Archaetnos Culture & Cultural
Resource Consultants
BK 98 09854/23

A REPORT ON A CULTURAL HERITAGE IMPACT ASSESSMENT FOR ADDITIONAL INFRASTRUCTURE AT THE EVANDER GOLD MINE, MPUMALANGA PROVINCE

For:

CABANGA ENVIRONMENTAL
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REPORT NO.: AE01703V

By:

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***Accredited member of ASAPA* (Accreditation number: 166)**
***Accredited member of SASCH* (Accreditation number: CH001)**

21 February 2017

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SUBMISSION OF REPORT

Please note that the South African Heritage Resources Agency (SAHRA) or one of its subsidiary bodies needs to comment on this report.

It is the client's responsibility to do the submission via the SAHRIS System on the SAHRA website.

Clients are advised not to proceed with any action before receiving the necessary comments from SAHRA.

DISCLAIMER

Although all possible care is taken to identify all sites of cultural importance during the survey of study areas, the nature of archaeological and historical sites are as such that it always is possible that hidden or subterranean sites could be overlooked during the study. Archaetnos and its personnel will not be held liable for such oversights or for costs incurred as a result thereof.

Should it be necessary to visit a site again as a result of the above mentioned, an additional appointment is required.

Reasonable editing of the report will be done upon request by the client if received within 60 days of the report date. However editing will only be done once and clients are therefore requested to send all possible changes in one request. Any format changes or changes requested due to insufficient or faulty information provided to Archaetnos on appointment, will only be done by additional appointment.

Any changes to the scope of a project will require an additional appointment.

EXECUTIVE SUMMARY

Purpose:
Archaetnos cc was requested by Cabanga Environmental to conduct a cultural heritage impact assessment (HIA) for the proposed Evander Gold Mine. The proposed development currently is in the EIA phase.

Project description:
The development is to extend this Evander Tailings Recycling Project to include the re-processing of the Winkelhaak and Leslie/Bracken TSFs, ultimately consolidating them into one large TSF at the end of life of mine. In addition, a dedicated extraction and smelting plant will be established within the Kinross shaft complex to handle additional tailings loads. These operational changes will require authorisation in terms of the various environmental legislation and as such an application for Environmental Authorisation ("EA") was submitted as per the requirements of the National Environmental Management Act, Act No. 107 of 1998 ("NEMA") and the NEM: Waste Act, Act No. 59 of 2008 ("NEM:WA"); read together with the MPRDA.

Methodology:
The methodology for the study includes a survey of literature and a field survey. The latter was conducted according to generally accepted HIA practices and was aimed at locating all possible objects, sites and features of cultural significance in the area of proposed development.

If required, the location/position of any site was determined by means of a Global Positioning System (GPS), while photographs were also taken where needed. The survey was undertaken by doing a physical survey via off-road vehicle and on foot and covered as much as possible of the area to be studied. Certain factors, such as accessibility, density of vegetation, etc. may however influence the coverage.

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

Public consultation:
Public consultation was handled by Cabanga Environmental. This included engagement with property owners and owners of adjacent properties, public meetings and open days and engagement with interested and affected parties. Newspaper notices were placed in September 2016. Site notices were placed on site on 19 October 2016.

Findings:
During the survey two sites of cultural heritage significance were identified within the immediate project area. Both will not be impacted on directly. These are discussed and mitigation measures are proposed.

Recommendations:
Site no. 11 is a grave yard which lies approximately 87 m from the proposed return water dams. Some clean water diversion trenches may be constructed closer.. The site should be fenced in and a cultural management plan should be drafted for the sustainable preservation

thereof. The plan should be drafted by a heritage specialist and should inter alia take into account a buffer zone of at least 20 m and controlled access to descendants.

Site no.11a is a farm yard, lying right on the edge of the proposed return water dam. At least some of the structures are expected be directly impacted on. The site may be mitigated and therefore a full photographic documentation is recommended, after which it may be demolished. For this a demolition permit is needed form the relevant heritage authority.

The remaining structures at site 11a, which will not be impacted on directly, can be left ***in situ***. Should the mine however wish to have it demolished, it may be allowed, as long as it is also documented photographically.

The other sites indicated close to, but outside of the development area should be monitored regularly to ensure that its state of preservation do not deteriorate.

The proposed development may continue only after the mitigation measures indicated above had been implemented and approved by SAHRA.

It should be noted that the subterranean presence of archaeological and/or historical sites, features or artifacts is always a distinct possibility. Due to the density of vegetation it also is possible that some sites may only become known later on. Operating controls and monitoring should therefore be aimed at the possible unearthing of such features. Care should therefore be taken when development commences that if any of these are discovered, a qualified archaeologist be called in to investigate the occurrence.

It is also important to take cognizance that it is the client's responsibility to do the submission of this report via the SAHRIS System on the SAHRA website. No work on site may commence before receiving the necessary comments from SAHRA.

CURRICULUM VITAE OF SPECIALIST: PROF ANTON CARL VAN VOLLENHOVEN

Tertiary education

- BA 1986, University of Pretoria
- BA (HONS) Archaeology 1988 (cum laude), University of Pretoria
- MA Archaeology 1992, University of Pretoria
- Post-Graduate Diploma in Museology 1993 (cum laude), University of Pretoria
- Diploma Tertiary Education 1993, University of Pretoria
- DPhil Archaeology 2001, University of Pretoria.
- MA Cultural History 1998 (cum laude), University of Stellenbosch
- Management Diploma 2007 (cum laude), Tshwane University of Technology
- DPhil History 2010, University of Stellenbosch

Employment history

- *1988-1991:* Fort Klapperkop Military Museum - Researcher
- *1991-1999:* National Cultural History Museum. Work as Archaeologist, as well as Curator/Manager of Pioneer Museum (1994-1997)
- *1999-2002:* City Council of Pretoria. Work as Curator: Fort Klapperkop Heritage Site and Acting Deputy Manager Museums and Heritage.
- *2002*-2007: City of Tshwane Metropolitan Municipality. Work as Deputy Manager Museums and Heritage.
- *August 2007* – present – Managing Director for Archaetnos Archaeologists.
- *1988-2003*: Part-time lecturer in Archaeology at the University of Pretoria and a part-time lecturer on Cultural Resources Management in the Department of History at the University of Pretoria.
- *2014*: Part-time lecturer for the Honours degree in Museum Sciences in the Department of History and Heritage Studies at the University of Pretoria
- *2015*: Appointed extraordinary professor in history at the Mafikeng Campus of the Northwest University

Other

- Published 75 articles in scientific and popular journals on archaeology and history.
- Author and co-author of over 580 unpublished reports on cultural resources surveys and archaeological work. A list of reports can be viewed on www.archaetnos.co.za
- Published a book on the Military Fortifications of Pretoria.
- Contributed to a book on Mapungubwe.
- Delivered more than 50 papers and lectures at national and international conferences.
- Member of SAHRA Council for 2003 – 2006.
- Member of the South African Academy for Science and Art.
- Accredited professional member of Association for South African Professional Archaeologists.
- Accredited professional member of the South African Society for Cultural History (Chairperson 2006-2008; 2012-2014).
- Has been editor for the SA Journal of Cultural History 2002-2004.
- Member of the Provincial Heritage Resources Agency, Gauteng's Council.
- Member of Provincial Heritage Resources Agency, Gauteng's HIA adjudication committee (Chairperson 2012-2019).

ASAPA Accreditation number: 166
SASCH Accreditation number: CH001

DECLARATION OF INDEPENDENCE

I, Anton Carl van Vollenhoven from Archaetnos, hereby declare that I am an independent specialist within the field of heritage management.

Signed:  Date: 21 February 2017

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LIST OF ACRONYMS:

AIA – Archaeological Impact Assessment
CMP – Cultural Management Plan
EAP – Environmental Assessment Practitioner
EIA – Environmental Impact Assessment
HIA – Heritage Impact Assessment
PIA – Palaeontological Impact Assessment
SAHRA –South African Heritage Resources Agency

1. INTRODUCTION

Archaetnos cc was requested by Cabanga Environmental to conduct a cultural heritage impact assessment (HIA) for the proposed Elikhulu Project at the Evander Gold Mines. As the name indicates this is close to the town of Evander in the Mpumalanga Province (Figure 1-4).
Evander Gold Mines has been operational since 1958, and has an approved mining right and Environmental Management Programme report ("EMPr") in terms of the Minerals and Petroleum Resources Development Act, Act 28 of 2002 ("MPRDA"). The approved EMPr currently authorises the mining and processing of gold and associated activities at the mine's three operational shaft complexes (Kinross, Winkelhaak and Leslie/Bracken). In addition, the approved EMPr covers the re-processing of the Kinross Tailings Storage Facility ("TSF") as part of the Evander Tailings Recycling Project.

Evander Gold Mines intends to extend this Evander Tailings Recycling Project to include the re-processing of the Winkelhaak and Leslie/Bracken TSFs, ultimately consolidating them into one large TSF at the end of life of mine. In addition, a dedicated extraction and smelting plant will be established within the Kinross shaft complex to handle additional tailings loads. These operational changes require authorisation in terms of the various environmental legislation and as such an application for Environmental Authorisation ("EA") was submitted as per the requirements of the National Environmental Management Act, Act No. 107 of 1998 ("NEMA") and the NEM: Waste Act, Act No. 59 of 2008 ("NEM:WA"); read together with the MPRDA. The proposed project is currently in the EIA phase of the Environmental Authorisation Process.

2. PROJECT INFORMATION

2.1 LOCALITY

Evander Gold Mine's operational areas can be divided into three shaft complexes, namely Kinross; Winkelhaak and Leslie/Bracken. These complexes are situated south of the N17 near the town of Evander. The area is largely characterised by mining, industry, and residential use with some scattered agricultural use (grazing).

- The Kinross complex is located immediately west of the town of Evander, separated by the R546. A small industrial area is located south of the existing Kinross TSF.
- The Leslie complex is situated approximately 5 kilometres south-west of the Kinross complex, and just north-east of eMbalenhle.
- The Winkelhaak complex is situated approximately 4 kilometres south-east of the Kinross complex, and 2.5km north-east of eMbalenhle.
- The mine's evaporation dam, the Leeuwpan Dam, is located approximately 12 kilometres south-west of the Kinross complex and 6 kilometres west of eMbalenhle.

TABLE 1: SUMMARY OF GEOGRAPHICAL DETAILS

Size of farm and portions	5288,75 Ha Affected farms:

	Winkelhaak 135 IS Leeuwspruit 134 IS Witkleifontein 131 IS Zandfontein 130 IS Grootspruit 279 IS Langverwacht 282 IS Leeuwpan 532 IR Rietkuil 531 IR Springbokdraai 277 IS
Magisterial district	Govan Mbeki Local and Gert Sibande District
1:50 000 map sheet number	2628 BD, 2629 AC, 2628 DB and 2629 CA
Central co-ordinate of the development	26°29’29.91”S; 29°05’03.75”E

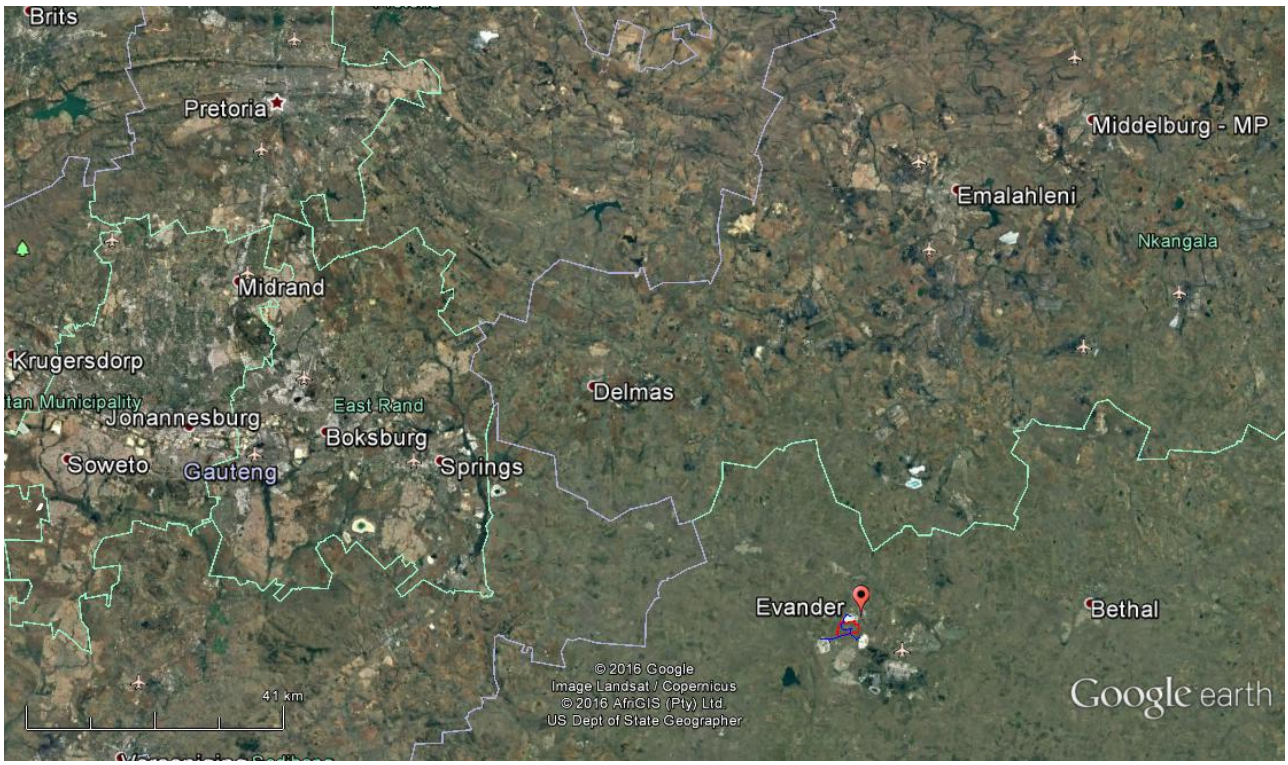

FIGURE 1: LOCATION OF EVANDER IN THE MPUMALANGE PROVINCE.

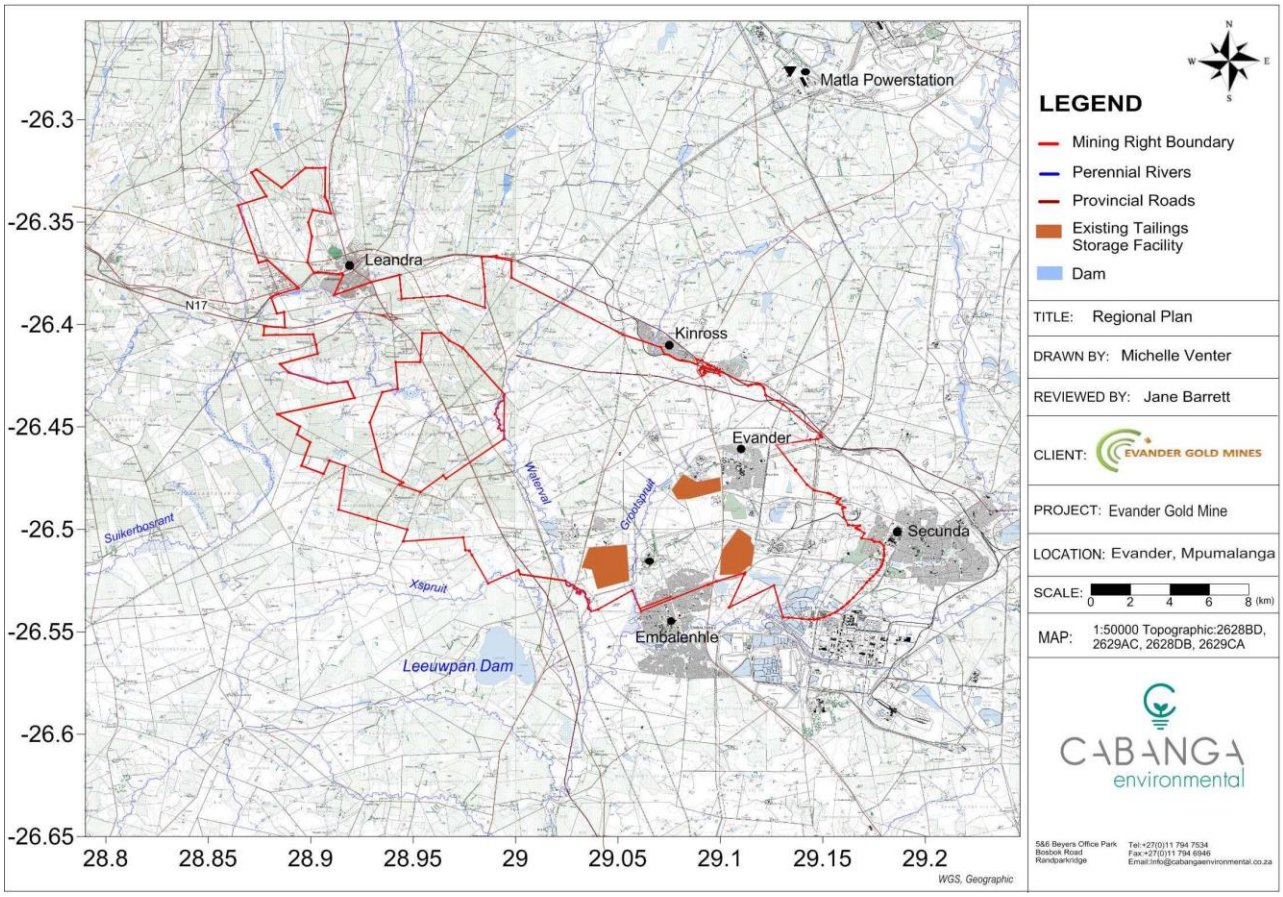

FIGURE 2: REGIONAL MAP INDICATING THE APPROVED MINERAL RIGHT (CABANGA ENVIRONMENTAL).

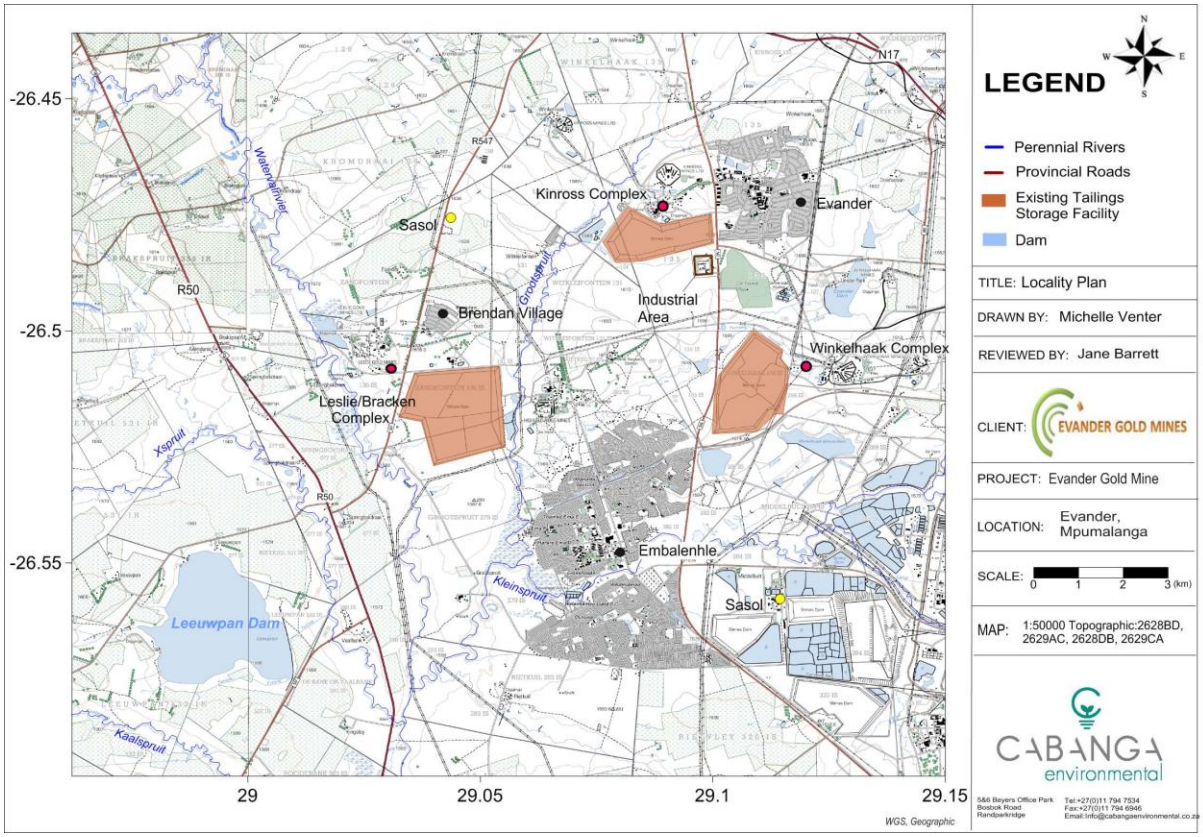

FIGURE 3: LOCALITY PLAN (CABANGA ENVIRONMENTAL).

2.2 PROJECT DESCRIPTION

The proposed project entails the construction of facilities and infrastructure at EGM to re-process gold tailings, the three existing TSFs will be mined in the following sequence:

- Kinross TSF
- Leslie TSF
- Winkelhaak TSF

Additional facilities and infrastructure required for the project include:

- Hydraulic mine infrastructure (incl. pump stations) to be constructed at each of the TSFs
- Water and slurry reticulation pipelines, to be constructed within existing servitudes registered in favour of EGM
- New plant ("the Elikhulu Plant") and associated infrastructure
    - The new plant will be constructed adjacent to the existing metallurgical plant, located at the Kinross complex
- "New" TSF and associated water management facilities (including the refurbishment of the existing Kinross Kariba RWD)
    - The new TSF will be designed as an extension to the existing Kinross TSF. Once the existing Kinross TSF material is recovered; the footprint that becomes available will be re-utilised and a new large TSF will be established at Kinross.

- Water supply
    - Water will be sourced from the mine's existing evaporation dam, the Leeuwpan Dam.
- Power supply

TABLE 2: SUMMARY OF PROJECT SPECIFICS

Type of development	Existing gold mine
Detail of proposed activities (NHRA section 38 triggers)	Application for additional infrastructure and re-processing of gold tailings
Size of project components	Pipelines – 12,8 km New TSF & RDW – 260 Ha Plant area – 10 Ha

FIGURE 4: PROPOSED INFRASTRUCTURE LAYOUT (CABANGA ENVIRONMENTAL).

2.3 APPLICANT AND EAP DETAILS

The applicant is Evander Gold Mines (Pty) Ltd and the EAP compiling the application for EA is Cabanga Environmental.

3. TERMS OF REFERENCE

The Terms of Reference for the survey were to:

1. Identify objects, sites, occurrences and structures of an archaeological or historical nature (cultural heritage sites) located on the property (see Appendix A).

2. Document the found cultural heritage sites according to best practice standards for heritage related studies.

3. Study background information on the area to be developed.

4. Assess the significance of the cultural resources in terms of their archaeological, historical, scientific, social, religious, aesthetic and tourism value (see Appendix B).

5. Describe the possible impact of the proposed development on these cultural remains, according to a standard set of conventions.

6. Recommend suitable mitigation measures to minimize possible negative impacts on the cultural resources by the proposed development.

7. Review applicable legislative requirements.

4. LEGISLATIVE REQUIREMENTS

Aspects concerning the conservation of cultural resources are dealt with mainly in two acts. The first of these are the National Heritage Resources Act (Act 25 of 1999) which deals with the cultural heritage of the Republic of South Africa. The second is the National Environmental Management Act (Act 107 of 1998) which inter alia deals with cultural heritage as part of the Environmental Impact Assessment process.

4.1 The National Heritage Resources Act

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

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

The national estate (see Appendix D) includes the following:

a. Places, buildings, structures and equipment of cultural significance
b. Places to which oral traditions are attached or which are associated with living heritage
c. Historical settlements and townscapes
d. Landscapes and features of cultural significance
e. Geological sites of scientific or cultural importance

f. Archaeological and paleontological importance
g. Graves and burial grounds
h. Sites of significance relating to the history of slavery
i. Movable objects (e.g. archaeological, paleontological, meteorites, geological specimens, military, ethnographic, books etc.)

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

A Palaeontological Impact Assessment (PIA) is an assessment of palaeontological heritage. Palaeontology is a different field of study, and although also sometimes required by the South African Heritage Resources Agency (SAHRA)[1], should be done by a professional palaeontologist.

The different phases during the HIA process are described in Appendix E. An HIA must be done under the following circumstances:

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

Structures

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

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

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

Archaeology, palaeontology and meteorites

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

a. destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or paleontological site or any meteorite;

[1] Please consult SAHRA to determine whether a PIA is necessary.

b. destroy, damage, excavate, remove from its original position, collect or own any archaeological or paleontological 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 paleontological material or object, or any meteorite; or
d. bring onto or use at an archaeological or paleontological site any excavation equipment or any equipment that assists in the detection or recovery of metals or archaeological and paleontological material or objects, or use such equipment for the recovery of meteorites.
e. alter or demolish any structure or part of a structure which is older than 60 years as protected.

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

Human remains

Graves and burial grounds are divided into the following:

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

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

a. destroy, damage, alter, exhume or remove from its original position or otherwise disturb the grave of a victim of conflict, or any burial ground or part thereof which contains such graves;
b. destroy, damage, alter, exhume or remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority; or
c. bring onto or use at a burial ground or grave referred to in paragraph (a) or (b) any excavation, or any equipment which assists in the detection or recovery of metals.

Unidentified/unknown graves are also handled as older than 60 until proven otherwise.

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

Permission must also be gained from the descendants (where known), the National Department of Health, Provincial Department of Health, Premier of the Province and local police. Furthermore, permission must also be gained from the various landowners (i.e. where the graves are located and where they are to be relocated) before exhumation can take place. Human remains can only be handled by a registered undertaker or an institution declared under the **Human Tissues Act** (**Act 65 of 1983 as amended**).

4.2 The National Environmental Management Act

This act (Act 107 of 1998) states that a survey and evaluation of cultural resources must be done in areas where development projects, that will change the face of the environment, will be undertaken. The impact of the development on these resources should be determined and proposals for the mitigation thereof are made.

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

4.3 THE INTERNATIONAL FINANCE CORPORATIONS' PERFORMANCE STANDARD FOR CULTURAL HERITAGE

This standard recognizes the importance of cultural heritage for current and future generations. It aims to ensure that clients protect cultural heritage in the course of their project activities.

This is done by clients abiding to the law and having heritage surveys done in order to identify and protect cultural heritage resources via field studies and the documentation of such resources. These need to be done by competent professionals (e.g. archaeologists and cultural historians). Any possible chance find, encountered during the project development, also needs to be managed by not disturbing it and by having it assessed by professionals.

Impacts on the cultural heritage should be minimized. This includes the possible maintenance of such sites in situ, or when not possible, the restoration of the functionality of the cultural heritage in a different location. When cultural historical and archaeological artifacts and structures need to be removed, this should be done by professionals and by abiding to the applicable legislation. The removal of cultural heritage resources may, however, only be considered if there are no technically or financially feasible alternatives. In considering the removal of cultural resources, it should be outweighed by the benefits of the overall project to the affected communities. Again professionals should carry out the work and adhere to the best available techniques.

Consultation with affected communities should be conducted. This entails that such communities should be granted access to their cultural heritage if this is applicable. Compensation for the loss of cultural heritage should only be given in extra-ordinary circumstances.

Critical cultural heritage may not be impacted on. Professionals should be used to advise on the assessment and protection thereof. Utilization of cultural heritage resources should always be done in consultation with the affected communities in order to be consistent with their customs and traditions and to come to agreements with relation to possible equitable sharing of benefits from commercialization.

5. METHODOLOGY

5.1 Survey of literature

A survey of literature was undertaken in order to obtain background information regarding the area. Sources consulted in this regard are indicated in the bibliography.

5.2 Reference to other specialist desktop studies

A PIA on the area was done in January 2017 (Bamford 2017). According to this desktop assessment, the rocks of the Johannesburg Subgroup underlie the area and contain the gold deposits. These are too old and not suitable to contain any fossils. However, there could potentially be fossil vertebrates and plants in the sandstones and shales of the Volksrust Formation, but in many cases these would have been destroyed by the dolerite dykes.

It is further indicated that the SAHRIS palaeosensitivity map for the site indicates both red (highly sensitive) and grey regions (insignificant to zero) for this area, but there are, however, no published records of fossil plants or invertebrates from this area. The areas designated for re-processing are already highly disturbed and the tailings have covered the land surface and therefore it is highly unlikely that any fossils would be found there.

5.3 Public consultation and stakeholder engagement

Public consultation was handled by Cabanga Environmental and the necessary report can be requested from them. This included engagement with property owners and owners of adjacent properties, public meetings and open days and engagement with interested and affected parties.

Newspaper notices were placed in September 2016. Site notices were placed on site on 19 October 2016.

5.4 Oral histories

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

5.5 Physical field survey

The survey was conducted according to generally accepted HIA practices and was aimed at locating all possible objects, sites and features of cultural significance in the area of proposed development. One regularly looks a bit wider than the demarcated area, as the surrounding context needs to be taken into consideration.

If required, the location/position of any site was determined by means of a Global Positioning System (GPS)[2], while photographs were also taken where needed. The survey was undertaken by doing a physical survey via off-road vehicle and on foot and covered as much as possible of the area to be studied (Figure 5).

[2] A Garmin Oregon 550 with an accuracy factor of a few meters.

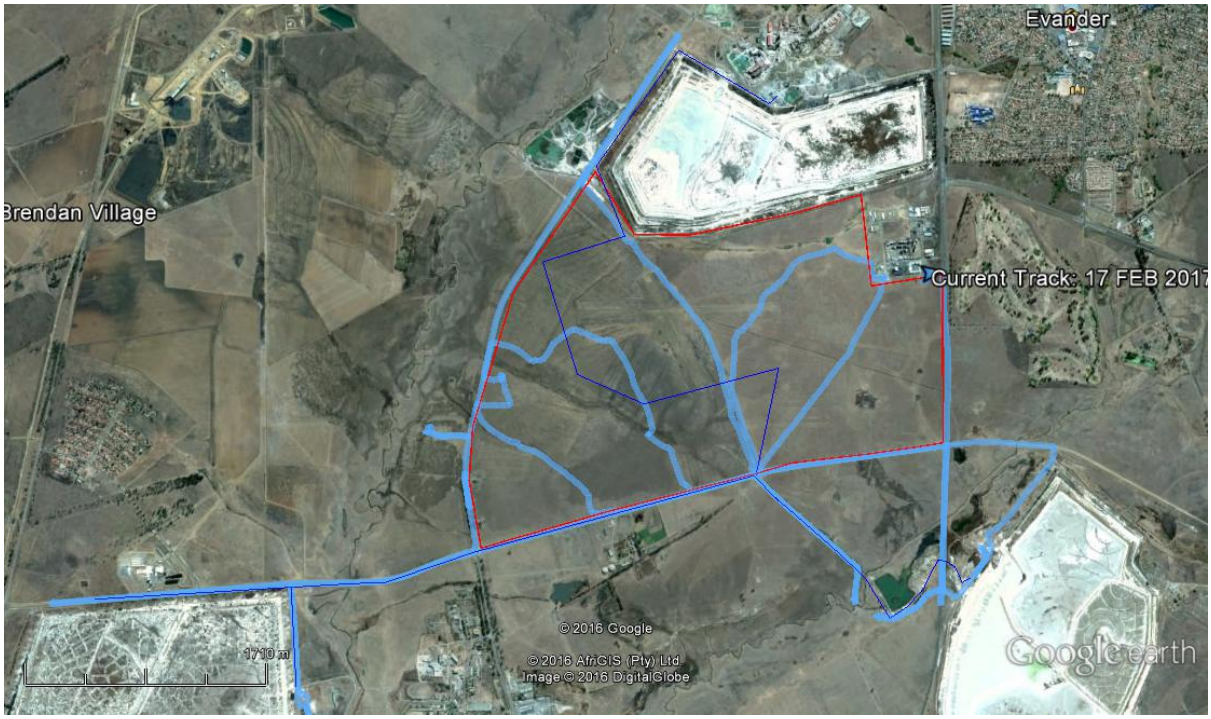

Figure 5: GPS track of the surveyed area.[3] North reference is to the top.

Certain factors, such as accessibility, density of vegetation, etc. may however influence the coverage. In this instance the under footing was extremely dense and the vegetation cover medium to high. Accordingly both the horizontal and the vertical archaeological visibility was influenced negatively. The survey took 5 hours to complete.

5.6 Documentation

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

5.7 Evaluation of Heritage sites

The evaluation of heritage sites is done by giving a field rating of each (see Appendix C) using the following criteria:

- The unique nature of a site
- The integrity of the archaeological deposit
- The wider historic, archaeological and geographic context of the site
- The location of the site in relation to other similar sites or features
- The depth of the archaeological deposit (when it can be determined or is known)
- The preservation condition of the site
- Uniqueness of the site and
- Potential to answer present research questions.

[3] Two people, in radio contact, did the survey, but only one GPS unit was available.

6. ASSUMPTIONS, GAPS, RESTRICTIONS, CONDITIONS AND LIMITATIONS

The following conditions and assumptions have a direct bearing on the survey and the resulting report:

1. Cultural Resources are all non-physical and physical man-made occurrences, as well as natural occurrences associated with human activity (Appendix A). These include all sites, structures and artifacts of importance, either individually or in groups, in the history, architecture and archaeology of human (cultural) development. Graves and cemeteries are included in this.

2. The significance of the sites, structures and artifacts is determined by means of their historical, social, aesthetic, technological and scientific value in relation to their uniqueness, condition of preservation and research potential. The various aspects are not mutually exclusive, and the evaluation of any site is done with reference to any number of these aspects.

3. Cultural significance is site-specific and relates to the content and context of the site. Sites regarded as having low cultural significance have already been recorded in full and require no further mitigation. Sites with medium cultural significance may or may not require mitigation depending on other factors such as the significance of impact on the site. Sites with a high cultural significance require further mitigation (see Appendix C).

4. The latitude and longitude of any archaeological or historical site or feature, is to be treated as sensitive information by the developer and should not be disclosed to members of the public.

5. All recommendations are made with full cognizance of the relevant legislation.

6. It has to be mentioned that it is almost impossible to locate all the cultural resources in a given area, as it will be very time consuming. Developers should however note that the report should make it clear how to handle any other finds that might occur.

7. In this particular case large parts of the surveyed area have been disturbed by mining and other activities. Accordingly these areas are seen as a low risk areas to reveal heritage sites due to it being almost entirely disturbed.

8. The vegetation cover in certain areas was high and dense, which had a negative effect on both the vertical and the horizontal archaeological visibility.

7. DESCRIPTION OF THE SOCIO-ECONOMIC ENVIRONMENT

Govan Mbeki Local Municipality (GMLM) is located in the north western side of the Gert Sibande District Municipality (GSDM) and in the south-western part of Mpumalanga Province. GMLM is 2,958.9km² in extent. GMLM was established in the year 2000 with the amalgamation of the following Towns; Secunda, Bethal, Kinross, Evander, EMbalenhle, Leandra, Trichardt, Emzinoni and Charl Cilliers.

The information below is taken from Statistics South Africa (Census, 2011) and summarises the demographics of the Local Municipality:

- The Govan Mbeki Municipality covers an area of 2 955km².
- The age structure of this region is as follows: 26.9 % of the population is under 15, 69.4% is between 15-64% and 3.7% is over 65.
- The population is growing at an annual rate of 2.84%.
- Only 31.3% of this population have a matric education and 7.9% have no formal schooling.
- The unemployment rate for the population is at 26.2% where 30.8% of these households are run by women.
- There are 83 874 households in the Govan Mbeki Local Municipality, 88.9% of which have toilets connected to a sewage line, 91.7% have weekly refuse removal, 56.5% have piped water in their homes and 90.3% have electricity.

8. DESCRIPTION OF THE PHYSICAL ENVIRONMENT

The area is largely characterised by mining, residential and industrial activities with some agriculture use. Information provided by the client indicate the following:

- The site for the 'new' TSF is heavily grazed by a large herd of cattle. The grass layer is thus generally very low and trampling has led to erosion in some wetland areas. A small industrial area is located to the east of the 'new' TSF. Storm water and possibly some waste water from this industrial area drains directly into the study site. An old airfield is also located on the study site. This airfield was used by the mine in the past. The study site is not fenced and access is thus easily obtained which has led to numerous dirt roads. Dumping was only confined to a small area of the study site.
- The site for the new plant (the Elikhulu Plant) is disturbed and was until recently used for the crushing and screening of waste rock on site.
- The new pipeline are all located within existing pipeline routes, associated servitudes are registered in favour of EGM.

The topography of the project area is characterised by a combination of flat and undulating grassland, with elevations ranging between 1,600 mamsl to 1,617 mamsl.
The overall mining area generally slopes from north to south. The surface area slopes downward from the Leslie TSF towards the Waterval River to the south and south-west of the TSF. The surface area slopes downward from the Kinross and Winkelhaak TSFs towards the Leslie TSF.

The Evander Goldfield is situated on the north-eastern limb of the Witwatersrand Basin, approximately 110 km east-southeast of Johannesburg and hosts several operating and defunct gold mines, all of which produce or produced gold from the Kimberley Reef of Central Rand Group of the Witwatersrand Supergroup. The Witwatersrand Supergroup strata are partially overlain by the Transvaal and Ventersdorp Supergroup sequences and all are entirely overlain by the Karoo Supergroup.

The proposed locations of the New TSF and treatment plant are directly underlain by rocks of the Vryheid Formation occurring in the Ecca Group of the Karoo Supergroup. The Vryheid Formation consists predominantly of thick beds of yellowish to white cross-bedded sandstone and grit alternating with beds of soft sandy shale. The Vryheid Formation also contains coal seams and is widely intruded by dolerite sills. The project area is thus located on recent colluvial and alluvial sands, silts and clays which overlie the weathered and fractured sandstone, mudrock and coal of the Vryheid Formation.

The regional geology gives rise to the land type Ea20. Soils characteristic of this land type are generally dark coloured or red with a high base status and usually clayey. Soil are also potentially associated with wetlands and include Avalon, Estcourt and Westleigh.

The operations around Leeuwpan fall onto the land type Bb3 which is characterised by dominantly yellow-brown, freely drained soils on soft plinthite.

The area that was surveyed is located on the Mpumalanga Highveld and shows typical Highveld characteristics, including grassland with isolated trees. These species are foreign and therefore an indication of disturbance. The vegetation cover varies from areas with medium high but dense grass to areas with dense high vegetation (Figure 6-8). The latter of course has a negative effect on both the horizontal as the vertical archaeological visibility.

The surveyed site has been disturbed to a large extent by recent human activities, mostly former mining and agricultural activities. Pioneer species such as grass and weeds dominate the surveyed area. The main disturbance however, comes from the recent mining activities, including tailings dams (Figure 9-10). Other disturbances include roads, power lines and old air strip (Figure 11-13).

The topography of the surveyed area is fairly flat, with a slight fall towards the south. Small perennial streams were noted and a wetland is found towards the east (Figure 14).

Figure 6: View of vegetation along the pipeline route.

Figure 7: General view in the surveyed area.

Figure 8: Another view of the surveyed area.

Figure 9: Tailings dam along pipeline route.

Figure 10: Another tailings dam along the pipeline route.

Figure 11: Road in the surveyed area.

Figure 12: Disturbance in the surveyed area.

Figure 13: Existing pipe line in the surveyed area.

Figure 14: Wetland area.

9. RESULTS OF PUBLIC CONSULTATION AND STAKEHOLDER ENGAGEMENT

None related to heritage.

10. HISTORICAL CONTEXT

Two sites of cultural heritage significance were located during the survey. Some background information is given in order to place the surveyed area and the sites found in a historical context and to contextualize possible finds that could be unearthed during construction activities. A heritage report was completed for the Evander Gold Mines in the past (Miller 2010). Seventeen sites were identified in this report and are included in the discussion below (SAHRIS database).

10.1 Stone Age

The Stone Age is the period in human history when lithic material was mainly used to produce tools (Coertze & Coertze 1996: 293). In South Africa the Stone Age can be divided in three periods. It is, however, important to note that dates are relative and only provide a broad framework for interpretation. The division for the Stone Age according to Korsman & Meyer (1999: 93-94) is as follows:

Early Stone Age (ESA) 2 million – 150 000 years ago
Middle Stone Age (MSA) 150 000 – 30 000 years ago
Late Stone Age (LSA) 40 000 years ago – 1850 - A.D.

No Stone Age sites are indicated on a map contained in a historical atlas of this area (Bergh 1999: 4). The closest known Stone Age occurrence is that of rock art close to the Olifants River to the south of Witbank (Bergh 1999: 5). This however should rather be seen as a lack of research in the area and not as an indication that such features do not occur. Some Middle Stone Age artifacts were identified out of context during previous surveys in the wider geographical area (Archaetnos' database).

However, no natural shelters were seen during the survey and therefore it is possible that these people did not stay here for long times. The close vicinity of water sources and ample grazing would have made it a prime spot for hunting and obtaining water during the past. Therefore one may assume that Stone Age people probably would have moved through the area.

10.2 Iron Age

The Iron Age is the name given to the period of human history when metal was mainly used to produce metal artifacts (Coertze & Coertze 1996: 346). In South Africa it can be divided in two separate phases according to Van der Ryst & Meyer (1999: 96-98), namely:

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

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

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

No Iron Age sites are indicated in a historical atlas around the town of Middelburg, but this may only indicate a lack of research. The closest known Iron Age occurrences to the surveyed area are Late Iron Age sites that have been identified to the west of Bronkhorstspruit and in the vicinity of Bethal (Bergh 1999: 7-8).

The good grazing and access water in the area would have provided a good environment for Iron Age people although building material seem to be reasonably scarce. One would therefore expect that Iron Age people may have utilized the area. This is the same reason why white settlers moved into this environment later on.

10.3 Historical Age

The Historical Age started with the first recorded oral histories in the area. It includes the in-migration of people that were able to read and write.

The first white people to move through this area were the party of the traveler, Robert Scoon who passed through during 1836 (Bergh 1999: 13). Although the Voortrekkers moved across the Vaal River during the 1830's, it seems as if white people only settled here after 1850 (Bergh 1999: 14-15).

At the beginning of the 19th century the Phuthing, a South Sotho group, stayed in the vicinity of modern day Kriel and Bethal. During the Difaquane they fled to the south (Bergh 1999: 10-11; 109). In 1829 the traveler Robert Scoon passed through an area to the south of Kriel (Bergh 1999: 13). The first white farmers only settled here during the late 1850's. By the 1890's this area was inhabited by many white farmers (Bergh 1999: 18-20).

During the Anglo-Boer War the Highveld areas saw much action consisting of various skirmishes between Boer and Brit (Bergh 1999: 51, 54). It includes skirmishes on the farms Oshoek (4 December 1901), Trigaardsfontein (10 December 1901), Witbank (11 January 1902) and Nelspan (26 January 1902).

One may therefore expect to find farm buildings, structures and objects from this time period in the area. Many graveyards from this period in time have also been identified in surrounding areas during past surveys (Archaetnos database). Miller (2010) has identified farmyards, grave yards, a well, township foundations, a midden and an initiation site in the surveyed area (Figure 15). Only two of these, discussed below, are inside of the area of impact associated with the Elikhulu project.

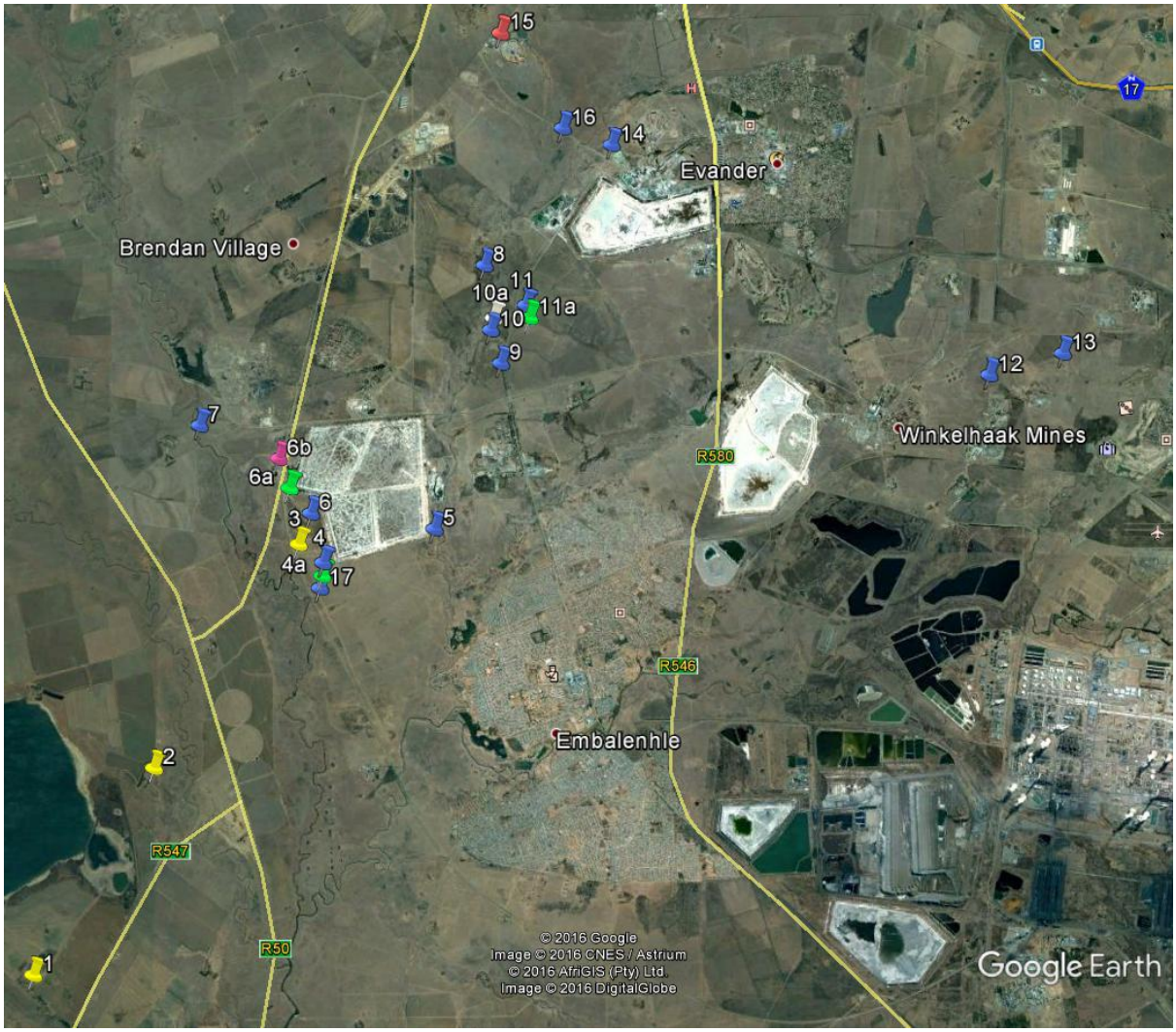

Figure 15: Heritage sites identified by Miller (2010).
Yellow – famyard and graves
Blue – graves
Green – farm yard
Purple – well
White – Initiation site
Red - monument

11. DISCUSSION OF SITES IDENTIFIED DURING THE SURVEY

As indicated, two sites of cultural importance were identified in the surveyed area. Five others were reasonably close, but outside of the project impact area. They are not discussed, but included in the map of heritage sites (Figure 18).

For easy reference, the numbers allocated by Miller is used. All of these date to the Historical Age.

11.1 Site 11 - Grave yard

GPS: 26°29’39.1”S; 29°04’09.9”E

This is a large grave yard containing approximately 15 graves (Figure 16). Most of the graves have cement or granite dressings and headstones. One of the surnames identified is Pieterse. The graves are mostly older than 60 years and some are damaged.

Figure 16: Some of the graves at site no. 11.

Cultural significance Table:

A place is considered to be part of the national estate if it has cultural significance because of -	**Applicable or not**	**Rating:** **1 - Neglible/ 2 -Low/** **3 - Low-Medium/ 4 - Medium/ 5 - Medium-High/ 6 - High/ 7 - Very High**
Its importance in the community or pattern of South Africa’s history	Y	H
Its possession of uncommon, rare, or endangered aspects of South Africa’s natural or cultural history	Y	M
Its potential to yield information that will contribute to an understanding of South Africa’s natural or cultural heritage	Y	M
Its importance in demonstrating the principal characteristics of a particular class of South Africa’s natural or cultural places or objects	Y	H
Its importance in exhibiting particular aesthetic characteristics valued by a community cultural group	N	
Its importance in demonstrating a high degree of creative or technical	N	

achievement at a particular period		
Its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons	Y	H
Its strong or special association with the life or work of a person, group or organization of importance in the history of South Africa	N	
Sites of significance relating to the history of slavery in South Africa	N	
Reasoned assessment of significance using appropriate indicators outlined above:		5 - Medium-High

Integrity scale:
1 – Bad state of preservation, but no contextual information
2 – Bad state of preservation and includes contextual information
3 – Reasonable state of preservation, but no contextual information
4 – Reasonable state of preservation and includes contextual information
5 – Good state of preservation, but no contextual information
6 - Good state of preservation and includes contextual information
7 – Excellent state of preservation, but no contextual information
8 – Excellent state of preservation and includes contextual information

Field-rating (56) = Cultural significance x Integrity
= 5 (Medium-High) x 4
= 20

The field rating therefore is Local Grade IIIB. It may be mitigated and should be included in the heritage register.

Two possibilities exist. The first option would be to fence the graves in and have a management plan drafted for the sustainable preservation thereof. This should be written by a heritage expert. This usually is done when the graves are in no danger of being damaged, but where there will be a secondary impact due to the activities of the development.

The second option is to exhume the mortal remains and then to have it relocated. This usually is done when the graves are in the area to be directly affected by the development activities. For this a specific procedure should be followed which includes social consultation. For graves younger than 60 years only an undertaker is needed. For those older than 60 years and unknown graves an undertaker and archaeologist is needed. Permits should be obtained from the Burial Grounds and Graves unit of SAHRA. This procedure is quite lengthy and involves social consultation.

The graves seem to be outside of the area of direct impact. However, there always is a secondary impact due to adjacent mining activities and issues with accessibility to the site for descendants. Therefore Option 1 is recommended. This includes the writing of a site preservation management plan and fencing in of the site. A buffer of at least 20 m is proposed, but the management plan may deviate from this, depending on other available information. Access to descendants also should be allowed.

11.2 Site 11a – Farmyard remains

GPS: 26°29’45.3”S; 29°04’11.9”E

The site consists of the rectangular ruin of a house, built from stone and a number of outbuildings of similar style (Figure 16). The house has at least three rooms and has measurements of approximately 12 x 5 m. At least two outbuildings and a kraal is visible. It is a very common building style for the early farms in the vicinity and is in a reasonably bad state of preservation.

Figure 17: Farm yard remains.

Cultural significance Table:

A place is considered to be part of the national estate if it has cultural significance because of -	**Applicable or not**	**Rating:** **1 - Neglible/ 2 -Low/** **3 - Low-Medium/ 4 - Medium/ 5 - Medium-High/ 6 - High/ 7 - Very High**
Its importance in the community or pattern of South Africa’s history	Y	L
Its possession of uncommon, rare, or endangered aspects of South Africa’s natural or cultural history	Y	L
Its potential to yield information that will contribute to an understanding of South Africa’s natural or cultural heritage	Y	N
Its importance in demonstrating the principal characteristics of a particular class of South Africa’s	Y	L

natural or cultural places or objects		
Its importance in exhibiting particular aesthetic characteristics valued by a community cultural group	Y	L-M
Its importance in demonstrating a high degree of creative or technical achievement at a particular period	Y	L-M
Its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons	Y	M
Its strong or special association with the life or work of a person, group or organization of importance in the history of South Africa	Y	L-M
Sites of significance relating to the history of slavery in South Africa	N	
Reasoned assessment of significance using appropriate indicators outlined above:		3 – Low-Medium

Integrity scale:
1 – Bad state of preservation, but no contextual information
2 – Bad state of preservation and includes contextual information
3 – Reasonable state of preservation, but no contextual information
4 – Reasonable state of preservation and includes contextual information
5 – Good state of preservation, but no contextual information
6 - Good state of preservation and includes contextual information
7 – Excellent state of preservation, but no contextual information
8 – Excellent state of preservation and includes contextual information

Field-rating (56) = Cultural significance x Integrity
= 3 (Low-Medium) x 3
= 9

The field rating therefore is Local Grade IIIB. It may be mitigated and should be included in the heritage register.

The site lies right on the edge of the proposed return water dam. At least some of the structures will be directly impacted on. Therefore a full photographic documentation is recommended, after which it may be demolished. For this a demolition permit is needed form the relevant heritage authority.

The remaining structures at the site, which will not be impacted on directly, can be left ***in situ***. Should the mine however wish to have it demolished, it may be allowed, as long as it is also documented photographically.

12. CONCLUSION AND RECOMMENDATIONS

The survey of the indicated area was completed successfully. As indicated two sites of cultural heritage significance were identified within the proposed project area, with another five nearby (Figure 18-19).

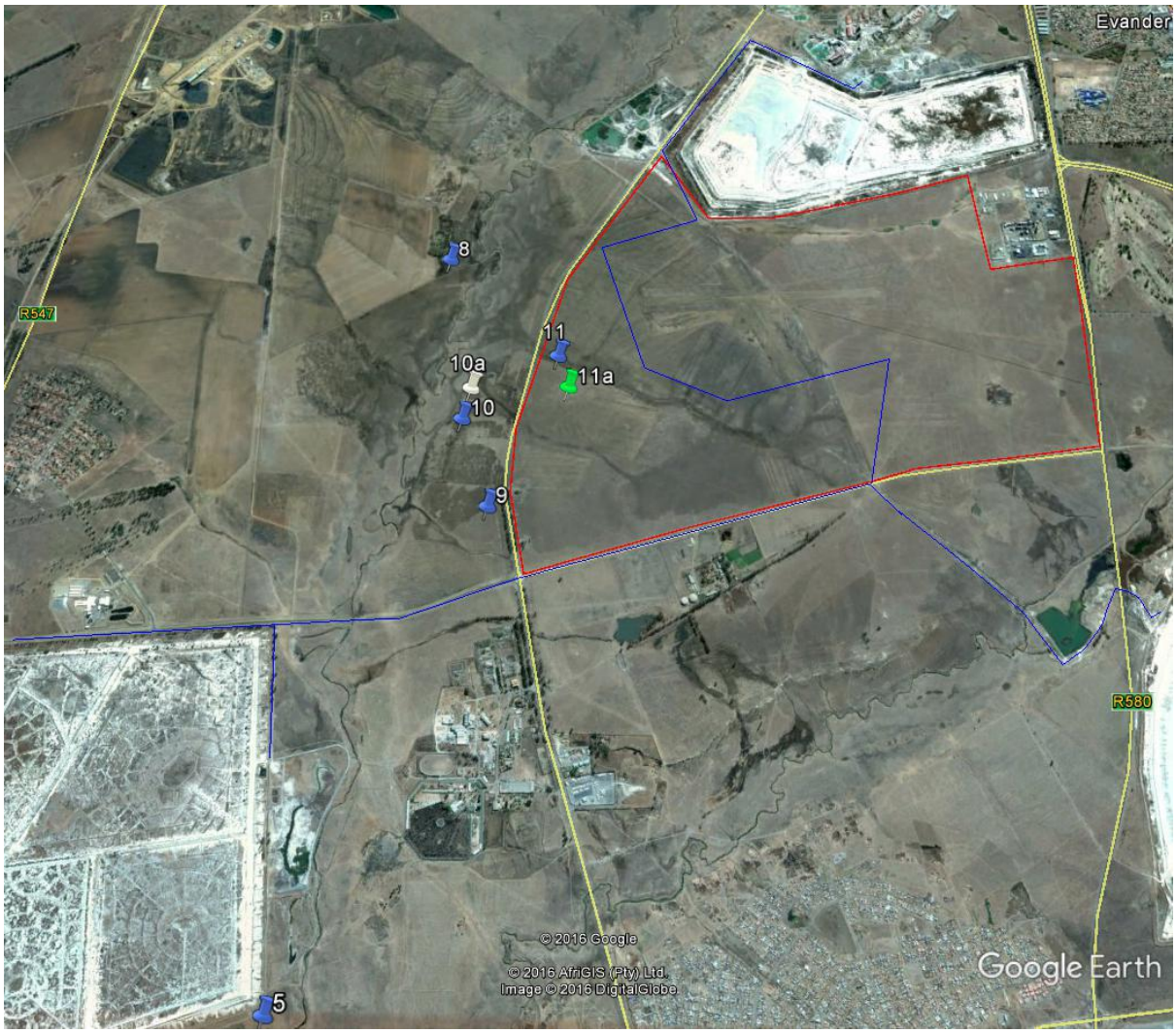

Figure 18: Google Earth image indicting the location of the sites identified.
Blue – graves
Green – farm yards
White – initiation site

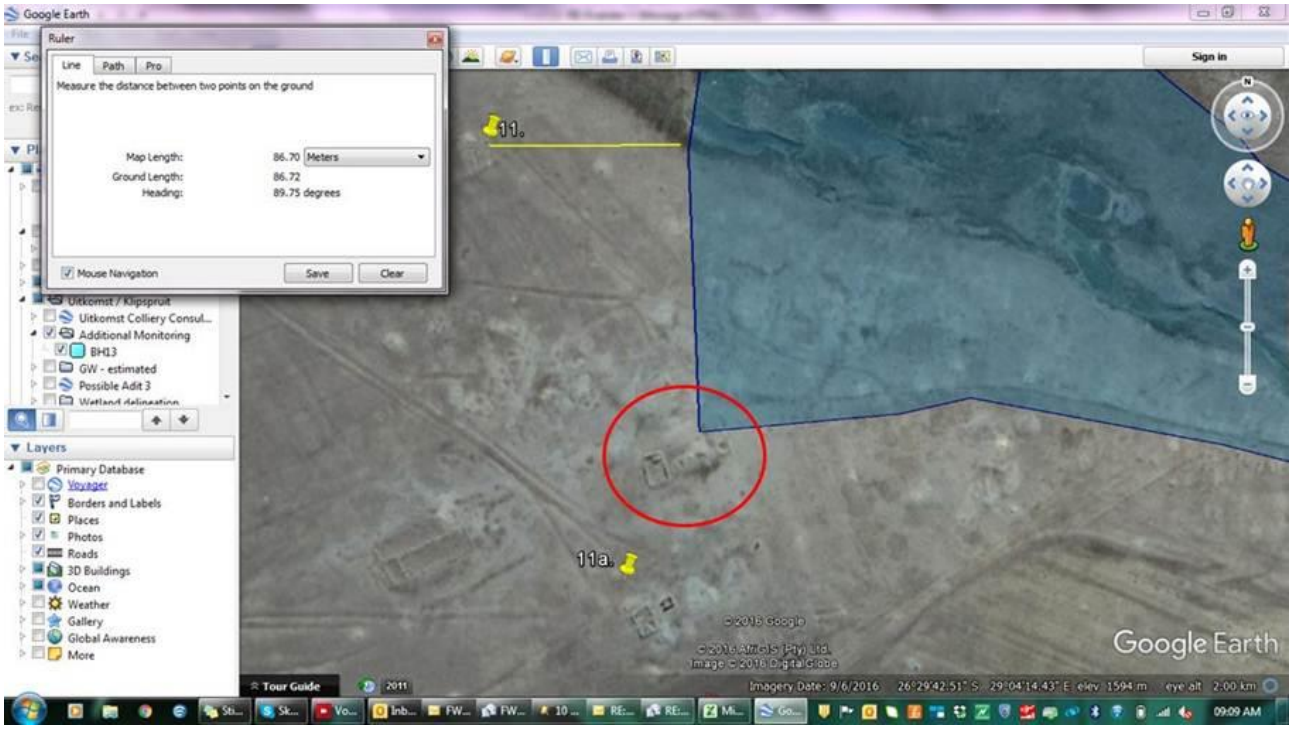

Figure 19: Location of sites 11 and 11a in relation to the proposed development.

The following is recommended:

- Site no. 11 is a grave yard which lies approximately 87 m from the proposed return water dams. Some clean water diversion trenches may be constructed closer. Therefore Option 1 is recommended. The site should be fenced in and a cultural management plan should be drafted for the sustainable preservation thereof. The plan should be drafted by a heritage specialist and should inter alia take into account a buffer zone of at least 20 m and controlled access to descendants.

- Site no.11a is a farm yard, lying right on the edge of the proposed return water dam. At least some of the structures will be directly impacted on. The site may be mitigated and therefore a full photographic documentation is recommended, after which it may be demolished. For this a demolition permit is needed form the relevant heritage authority.

- The remaining structures at site 11a, which will not be impacted on directly, can be left ***in situ***. Should the mine however wish to have it demolished, it may be allowed, as long as it is also documented photographically.

- The other sites indicated in Figure 18 (sites no. 5, 8, 9, 10 and 10a) should be monitored regularly to ensure that its state of preservation do not deteriorate.

- The proposed development may continue only after the mitigation measures indicated above had been implemented and approved by SAHRA.

- It should be noted that the subterranean presence of archaeological and/or historical sites, features or artifacts is always a distinct possibility. Due to the density of vegetation it also is possible that some sites may only become known later on.

Operating controls and monitoring should therefore be aimed at the possible unearthing of such features. Care should therefore be taken when development commences that if any of these are discovered, a qualified archaeologist be called in to investigate the occurrence.

13. REFERENCES

Archaetnos database.

Bamford, M. 2017. **Palaeontological Impact Assessment for the proposed re-mining and expansion of Kinross dump, Mpumalanga Province**. (Unpublished report, Johannesburg, University of the Witwatersrand).

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

Coertze, P.J. & Coertze, R.D. 1996. **Verklarende vakwoordeboek vir Antropologie en Argeologie.** Pretoria: R.D. Coertze.

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

International Finance Corporation. 2012. **Overview of performance standards on Environmental and Social Sustainability. Performance Standard 8, Cultural Heritage.** World Bank Group.

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

Korsman, S.A. & Meyer, A. 1999. Die Steentydperk en rotskuns. Bergh, J.S. (red.). **Geskiedenisatlas van Suid-Afrika. Die vier noordelike provinsies.** Pretoria: J.L. van Schaik.

Miller, S. 2010. **Cultural Heritage Resources Impact Assessment for Harmony Gold Mine, Evander**. (Unpublished report, Magalieskruin, African Heritage Consultants).

Republic of South Africa. 1980. Ordinance on Excavations **(Ordinance no. 12 of 1980). The Government Printer: Pretoria.**

Republic of South Africa. 1983. **Human Tissue Act** (Act 65 of 1983). The Government Printer: Pretoria.

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

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

SAHRA's SAHRIS database.

Van der Ryst, M.M. & Meyer, A. 1999. Die Ystertydperk. Bergh, J.S. (red.). **Geskiedenisatlas van Suid-Afrika. Die vier noordelike provinsies. Pretoria: J.L. van Schaik.**

APPENDIX A

DEFINITION OF TERMS:

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

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

Feature: A coincidental find of movable cultural objects.

Object: Artifact (cultural object).

(Also see Knudson 1978: 20).

APPENDIX B

DEFINITION/ STATEMENT OF HERITAGE SIGNIFICANCE:

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

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

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

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

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

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

APPENDIX C

SIGNIFICANCE AND FIELD RATING:

Cultural significance:

- Neglible – The site has no heritage significance, although it may be older than 60 years.

- Low - A cultural object being found out of context, not being part of a site or without any related feature/structure in its surroundings. A site with minimal importance which is decreased by its bad state of decay.

- Low-Medium - A site of lesser importance, which is increased by a good state of preservation and contextual importance (e.g. a specific community).

- Medium - Any site, structure or feature being regarded less important due to a number of factors, such as date and frequency. Also any important object found out of context.

- Medium-High - A site that has high importance due to its age or uniqueness, but which decreases due to its bad state of decay.

- High - Any site, structure or feature regarded as important because of its age or uniqueness. Also any important object found within a specific context.

- Very High - A site of exceptional importance due to its age, uniqueness and good state of preservation.

Heritage significance:

- Grade I Heritage resources with exceptional qualities to the extent that they are of national significance

- Grade II Heritage resources with qualities giving it provincial or regional importance although it may form part of the national estate

- Grade III Other heritage resources of local importance and therefore worthy of conservation

Field ratings:

National Grade I significance: The site should be managed as part of the national estate, should be nominated as Grad I site, should be maintained in situ with a protected buffer zone and a CMP must be recommended. Score above 50.

Provincial Grade II significance: The site should be managed as part of the provincial estate, should be nominated as Grade II site, should be maintained in situ with a protected buffer zone and a CMP must be recommended. Score between 40 and 50.

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Local Grade IIIA: The site should be included in the heritage register and not be mitigated (high significance), should be maintained in situ with a protected buffer zone and a CMP must be recommended. Score between 36 and 40.

Local Grade IIIB: The site should be included in the heritage register and may be mitigated (high/ medium significance). Mitigation is subject to a permit application lodged with the relevant heritage authority. Score between 6 and 35.

Local Grade IIIC: The description in the phase 1 heritage report is seen as sufficient recording (low significance) and it may be granted destruction at the discretion of the relevant heritage authority without a formal permit application, subjected to the granting of Environmental Authorisation. Score below 5.

APPENDIX D

PROTECTION OF HERITAGE RESOURCES:

Formal protection:

National heritage sites and Provincial heritage sites – grade I and II
Protected areas - an area surrounding a heritage site
Provisional protection – for a maximum period of two years
Heritage registers – listing grades II and III
Heritage areas – areas with more than one heritage site included
Heritage objects – e.g. archaeological, palaeontological, meteorites, geological specimens, visual art, military, numismatic, books, etc.

General protection:

Objects protected by the laws of foreign states
Structures – older than 60 years
Archaeology, palaeontology and meteorites
Burial grounds and graves
Public monuments and memorials

APPENDIX E

HERITAGE IMPACT ASSESSMENT PHASES

1. Pre-assessment or scoping phase – establishment of the scope of the project and terms of reference.
2. Baseline assessment – establishment of a broad framework of the potential heritage of an area.
3. Phase I impact assessment – identifying sites, assess their significance, make comments on the impact of the development and makes recommendations for mitigation or conservation.
4. Letter of recommendation for exemption – if there is no likelihood that any sites will be impacted.
5. Phase II mitigation or rescue – planning for the protection of significant sites or sampling through excavation or collection (after receiving a permit) of sites that may be lost.
6. Phase III management plan – for rare cases where sites are so important that development cannot be allowed.

APPENDIX F
HERITAGE IMPACT ASSESSMENT FOR HARMONY GOLD MINE, EVANDER, 2010