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8 August 2023

Natasha Higgitt

Manager: Development Applications Unit

South African Heritage Resources Agency

111 Harrington Street

Cape Town 8001

Dear Ms Higgitt

Application for exemption from a Heritage Impact Assessment for the Retreatment of Eastern Platinum (Pty) Ltd (EPL) Tailings Dam 2, Marikana, North West Province

1. Introduction

Beyond Heritage was appointed by Alta van Dyk Environmental Consultants to assess the impacts on heritage resources by the proposed re-mining project. The assessment consists of a desktop study as well as a site visit to the study area. Based on the transformed nature of the site and the lack of any surface evidence of heritage resources in the study area, the exemption for a Heritage Impact Assessment is supported by the author.

2. Project Background

Sibanye-Stillwater owns and operates the Marikana Operations located near Marikana Town, in the North West Province. The Marikana Operations are divided into Western Platinum (Pty) Ltd (WPL) and Eastern Platinum (Pty) Ltd (EPL), each with its own set of mining rights. The Marikana Operations are currently mining both the Merensky and Upper Group 2 Reef (UG2) for Platinum Group Metals (PGMs).

EPL has an approved Final Environmental Impact Assessment and Environmental Management Programme (EIA/EMPr) (approved on 16 January 2017, Reference Number NW 30/5/1/2/3/2/2/111 EM). The following activities are approved in the EIA/EMPr:

Exploration: Merensky and UG2 Chromite reserves are determined and demarcated for mining within the western limb of the Bushveld Complex, by the drilling of exploration boreholes.

Mining: EPL uses both underground and opencast mining methods. Underground mining methods vary between breast mining, up-dip mining, down-dip mining, conventional and mechanised mining. The ore is then broken and transported to the surface by any of the four (4) EPL shafts (consisting of both vertical and incline orientated shafts). The waste rock is transported to the waste rock dumps.

Concentrating: The ore from the mining process is sent to EPL Concentrators (two (2) in total) which involves milling, crushing and flotation of the ore. Opencast ore is however, taken to the Merensky Concentrator at WPL for processing.

Tailings Dam Facilities (TDF): Slime or tailings is used to describe the waste product derived from the concentrator process and is deposited in tailings dam facilities of which EPL has both an active (EPL TD No. 2) and a decommissioned dam (EPL TD No. 1) on site.

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Smelting and Base Metal Extraction: Further to the flotation concentrate produced by the concentrating process, the concentrate is exposed to high temperatures at the Smelter and Base Metal Refinery (BMR). This process generates converter matte which is then treated to produce nickel sulphates crystals, copper cathodes and PGM concentrate.

Refining: Final PGM concentrate from Smelter/BMR, located within WPL, is air freighted to the Western Platinum Refinery in Gauteng Province near Brakpan/Springs for further refining to finished metals (PGMs) for the market.

There are also numerous infrastructural and service elements associated with the mining and processing areas including landfill sites, sewage plants, workshops and stores, hostels, road networks and other service and maintenance infrastructural networks.

Sibanye-Stillwater is currently remining EPL TD1. The remining of EPL TD1 will be completed by Q1 2024. Once the remining of EPL TD1 is completed, Sibanye-Stillwater plans to commence re-mining of EPL TD2.

2.1. Tailing Dam Facilities (TDF)

All the TDFs at EPL are constructed in traditional angle-of-slope style and all bear a very steep side slope. Toe-paddocks are also used to control stormwater around the base of the TDFs with solution trenches leading to the penstock. Seepage and run-off water are sent to the return water dams (RWDs). Particulate matter is mitigated by means of irrigation system management of deposition cycles in strategic areas, chemical suppression and vegetation cover. The side slopes and surface of the decommissioned TDFs are vegetated whereas only the side slopes of the active TDFs are vegetated.

The EPL Tailings Dam Complex comprises two tailings dams, namely Tailings Dam No.1 (EPL TD1) and Tailings Dam No.2 (EPL TD2. EPL TD1 has been dormant since October 2004 and re-mining of this facility commenced in February 2018. EPL TD2 has been operational since 2002, with tailings deposited from the EPL and Eastern Platinum Concentrator (EPC) Plants.

2.2. Current tailings re-treatment

Bulk tailings re-treatment is the re-processing of disposed tailings material from existing concentrators. The process begins by re-mining the tailings material stored in EPL TD1 by means of a high pressure wash-back method, i.e. hydraulic re-mining. Typically, hydraulic re-mining requires approximately 1 ton of water per ton of ore to be re-mined and requires an energy input of approximately 1 MW.

The EPL TD1 tailings dam is re-mined at a maximum rate of 450 000 tons per month. The water required for this project comes from current return water dams, and is recycled via thickeners. Three main steps are involved:

- Slurry Pumping: The re-mined slurry is pumped from EPL TD1 via an overland pipeline to Western Platinum Limited - UG2 concentrator for processing
- 2) Processing: The re-mined slurry is re-processed at the existing UG2 concentrator. Chromite is removed at a new chrome removal plant situated at UG2 concentrator
- 3) Disposal: The fresh tailings post flotation is deposited onto two existing central tailings dams. These will be in Western Platinum Central TD5 and Central TD6.

2.3. Remining of EPL TD2

The re-mining of EPL TD1 will be completed by Q1 2024. Once the remining of EPL TD1 is completed, Sibanye-Stillwater plans to commence re-mining of EPL TD2.

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The EPL TD2 area footprint is 129 hectares. The current height is around 37m and the rate of rise is around 1.31m/year. The estimated tons deposited onto the dam in 20 years is 58 million tonnes. The re-mining production to Eastern Bulk Tailing Treatment (EBTT) plant will be an average of 320 000 tons/month (3.8mt/year). This will give a re-mine lifetime of 15 years to complete. Drainage water from EPL TD2 will flow the same route back to the RWD. Retreated tailings material will be deposited onto TD6 that can accommodate tailings material up to 2032.

Sibanye-Stillwater will start with hydraulic re-mining with high pressure water guns till a point when the dam is dry enough to start with mechanical re-mining. This will be after approximately five (5) years.

2.4. Hydraulic remining

Hydraulic re-mining involves the use of four high pressure water cannons, one at a time depending on where on the dam re-mining (re-pulping) is taken place. The pulped material end up in a sump on the dam with a bare pump. From the sump, the material is pumped to the EBTT Plant in existing pipelines.

From the EBTT Plant, the slurry is pumped across land in a 10km steel pipe to BTT plant for processing. The concentrate is sent to the smelter and the tailings material is deposited onto the active WPL TD6 tailings facility.

2.5. Mechanical re-mining:

Once the EPL TD2 is dry enough, Sibanye-Stillwater will revert to mechanical re-mining. This involves loading the tailings material with trucks into bins, and then feed it to EBTT and pump it to BTT.

2.6. Rehabilitation:

The EPL TD2 footprint area will be rehabilitated on completion of the re-mining.

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3. Project Location

The EPL Tailings Dam Complex is located on Portion 3 of the farm Turffontein 462 JQ in the district of Marikana in the North West Province. The land is owned by the Government of South Africa, administered by the Bapo Ba Mogale Traditional Community. The site is bounded by the Marikana – Brits railway line to the north and a tarred Mine access road to the south (Figure 3.1 - 3.3). Information on the location is provided in Table 1.

Table 1: Location and property information for the remining of EPL TD2

| Province | North West Province | |
|--|---|--|
| District Municipality | Bojanala Platinum District Municipality | |
| Local Municipality | Madibeng Local Municipality | |
| Ward | Ward 32 and 40 | |
| Quaternary catchment | A21J, A21K | |
| Farm name | Turffontein 462 JQ Portion 3 | |
| Application area (ha) | ~129 ha | |
| Distance and direction from nearest town | 12 km east of Marikana | |
| Distance and direction from flearest town | 20 km south west of Brits | |
| 21-digit Surveyor General code for each farm portion | T0MS0000000010300001 | |
| Coordinates of the centre point | 22°26'28.94"S | |
| Coordinates of the contre point | 29°20'3.90"E | |

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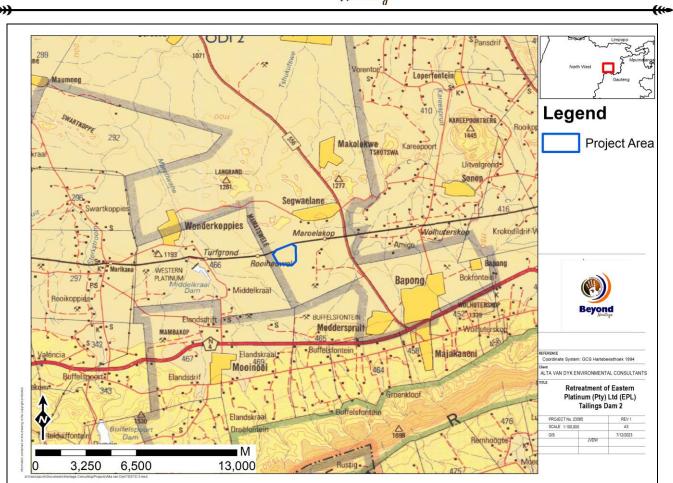


Figure 3.1. Regional setting of the project (1: 250 000 topographical map).

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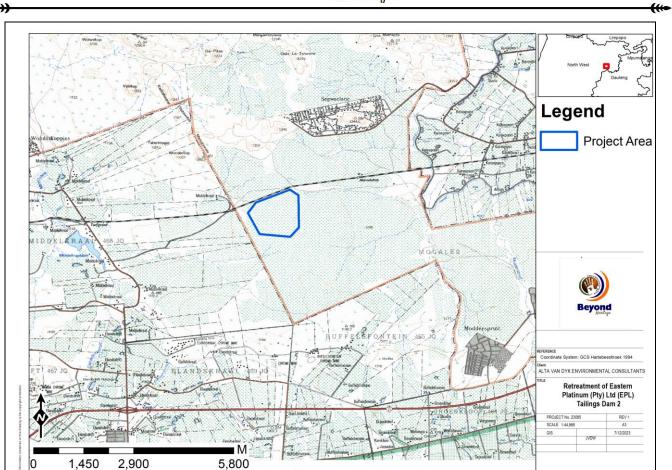


Figure 3.2. Local setting of the project (1: 50 000 topographical map).

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Figure 3.3. Aerial image of the study area. The study area is characterised by manicured fairways and road developments.

1,050

4. The Heritage Character of the Study area

525

3.1. Literature review

262.5

A brief survey of available literature was conducted to extract data and information on the area in question to provide general heritage context into which the development would be set. This literature search included published material, unpublished commercial reports, and online material, including reports sourced from the South African Heritage Resources Information System (SAHRIS).

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4.1. Background to the general area

The archaeology of the area spans the Stone Age, Iron Age, and Historical period.

4.1.1. Stone Age

South Africa has a long and complex Stone Age sequence of more than 2 million years. The broad sequence includes the Later Stone Age, the Middle Stone Age and the Earlier Stone Age. Each of these phases contains sub-phases or industrial complexes, and within these we can expect regional variation regarding characteristics and time ranges. For (CRM) purposes it is often only expected/ possible to identify the presence of the three main phases. Yet sometimes the recognition of cultural groups, affinities or trends in technology and/or subsistence practices, as represented by the sub-phases or industrial complexes, is achievable. The three main phases can be divided as follows;

- » Later Stone Age (LSA); associated with Khoi and San societies and their immediate predecessors. -Recently to ~30 thousand years ago.
- » Middle Stone Age (MSA); associated with Homo sapiens and archaic modern human . 30-300 thousand years ago.
- Earlier Stone Age (ESA); associated with early Homo groups such as Homo habilis and Homo erectus. 400 000-> 2 million years ago.

The Jubilee shelter, approximately 28km north of the project area has been excavated and provides a record from the Late Pleistocene to the 7th Century AD (Turner 1986), an extended cultural sequence with assemblages' characteristic of the Middle Stone Age, Early Later Stone Age and Later Stone Age including assemblages from the Oakhurst and Wilton industries (Wadley 1986). The Jubilee shelter provides evidence of hunter–gatherer occupation during three phases of agro pastoralist contact, beginning in 225 AD and characterised by cooperative contact, prior to the hunter-gatherers being either assimilated or dispersed to other areas (Wadley 1996). Extensive research has also been conducted on LSA sites situated along the Magaliesberg Mountains with many Stone Age scatters being identified throughout the mountain range (Carruthers 2007). Rock art sites are also common within the Rustenburg region dating to the LSA. In a survey conducted by Huffman (2005a) approximately 16km west of the project area, identified an ESA quarry indicating local production of ESA tools during that time period.

4.1.2. Iron Age

Bantu-speaking people moved into Eastern and Southern Africa about 2 000 years ago (Mitchell 2002). These people cultivated sorghum and millets, herded cattle and small stock and manufactured iron tools and copper ornaments. Because metalworking represents a new technology, archaeologists call this period the Iron Age. Characteristic ceramic styles help archaeologists to separate the sites into different groups and time periods. The Iron Age as a whole represents the spread of Bantu speaking people and includes both the Pre-Historic and Historic periods. It can be divided into three distinct periods:

- » The Early Iron Age (EIA): Most of the first millennium AD.
- » The Middle Iron Age (MIA): 10th to 13th centuries AD.
- The Late Iron Age (LSA): 14th century to colonial period.

The greater region saw expansive Iron Age occupation as early as AD150 at Jubilee Shelter where Bambata ceramics were identified with the ceramics facies dating to around AD150 to AD750 (Wadley 1996). Another prominent EIA site situated approximately 43km southeast of the project area, Broederstroom was identified

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as an EIA site with Mzonjani ceramics found at the site. The site dates to around AD450 to AD750 (Huffman 2007). The Broederstroom Iron Age site was declared a Provincial Heritage Site in 1980 as it was the one of the earliest known Iron Age sites south of the Limpopo and consists of around 250 years of occupation by iron and copper producers (Mason 1981).

Just west of the project area are a range of granite hills which form part of the Thaba-ea-Maralla range of mountains. These granite hills are abundantly scattered with Iron Age settlements including many stonewalling sites (Pistorius 2002a). No stonewalling was identified within the project area.

The hills as well as the larger area was occupied by predecessors of the Tswana people from around the 17th century. These include the Fokeng, Bapo ba Môgale and Bakwena ba Mogôpa, with the Fokeng largely occupying current day Rustenburg. Around AD1650 the Bakwena ba Mogôpa moved into the larger region and settled north-east of present-day Brits. Their influence stretched across parts of the Crocodile, Apies, Pienaars, and Hennops Rivers. Around AD1750, they then moved east of the Apies River, only to return a few years later (Breutz 1953).

Around this time, the Bapo ba Môgale also entered and settled within the larger region and this period is marked by great wealth and large cattle herds for them. One of their capitals was established at Wolhuterskop, approximately 23km southeast of the project area.

Between AD1817 to AD1823, the Pedi, under the rule of Maleleku were invading and attacking settlements around the Magaliesberg Mountains. The Pedi went on to attack the Bapo ba Môgale after they were unsuccessful in their attack of the Bakwena ba Mogôpa near the Apies River (Breutz 1953). The Pedi had been defeated in both attacks but did claim large herds of cattle as well as women and children from both groups. During the battle, Mogale Mogale, the heir to the Bapo throne was hidden in a kloof as he was only a child. The origins of the name of the Magaliesberg Mountains are believed to have originated to Mogale Mogale (Carruthers 2007).

4.1.3. Historical Period

During the mid-17th century Europeans started to settle in modern-day Cape Town. During and after the conflict caused by the Mfecane (1820-1840), during the reign of king kaSenzangakhona Zulu, known as Shaka, Dutch-speaking farmers started to migrate to the interior regions of South Africa. A period that is marked by various skirmishes and battles between the local inhabitants, Dutch settlers and the British (Giliomee & Mbenga 2007). The Matabele led by Mzilikazi left their settlements along the Vaal River in the late 1820s and entered the region surrounding the study area. They went on to attack the Bakwena ba Mogôpa around present day Zilkaatsnek, further east of the project area. Three separate battles took place which ended with the surrendering of the Bakwena ba Mogôpa whereby they were forced to join the Matabele and those that refused were slaughtered (Carruthers 2007). Mzilikazi then went on to attack the Bapo ba Môgale in present day Wolhuterskop, and west of Zilkaatsnek. Their attack was successful and Mzilikazi and his Matabele then established three royal residencies across the northern foot of the Magaliesberg Mountains at Kungwini, Hlahlandlela, and Dinaneni. They would then remain settled along the Magaliesberg for five years. The remaining Bakwena ba Mogôpa and Bapo ba Môgale who survived the attacks managed to flee and disperse across the greater landscape. Around 1850, both groups then moved and settled in present day Lesotho (Carruthers 2007).

After the Matabele were driven out of the Magaliesberg Mountains by the Voortrekkers, the first Voortrekker to settle in the larger region, Albert Venter settled on the farm De Kroon in 1840, near present day Brits. Another Voortrekker, P.J Fourie also settled in the area. This period was also marked by the first contact between the white and black settlers. The initial interactions were agreeable but later tensions rose in the region around Rustenburg between the Bafokeng and the Voortrekkers as they were removed from their farms which were

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previously laid out for the ownership of the Bafokeng. This led to the establishment of individual farms and farmsteads.

Marikana was first laid out in the farm Rooikoppies in the 1870s when farmers began occupying Marikana and Mooinooi. In the 1960s there was a surge of tobacco and citrus farming in Marikana with other crops following which further grew Marikana (Pistorius 2002a). Mining of platinum and chrome led to further developments within the region following the discovery of the Merensky Platinum Reef which was discovered in 1929.

4.1.4. Battlefields

The larger region of the Magaliesberg was the backdrop to multiple skirmishes and battles between the British and the Boers. In December 1880, during the First Boer War, a Boer Commando of around 600 men stormed Rustenburg and demanded they surrender the fort. The refusal of the British garrison led the Boers to dig multiple trenches to reach closer to the fort (sahistory.co.za). After a few months, the British garrison surrendered to the Boers in March of 1881.

During the Anglo-Boer War (1899- 1902), British troops had built blockhouses along the Magaliesberg Mountain, many of these are situated in the vicinity of the study area near Kommandonek and Pampoennek.

The first Battle of Silkaatsnek took place on 11 July 1900 when 600 Boers led by General De la Rey attacked the 240 British led by Colonel H.R Roberts who had been camping at Silkaatsnek. The Boers were attacking from the top of the Magaliesberg and were too high for the British to defend themselves and the British had surrendered by nightfall. The Second Battle of Silkaatsnek took place on 2 August 1900 whereby the British troops led by General Ian Hamilton was successful in forcing the Boers out of Silkaatsnek.

Another battle, the Battle of Dwarsvlei occurred in the larger region on 11 July 1900 when General Sarel Oosthuizen led the Boer troop to ambush the British troop led by General Horace Smith-Dorrien who were on route to Rustenburg. The Boers had killed many of the British and by sunset, General Oosthuizen led a charge which would fatally wound him and lead to his death in the following weeks.

Below the Nooitgedacht cliffs, the British troop of 1500 men led by Major-General Ralph Clements were camping on the 8th December 1900 (Pretorius 2000). Early on the 13th December, 2500 Boers led by Generals De la Rey, Smuts, and Beyers attacked the British troops. With General Beyers situated on the Magaliesberg summit and General De la Rey at the base, the Boers were able to overtake the British troops in what is now called the Battle of Nooitgedacht and this was a significant win for the Boers (magaliesbergheritage.co.za).

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3.2.5. CRM reports

Many sites are known in the region and consists of multiple LIA stone walled sites and complexes with associated artefacts, MSA scatters, multiple Historical ruins and homesteads, an ESA quarry, graveyards and graves, and Historical stone walling, A previous survey (see Pistorius 2002a) surveyed a section of the southern part of the current project area. The following Cultural Resource Management (CRM) assessments (Table 2) were conducted in the larger area and consulted for this report:

Table 2. CRM reports consulted for the study.

| Author | Year | Project | Findings |
|-------------------|-------|--|--------------------------------|
| Pistorius, J.C.C. | 2000 | A Phase 1 Archaeological Survey of Portions | Stone walling sites, a lower |
| | | 11777, 1178, 1179, 1180, 1181, 1182 of the Farm | grinding stone, potsherds. |
| | | Hartebeespoort B 410 JQ in the Brits District of the | |
| | | North West: Addendum to the Environmental | |
| | | Management Programme Done for Eagle | |
| | | Quarries. | |
| Pistorius, J.C.C. | 2002a | A Cultural Heritage Impact Assessment for | Multiple LIA sites, a village, |
| | | Eskom's Power Supply for the Anglo Platinum | a cemetery. |
| | | Western Limb Tailings Retreatment Project | |
| | | Between the Bighorn Power Station and the Turf | |
| | | Shaft Substation in the Rustenburg District of the | |
| | | North West. | |
| Pistorius, J.C.C. | 2002b | A Heritage Impact Assessment for Eskom's New | Two LIA sites, scattered |
| | | Proposed 88 kV Powerline From the Middelkraal | potsherds, a graveyard, |
| | | Substation to the Big Horn/Wonderkoppies Power | |
| | | Stations on the Farm Elandsdrif 467 JQ and | |
| | | Middelkraal 466 JQ Near Marikana and Mooinooi | |
| | | in the North West Province of South Africa. | |
| Pelser, A.J. | 2019 | A Phase 1 HIA Report for Propose Development | Graves, ruins of recent |
| | | of Affordable Housing & Related Activities on | farming structures, |
| | | Various Portions of the Farm Rooikoppies 297JQ | |
| | | in Marikana, Northwest Province. | |
| Pelser, A.J. | 2020 | A Phase 1 HIA Report on Portions 36 & 83 of the | Graves |
| | | Farm Zwartkoppies 296JQ North of Marikana, | |
| | | Bonjanala District Municipality Northwest Province. | |
| Matenga, E. | 2022 | Phase I Heritage Impact Assessment for the | A burial ground, recent |
| | | Proposed Mixed Residential Development on | farming structures. |
| | | Several Portions of the Farm Rooikoppies 297 JQ | |
| | | in Marikana, in the Rustenburg Local Municipality, | |
| | | Northwest Province. | |
| Van Schalkwyk, | 1999 | A Survey of Cultural Resources on the Farms | Two Iron Age sites |
| J.A., Pelser, | | Spruitfontein 341 JQ and Kafferskraal 342 JQ, | consisting of potsherds, |
| A.J. | | Rustenberg District | grinding and hammer |
| | | | stones, cattle kraals, |
| | | | terraces, and stone built |
| | | | structures, an old mud-brick |
| | | | and cement structure, two |

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| *** | | | |
|---|-------|---|--|
| | | | unmarked graves and three cemeteries. |
| Huffman, T.N. | 2005a | The Archaeology of the Anglo Platinum Lease Area, Rustenburg: A Consolidated Report for Anglo Platinum | MSA scatters, Iron Age sites, potsherd scatters, stonewalling sites, multiple stonewalling complexes, ESA quarry, historical homesteads. |
| Huffman, T.N. | 2005b | Leeuwkop Archaeological Assessment: A combined Phase 1 Report Prepared for Knight Piésold Consulting. | Scattered potsherds, multiple large Iron Age stonewalling sites, multiple Historical stonewalling sites, Historical settlements remains, a graveyard, Historical homesteads, Historical artefacts. |
| Küsel, U. | 2007 | Cultural Heritage Resources Impact Assessment of Proposed Mining Area on the Farm Leeuwkop 402 JQ North West Province. | Multiple LIA Stonewalling complexes and sites. |
| Pelser, A.J., van Vollenhoven, A.C. | 2008a | A Report on a Cultural Heritage Impact Assessment for the Proposed Elandsdrift EMPR, near Mooinooi, Northwest Province. | A large Iron Age complex, two old farm buildings, foundations of labourer houses, foundations of former workers dwellings, a graveyard. |
| Pelser, A.J., van Vollenhoven, A.C. | 2008b | A Report on a Heritage Impact Assessment for the Buffelsfontein East & West Expansion Project on the Farm Buffelsfontein 465 JQ, near Mooinooi, North West Province. | Foundation of a rectangular structure, LIA potsherd, an extensive LIA stone walled complex. |
| Birkholtz, P., van Rooyen, A. | 2003 | Cultural Heritage Assessment as Part of the Environmental Management Programme Report for the Proposed Mining of Granite on Portion 1219 of the Farm Hartebeespoort "B" 410 JQ in North West Province, South Africa | LIA stonewalling with associated artefacts. |

3.2.6. Society and Google Earth Monuments

Google Earth and 1:50 000 maps of the area were utilised to identify possible places where archaeological and historical sites might be located. The database of the Genealogical Society of South Africa indicated no known grave sites within the study area.

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4.2. Cultural Landscape

The landscape is marked by extensive agricultural activities (Figure 4.1 - 4.4) throughout the years that would have affected surface indicators of heritage sites. The landscape has recently been transformed from a rural/agricultural landscape to a landscape with an industrial character attributed to large-scale ongoing mining activities throughout the region.

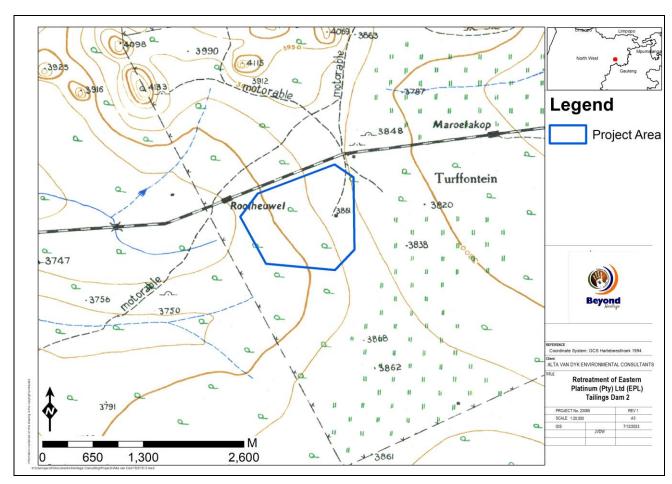


Figure 4.1. 1943 Topographic map of the study area indicating no development in the study area.

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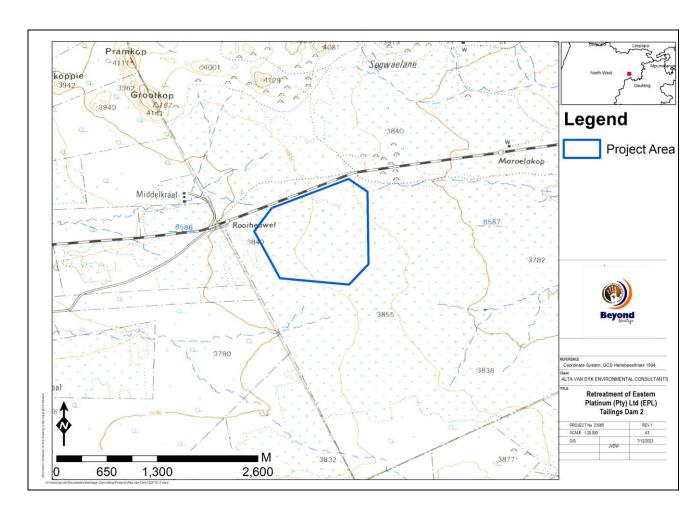


Figure 4.2. 1968 Topographic map indicating cultivation in the study area and surrounding areas. Cultivation activities would obliterate surface indicators of heritage resources if any were present.

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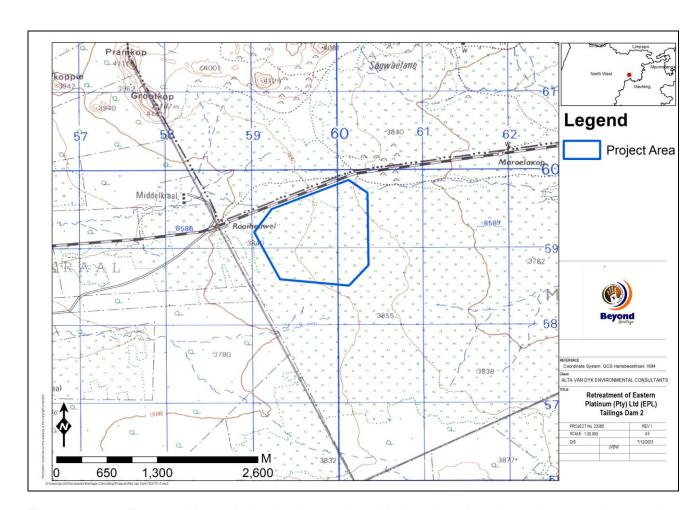


Figure 4.3. 1979 Topographic map indicating large scale cultivation throughout the study area and surrounds.

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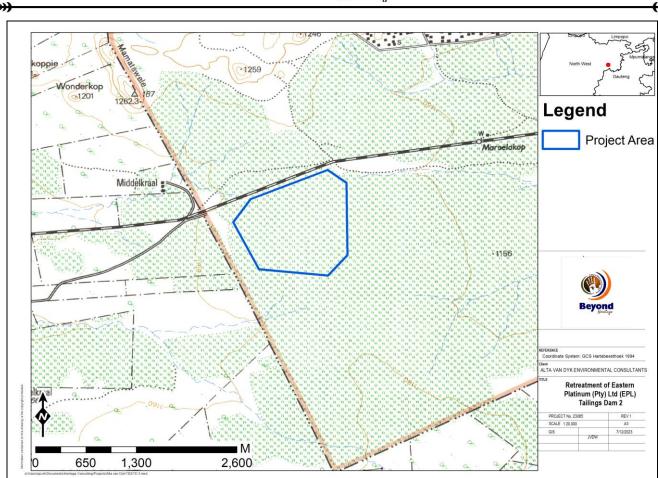


Figure 4.4. 1980 Topographic map indicating cultivation throughout the greater area.

5. Findings

5.1. Heritage Resources

The existing Tailings Dam Complex has completely transformed the study area. Prior to this, extensive cultivation of the study area and surrounds from as early as the 1960's until recently further altered the study area and would have destroyed surface indicators if any heritage resources were present in these areas. There are no surface indicators of heritage resources, and no impact on the cultural record of the area is expected by the re-mining of the facility. General site conditions are illustrated in Figures 5.1 - 5.4.

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Figure 5.1. General site conditions – the tailings facility has transformed the study area.



Figure 5.2. General site conditions – the entire site has been altered by mining activities.



Figure 5.3. General site conditions viewed from the east.



Figure 5.4. General site conditions viewed from the north.

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4.1. Paleontological Resources

Based on the SAHRA paleontological map the study area is of insignificant senstivity (Figure 5.5) and no further studies are required for this aspect.



Figure 5.5. SAHRIS palaeosensitivity map for the study area (blue polygon). Background colours indicate the following degrees of sensitivity:

| Colour | Sensitivity | Required Action | |
|---------------|--------------------|---|--|
| RED | VERY HIGH | Field assessment and protocol for finds is required | |
| ORANGE/YELLOW | HIGH | Desktop study is required and based on the outcome of the desktop study, a field assessment is likely | |
| GREEN | MODERATE | Desktop study is required | |
| BLUE | LOW | No palaeontological studies are required however a protocol for finds is required | |
| GREY | INSIGNIFICANT/ZERO | No palaeontological studies are required | |
| WHITE/CLEAR | UNKNOWN | These areas will require a minimum of a desktop study. As more information comes to light, SAHRA will continue to populate the map. | |

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6. Conclusion

The project area is completely transformed through the establishment of the existing tailings dam complex, and the study area is considered to be of low heritage potential. This was confirmed during the site visit, and no evidence of heritage resources was noted. According to the SAHRA paleontological map, the palaeontological sensitivity is determined as insignificant sensitivity and no further studies are required for this aspect.

An application for exemption from a Phase 1 Heritage Impact is therefore supported for the project due to the lack of heritage resources and the extent of the transformation of the area.

7. Assumptions and limitations

- The authors acknowledge that the brief literature review is not exhaustive of the literature of the area.
- Due to the nature of heritage resources and pedestrian surveys, the possibility exists that some
 features or artefacts may not have been discovered/recorded and the possible occurrence of graves
 and other cultural material cannot be excluded. This limitation is successfully mitigated with the
 implementation of a Chance Find Procedure (CFP) (Annexure A).
- This report only deals with the footprint area of the proposed development.
- This study did not assess the impact on medicinal plants and intangible heritage as it is assumed that these components will be highlighted through the public consultation process if relevant.
- It is possible that new information could come to light in future, which might change the results of this assessment.

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Annexure A

Chance Find Procedure for Heritage Resources

The possibility of the occurrence of subsurface finds cannot be excluded. Therefore, if during construction any possible finds such as stone tool scatters, artefacts or bone and fossil remains are made, the operations must be stopped, and a qualified archaeologist must be contacted for an assessment of the find and therefor chance find procedures should be put in place as part of the EMP. A short summary of chance find procedures is discussed below and monitoring guidelines applicable to the Chance Find procedure is discussed below and monitoring guidelines for this procedure are provided in Section 10.5.

This procedure applies to the developer's permanent employees, its subsidiaries, contractors and subcontractors, and service providers. The aim of this procedure is to establish monitoring and reporting procedures to ensure compliance with this policy and its associated procedures. Construction crews must be properly inducted to ensure they are fully aware of the procedures regarding chance finds as discussed below.

- If during the pre-construction phase, construction, operations or closure phases of this project, any person employed by the developer, one of its subsidiaries, contractors and subcontractors, or service provider, finds any artefact of cultural significance or heritage site, this person must cease work at the site of the find and report this find to their immediate supervisor, and through their supervisor to the senior on-site manager.
- It is the responsibility of the senior on-site Manager to make an initial assessment of the extent of the find and confirm the extent of the work stoppage in that area.
- The senior on-site Manager will inform the ECO of the chance find and its immediate impact on operations. The ECO will then contact a professional archaeologist for an assessment of the finds who will notify the SAHRA.