assessment of the Abrahamson Cemetery, Boksburg*. An unpublished report by Archaeological Resources Management. SAHRA report number: 2001-SAHRA-0052.

Vivian Labuschagne DRD Gold, personal communication.

Louis Kleynhans, DRD Gold, personal communication.



Guy Thomas
Archaeologist (Intern)



Johan Nel
Unit manager: CRM



Appendix A: CV of Specialist

Curriculum Vitae for Mr Guy Thomas

Personal Details

Birthday: 24/12/1987

Demographics: Male,

Contact details: 9 Budock rd

Claremont

7708

Cape Town

Cell- 076 725 5277

Language skills: English - Excellent

Afrikaans-fair

Driver's License: Code B

Professional memberships

Association of Southern African Professional Archaeologists (ASAPA)

High school

Westerford High School

Matric 2006

Tertiary Education

University of Cape Town

BSocSci Social Anthropology and Archaeology (December 2009)

BSocSci (Hons.) Archaeology (June 2011)

Current employment

Archaeology Intern at Digby Wells Environmental, Randburg (4 July 2011- 2 December 2011)

Previous employment

- **Research Assistant to Dr. Jessica Thompson (University of Queensland, Brisbane, Australia)**

This project is concerned with analyzing the exploitation of tortoises as a food source in the middle stone age from the Blombos cave collection at the Iziko Museum in Cape Town. My duties included assisting Dr. Jessica Thompson in the curation of the Blombos reptile collection. This included sorting, labeling, refitting, database entry and photographic recording.

February 2011 - June 2011

Ref. Jessica.thompson@uq.edu.au

- **Monitoring position at Parliamentary Monitoring Group (PMG).**

Duties included accurate note taking and reporting on the events of parliamentary committee meetings, timely submission of written reports and working to a strict deadline. PMG requires that reports are written to a high standard.

August 2010 - February 2011

Ref. Rashaad Allie. Monitors@pmg.org.za

- **Data Entry Position in UCT Archaeology Contracts Office**

Work focused on the Prestwich burial ground excavation, where more than 1500 skeletons were excavated. This project was concerned with the creation of a public access database where the demographics of the burial ground could be shared with the public. My duties were to collate all of the information on the site record forms and to enter this on a Microsoft Access database. This database will be published, once other sites of similar circumstance are included in the project.

April 2009 - June 2010

Ref. Timothy.hart@uct.ac.za

Field experience

2011-Libanon/Pramberg excavation season. (Historical/ Late Iron Age site). Director: Dr Simon Hall.

2010-Elandsfontein Field School, employed as a teaching assistant. (Plio/Pleistocene Early Stone Age Site). Director: Dr David Braun

-Libanon/Pramberg excavation season. (Historical/ Late Iron Age site). Director: Dr Simon Hall

-Rooiberg/Rhenosterkloof excavation and site sampling. (Late Iron Age Site). Performed with Dana Rosenstein and Foreman Bandama.

-Phalaborwa Mining Company excavation season. (Middle Iron Age site). Director: Dr Shadreck Chirikure

2009-Elandsfontein Field School as a student, (Plio/Pleistocene Early Stone Age Site). Director: Dr David Braun

-Rooiberg/Rhenosterkloof excavation (Late Iron Age Site). Director: Dr Simon Hall

-Libanon/Pramberg initial survey. (Historical/ Late Iron Age site). Director: Dr Simon Hall

2008-Hoffman/Robberg Cave excavation 2008 season. (Late Stone Age site). Director: Prof. Judith Sealy

CRM (Contract work)

2011 -Scoping survey for proposed Platinum Mine at Mokopane, Limpopo for Ivanhoe Platinum (Digby Wells Environmental)

-Scoping survey for Proposed Platinum Mine Prospecting in Mpumalanga, near Bethal for Anglo Platinum (Digby Wells Environmental)

-Scoping survey for Proposed Roodepoort Strengthening Powerline for Eskom (Digby Wells Environmental)

-Phase 2 Mitigation of Archaeological sites at Boikarabelo Coal Mine, Steenbokpan, Limpopo (Digby Wells Environmental)

Additional experience

-Various Contract surveys and Excavations through the Archaeology Contracts Office from the University of Cape Town, including grave excavations (Green point), as well as land surveys (Cedarberg and Kommetjie) and excavations of historical buildings (Tokai Manor house).