



TURN180
ENVIRONMENTAL CONSULTANTS

HERITAGE CONSERVATION MANAGEMENT PLAN

FOR THE JAGERSFONTEIN TAILINGS OPERATION LOCATED ON THE REMAINDER,
PORTION 15 AND PORTION 16 OF THE FARM JAGERSFONTEIN 14IS, FAURESMITH RD

FREE STATE PROVINCE

Water Use License No: 10/D33K/AA/6148

JAGERSFONTEIN DEVELOPMENTS (PTY) LTD

May 2022

Undertaking by Licensee:

Jagersfontein Developments (Pty) Ltd hereby confirms that the Heritage Conservation Management Plan (“**HCMP**”) compiled by Turn 180 Environmental Consultants (Pty) Ltd was reviewed by us upon completion and that all the information contained in it is correct and true. We furthermore hereby undertake to implement all mitigation and management measures as contained in this report and that we will aim to conduct our activities at the Jagersfontein Tailings Operation to comply with this HCMP.

This report will be updated throughout when necessary to ensure that the activities at the Tailings Operation and the HCMP is aligned.

Signed on this _____ day of _____(month) of 2022 by the following representatives:

Mr. Johan Combrink

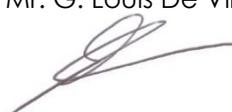
Operational Manager – Jagersfontein Developments (Pty) Ltd

Mr. Marius De Villiers

Compliance Manager –Jagersfontein Developments (Pty) Ltd

Report prepared by:
TURN 180 ENVIRONMENTAL CONSULTANTS (PTY) LTD

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Report	Heritage Conservation Management Plan ("HCMP") for the Jagersfontein Tailings reprocessing operations
Client/Project	The extraction of diamonds through the reprocessing of surface tailings on the Remainder, Portion 15, and Portion 16 of the farm Jagersfontein 141S, Free State Province
Compiled by	Mr. G. Louis De Villiers  <i>B.sc Environmental Geography – University of the Free State</i>
EAP Declaration:	I, Gardiol Louis De Villiers hereby declare that the information contained in this report is accurate to my knowledge. The information is based on information obtained from Jagersfontein Developments (Pty) Ltd, specialist studies, assessments, surveys, and reports conducted on the site and the region. Furthermore, I hereby declare that I act independently and that no financial or other gains was given to me by Jagersfontein Developments (Pty) Ltd, apart from remuneration for the work relating to the writing of this report. I declare that I am not a director, employee, shareholder or in any other way involved in the decision-making process of the company. Turn 180 Environmental Consultants acts as consultant on various projects on behalf

	of Jagersfontein Developments (Pty) Ltd and conducts monthly assessments and monitoring.
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Report prepared for:

Report Prepared for	Jagersfontein Developments (Pty) Ltd
Responsible person	Mr. Henk Johan Van Zuydam
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Land tenure and local and regional setting of project

Property	Jagersfontein RE/14
Title Deed Number	T10837/1973
Owner	Kopanong Local Municipality
Postal Address	Private Bag X23 Trompsburg 9913
Tell. No	051 713 9202
Property	Jagersfontein 15/14
Title Deed Number	T1157/2011
Owner	Jagersfontein Developments (Pty) Ltd
Postal Address	P. O. Box 24 Jagersfontein 9974
Property	Jagersfontein 16/14
Title Deed Number	T377/2012
Owner	Jagersfontein Developments (Pty) Ltd
Postal Address	P. O. Box 24 Jagersfontein

	9974
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Local and Regional Setting:

Jagersfontein is situated in the Free State Province and is served by the following Municipalities:

District Municipality: Xhariep Municipality

Local Municipality: Kopanong Municipality

EXECUTIVE SUMMARY

Turn 180 Environmental Consultants ("**Turn 180**") was appointed to compile a Heritage Conservation Management Plan ("**HCMP**"), which will serve as the HCMP in terms of the National Heritage Resources Act, 1999 (Act No. 25 of 1999) ("**NHRA**") for Jagersfontein Developments.

This HCMP is compiled in terms of the Guidelines for the Development of Plans for the Management of Heritage Sites or Places published by SAHRA under the National Heritage Resources Act, 1999 (Act No. 25 of 1999) ("**NHRA**").

The Jagersfontein surface tailings processing operations ("**Tailings Operation**") is an existing diamond processing plant at Jagersfontein in the Xhariep District Municipality of the Free State Province. The Tailings Operation is located over 3 properties near the town of Jagersfontein and includes the Remainder and Portions 15 and 16 of the farm Jagersfontein 141S ("**Operational Footprint**"). The 3 properties have a combined surface area of 5 945 ha.

The Operation entails the reprocessing of surface tailings dumps, where the coarse tailings from historic diamond mining operations were discarded. The tailings dumps were purchased, and site establishment commenced in late 2010. The Tailings Operation commenced in 2011 and is currently responsible for approximately 190 job opportunities.

The Tailings Operation does not operate under a mining right, as the process is not regarded as mining and the material is not excavated. The Tailings Operation is conducted in terms of a WUL, issued by the DWS in 2018, and Best Practice Guidelines.

Activities undertaken at the Operation include the ploughing and/or ripping of tailings dumps to loosen tailings before a dozer is used to gather the material onto stockpiles, from where it is loaded onto dumper trucks using loaders. Dumper trucks load the tailings onto conveyors through feeders at various locations. Tailings are transported to the processing plant via conveyors where it is stockpiled. The tailings are then fed into the main feed of the processing plant (the "**Plant**").

The Plant consists of 4 X 75 T/hour Dense Media Separator ("**DMS**") Plants, which are used to separate the mineral particles in a sink-float process. A suspension of dense powder in water is used, which forms a heavier liquid, for the separation. The heavier material containing diamonds sink and the lighter material float. The DMS Plants have a minimum processing target of 300 tons of tailings per hour. A pan plant was also introduced in 2019 to further separate material into concentrate, which carries the diamonds, and excess material used for the stabilization of the existing fine storage tailings facility ("**FTSF**") walls. The concentrate still passes

the x-ray machine and sorting house used at the DMS Plants. With the introduction of the pan plant, the capacity of the Plants to process tailings increased to 700 T/hr.

The Plant produces coarse tailings at a rate of approximately 300 T/hr, which is deposited onto the FTSF's walls, to continuously increase and stabilise them. Fine tailings suspended in water, referred to as paste or slimes, are discharged into the FTSF through a pipe, at a rate of between 150 – 350 m³/hr. The higher end of this volume is discharged more frequently.

In 2021 Cyclones were installed for the extraction of 30% of solids from the slimes. These solids are deposited with the coarse tailings onto the FTSF walls to reduce the slimes volume in the FTSF. The overflow from the cyclones, which is a more liquid substance, is discharged into the FTSF. After settling of the solid materials in the FTSF, a float pump is used to abstract free water on the surface to ensure that there is never a volume exceeding 50 000 m³ of water and that the freeboard of at least 0.8 m above the 1:50 year flood event is maintained.

Jagersfontein is a historically important mine, as it is the largest hand-excavated mine in the world. The mine produced some of the world's clearest and largest diamonds. Due to the long existence of the mine, archaeological artefacts in the area are numerous. The mine was declared a public digging in 1870 and was operational, with a few interruptions, for 100 years. The mine was closed down in 1970.

This makes the town and specifically, the mining site, a significant place in terms of heritage. Four respective heritage impact assessments by heritage specialists L. Phillip (2009), Dr L. Rossouw (2013), Dr Gagher (2019) and Dr P. Birkholst (2021), have been undertaken before and during the operation of Jagersfontein Developments which commenced in 2010.

Both paleontological and archaeological artefacts have been found in the Operational Footprint, which falls in a high sensitivity zone regarding paleontological sensitivity. Therefore, it is important that measures (laid out in the CMP) are taken to protect the historical integrity of the place for future generations to appreciate.

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1 OBJECTIVES OF THE HERITAGE CONSERVATION MANAGEMENT PLAN

The HCMP is intended to provide a detailed background description of the:

- Tailings Operation;
- The activities associated with the Tailings Operation;
- The specifications for the reprocessing of tailings from surface tailings dumps for the extraction of diamonds and all activities associated with it,
- The heritage resources which may be affected;

to put measures in place to mitigate and manage potential impacts on heritage resources arising from all phases of the Operation.

Furthermore, the HCMP will indicate measures to be implemented to preserve, minimize damage or destruction and present the heritage resources at the site, to achieve closure and reduce the potential for residual and/or latent risk from occurring and to ensure the historical integrity and value of the site is protected.

The purpose of this document is to describe the management procedures that will be implemented by Jagersfontein Developments in terms of heritage resources.

2 EAP DETAILS

Report Prepared by:

TURN 180 ENVIRONMENTAL CONSULTANTS (PTY) LTD

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Louis De Villiers is an Environmental Consultant with a B.Sc Environmental Geography degree obtained from the University of the Free State in 2010. Since obtaining his degree, Mr De Villiers has been employed in a capacity as Environmental Consultant. Apart from the formal application processes and other reports associated with these processes, one of the key functions of an Environmental Consultant is the writing of Environmental Management Plans / Programmes. Mr. De Villiers has approximately 10 years of relevant experience in the writing of EMPs, among other reports.

Refer to **Appendix A** for the expertise, Curriculum Vitae, and Company Profile of the project team.

3 DETAILED PROJECT- AND ASPECT DESCRIPTION

The Tailings Operation is a diamond recovery operation with the main objective of extracting diamonds by the reprocessing of numerous different surface tailings dumps, scattered over a portion of the Remainder, portion 15 and portion 16 of the farm Jagersfontein 141S (“**Operational Footprint**”). These surface tailings dumps were discarded during historical mining activities where kimberlite was mined from the Pit on Portion 15 and placed on the surrounding landscape.

Activities associated to the Tailings Operation involves the loosening of surface tailings by means of a ripper or plough, where necessary; dozing tailings onto heaps on the footprint of the surface dump using a dozer; and loading of the tailings onto dumper trucks using a front-end loader or excavator. Where necessary, the tailings pass through rotary barrel screens located at the surface dumps to remove oversized material from the tailings. Oversized materials are stockpiled and reused as filling and for rehabilitation purposes. The trucks haul the tailings and tip it into feeders of various conveyors located at the Dump 1 and 11, Big Hole, Dumps 5 and 9 and Loskop Dam. Tailings are transported via conveyors to the Head Feed Bin at the Plant, where it is temporarily (i.e., per shift) stockpiled. Front-end loaders are used to feed the tailings into the Plant at a rate of approximately 615 Ton/hour (“**T/hr**”). Refer to Figure 1 below.

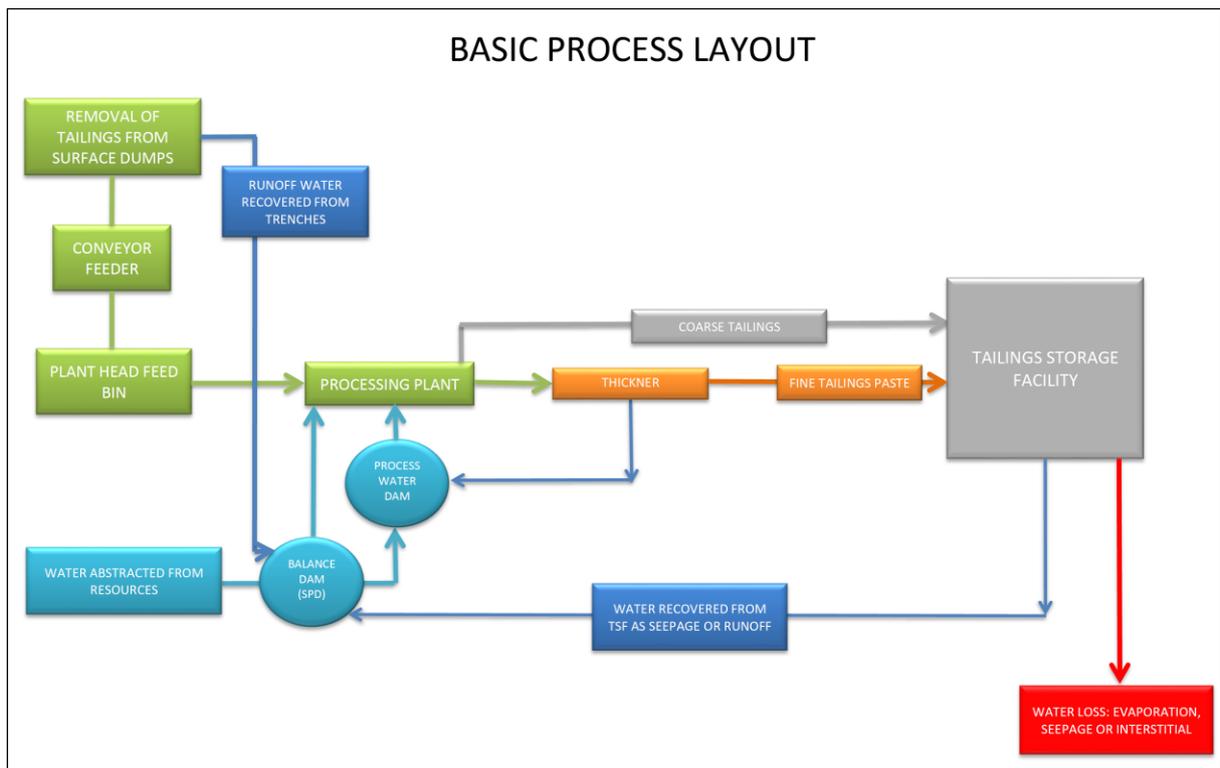


Figure 2: Illustration of the main process at the Jagersfontein Tailings Operation

After tailings are fed into the Plant, it passes through scrubbers and sizing screens to remove the +32mm material, which are crushed and returned to the Plant. The -32mm +16mm material are crushed further to a -8mm size, which is then fed to Pan Plant B. The -2mm tailings from the Head Feed Bin is screened out and passes through Pan Plant A, where the material is separated into tailings waste (i.e., coarse tailings) and -2mm concentrate. Tailings of -8mm from both Pan Plant A and B are discharged on a conveyor as coarse tailings which are discarded on the FTSF's walls. The -8mm concentrate from the Pan Plants is fed into the DMS Plants and diamonds are sorted from the concentrate (refer to Figure 3: Illustration of the Jagersfontein processing plantFigure 3 below). The Plant consists of 4 x 75 tons/hour DMS Plants, which are used to separate the mineral particles in a sink-float process. A suspension of dense powder in water is used, which forms a heavier liquid, for the separation. This causes the heavier material, containing diamonds, to sink and the lighter material to float.

The Plant uses a thickener to settle fine particles in water so that water from the process is recovered to reuse in the Plant. The fine tailings paste is reused in the Pan Plants and/or discharged into the FTSF at a rate of between 155 m³/hr. Coarse tailings of -8mm and solids, removed from the paste through cyclones, are transported from the Plant to the top of the FTSF wall, via conveyors, at a rate of between 186 m³/hr where it is loaded onto dumper trucks, which tip the material onto the FTSF wall to level out and stabilise it. The coarse tailings are levelled, using graders, and then compacted using a roller.

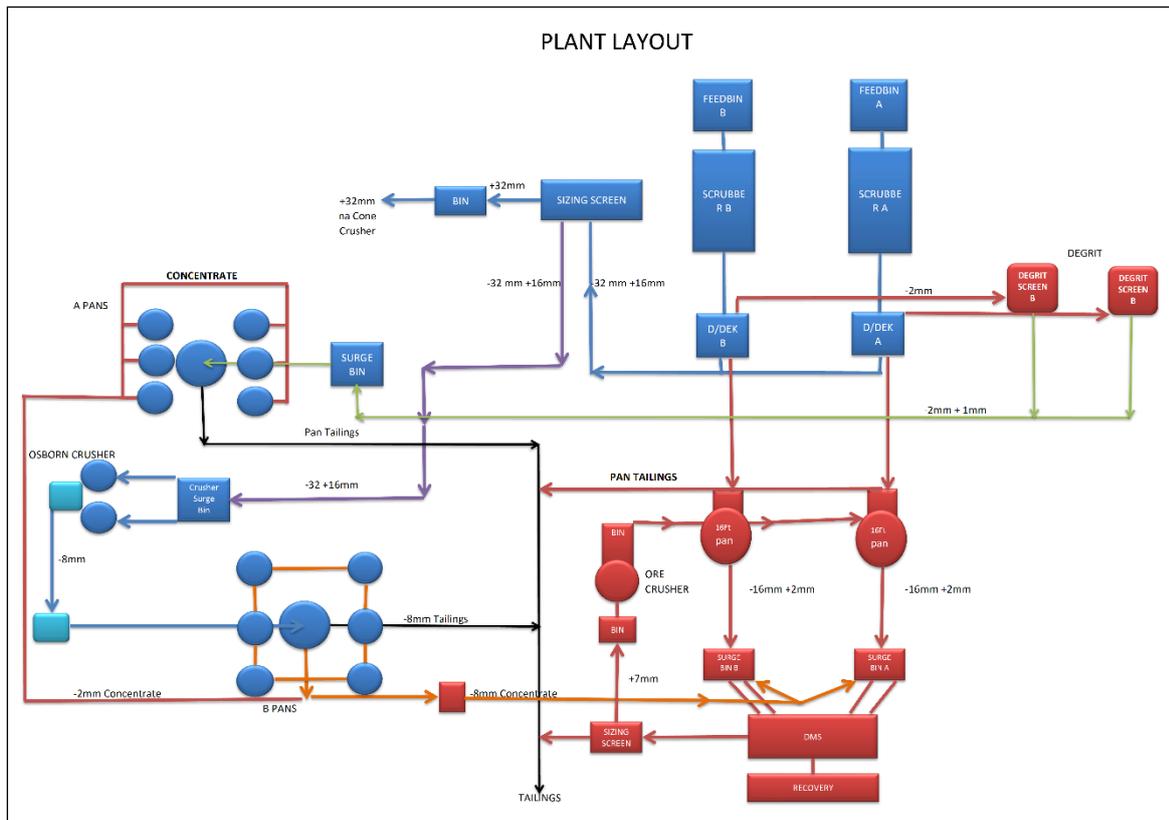


Figure 3: Illustration of the Jagersfontein processing plant

The activities carried out on site is conducted in terms of a WUL, issued by the DWS, Best Practice Guidelines and various Norms and Standards.

The removal of the various surface dumps and reprocessing thereof is regarded as an effort to rehabilitate the Operational Footprint landscape by removing the surface dumps, extracting the diamonds from the tailings, and storing and disposing of the tailings from the Plant into the FSTF.

The rehabilitation objective is to:

- clean the landscape to pre-mining conditions prior to the discovery of the first diamonds, as far as practically possible;
- ensure improved drainage of surface water by removing obstructions (i.e., surface dumps) and the scattered pollution sources;
- prevent pollution of both surface water and groundwater over the Operational Footprint; and
- create an environment with more beneficial land use possibilities for the Jagersfontein community and other landowners.

The Tailings Operation consist of various areas, features, structures, infrastructure, and activities which all need to be decommissioned, rehabilitated, and closed throughout various phases of the Tailings Operation's lifetime, including the following:

- 16 Surface tailings dumps being removed for reprocessing,
- Road network,
- Conveyor systems,
- Electrical cables and infrastructure,
- Processing plant,
- Workshop,
- Offices,
- Materials storage areas,
- Waste disposal and storage areas including process water and balance dams,
- Infield screening areas,
- Ablution facilities,
- Washing areas,
- Staff accommodation,
- Watercourses and wetlands drainage lines and surface dams, and
- Water service network, including boreholes for abstraction of water, water pipelines, and monitoring boreholes,

A recent (16 July 2021) survey determined that the remaining surface tailings to be removed and reprocessed until the end of life of the mine (estimated to be in 2028), comprised a total volume of approximately 18 339 924 m³. This volume only refers to the historical surface tailings dumps, which includes the following:

- | | |
|---|------------------------------|
| • Dumps 1, 11 and TP: | 946 421 m ³ , |
| • Tailings at BH (i.e., north of Big Hole): | 330 254 m ³ , |
| • Dumps 2 and 4: | 769 882 m ³ , |
| • MTD (i.e., Modern Tailings Dump) and Dump 13: | 14 126 242 m ³ . |
| • Dumps 5 and 9: | 281 290 m ³ , |
| • Pulsator Dump: | 90 127 m ³ , |
| • Dump 8: | 264 190 m ³ , |
| • Dump 12: | 514 153 m ³ , and |
| • Dump 14: | 943 281 m ³ . |

Apart from the main activities associated with the Tailings Operation, as indicated above, there are other activities which occur on the Operational Footprint, including the following:

- Servicing, maintenance, washing and repair of vehicles and machinery at the on-site workshop,

- Servicing, maintenance, and repair on the Plant,
- Storage and handling of dangerous goods, such as diesel for vehicles and machinery, oil and other hazardous substances,
- The movement of vehicles on roads, and parking and storage of vehicles, machinery and equipment in parking bays or salvage yards,
- Administrative activities and office work,
- Housing and accommodations for employees,
- Management and disposal of sewage from bathrooms and domestic washing areas,
- Abstraction and use of water in both the Plant and for domestic and potable use,

Figure 5 below shows the layout and locality of the various structures and infrastructure on the Operational Footprint.

From the above project description, the following aspects which may impact on heritage resources have been identified:

- Surface disturbance:
 - Clearance of vegetation
 - Road expansion
 - Alteration of the operation footprint
 - Construction of new infrastructure

Heritage resources have been identified and located by L. Phillips and P. Birkholst in 2009 and 2019/20, respectively. The measures described in the CMP applies specifically to those, and to any heritage resources or artefacts that are newly discovered.

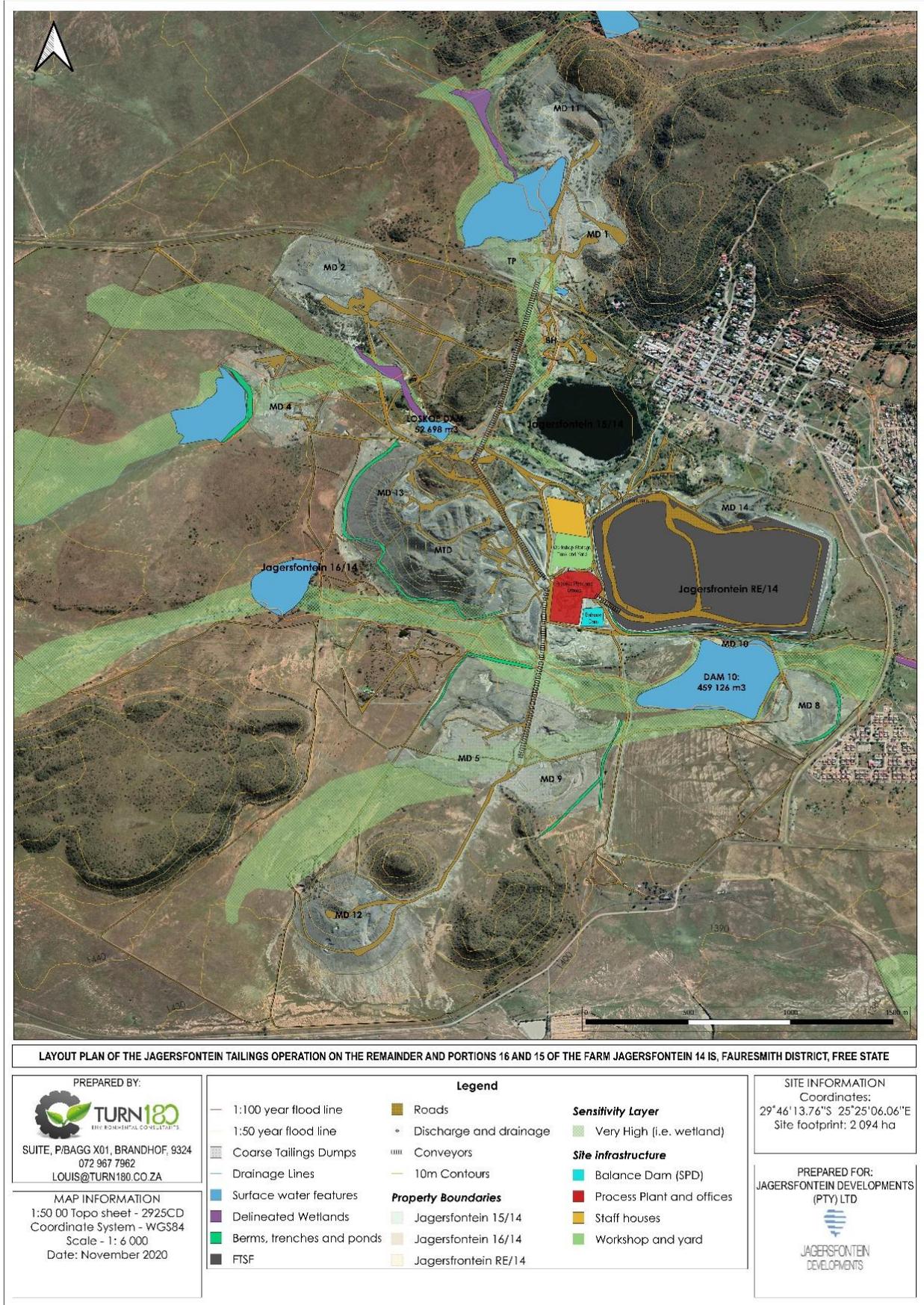


Figure 5: Layout map of the Operational Footprint

4 RELEVANT LEGISLATION

- National Environmental Management Act, 1998 (Act No. 107 of 1998)
- National Heritage Resources Act, 1999 (Act No. 25 of 1999)

5 DESCRIPTION OF THE BASELINE ENVIRONMENT

5.1 Archaeology and Palaeontology

5.1.1 Archaeology and history

The first diamonds were discovered on the farm Jagersfontein in November 1868. The farm belonged to the widowed Mrs. Visser and was situated in the District of Fauresmith in the Orange Free State. Because diamonds were known only to be found in alluvial deposits up to that point, the finds at Jagersfontein remained unnoticed, except amongst those in the immediate neighbourhood. Therefore, the alluvial finds on the banks of the Orange River enjoyed far more attention. Jagersfontein was the first so-called "dry mine" to be discovered.

For a monthly licence fee of £2, family and neighbours were allowed to dig in allotted patches. Although progress was slow and finds few and far inbetween, the digging population grew to such a degree that the Government found it necessary to proclaim the farm as a Public Diggings in 1871. Mr. Charles Hutton of the nearby town Fauresmith was appointed as the first Inspector. Wonderful finds on the Vaal River once again deferred attention from Jagersfontein, as thousands swarmed there to try their luck at instant riches.

Subsequent discovery of diamonds at Du Toitspan, Bultfontein and Colesberg Kopje in Kimberley, however, once again brought attention to Jagersfontein and the illusion of finding diamonds in alluvial beds alone was finally dispelled. Primitive methods, scarcity of water and lack of sufficient capital, however, made for little success at Jagersfontein during its early years of existence (Gaigher, 2019).

Towards the end of 1878 the "Fauresmith Diamond Mining Company" was formed, with Mr. C Bannau as manager. Their equipment used to extract diamonds from Kimberlite was primitive and not very effective at this stage. "It was during that same year that the real pioneers arrived in the form of experienced Australian gold miners. Among these, were the well-known Kerr brothers (renowned for having tested and laid the real foundation of the mining industry at Jagersfontein), William Miller, Thomas McCrea, Tom Dunn, Forster, Garrett Harrington and Richard Smith. At this stage, the government appointed Mr. J.W. Lotz as Inspector and steps were taken to have the mine surveyed and chartered. The latter was done by Mr. G.C. Brand and the mine plan showed 1,244 claims, each 30 X 30 feet (9.144 X 9.144 meters). At the same time the township was laid out. Although buildings shot up like mushrooms, it was mostly

constructed of sun-dried bricks and corrugated iron due to the uncertainty that existed as to the profitability and therefore long-term probability of the mine. In 1879 Mr. M.G. Keyter took up the position of Government Inspector, with the combined function of trialing petty offences. A Management Committee was formed, with Mr. Keyter as Chairman (ex officio) and Mr. J.G. Brink the Secretary. The Government offices was housed in the old farmstead situated immediately west of the mine. An old blue-gum tree in front of the house served as "gaol". The prisoners were detained by being handcuffed together, forming a ring around the tree and, in this peculiar manner, served their time. In 1881 the new Government Offices (in the township) was completed, and the farmhouse evacuated" (Gaigher, 2019).

Given the history of the mining operations in the area, an extensive assessment and study was conducted by Ms. L. Philip in 2009. The following table shows her findings of archaeological artefacts.

Area	Map Name	Group Name	Related To/ Period	Date Recorded	Latitude	Longitude	Altitude
Central Section	Fence Post	Fence Post	Mine	2009/03/02	-29.77359	25.40808	1416 m
Central Section	Fence Post	Fence Post	Mine	2009/03/02	-29.77272	25.40798	1419 m
Central Section	Fence Post	Fence Post	Mine	2009/03/02	-29.77232	25.4079	1418 m
Central Section	Fence Post	Fence Post	Mine	2009/03/02	-29.77471	25.4078	1419 m
Central Section	Fence Post	Fence Post	Mine	2009/03/02	-29.77442	25.40778	1418 m
Central Section	Fence Post	Fence Post	Mine	2009/03/02	-29.77409	25.40793	1418 m
Central Section	Fence Post	Fence Post	Mine	2009/03/02	-29.77483	25.40777	1416 m
Central Section	Fence Post	Fence Post	Mine	2009/03/02	-29.77536	25.40769	1420 m
Central Section	Gate Post	Gate Post	Mine	2009/03/02	-29.77185	25.40788	1422 m
Central Section	Gate Post	Gate Post	Mine	2009/03/02	-29.77156	25.40785	1423 m
Central Section	Gate Post	Gate Post	Mine	2009/03/02	-29.77148	25.4079	1423 m
Central Section	Gate Post	Gate Post	Mine	2009/03/02	-29.77189	25.40785	1420 m
Central Section	Gate Post	Gate Post	Mine	2009/03/02	-29.77138	25.40795	1423 m
Central Section	Loading Ramp	Structure	Mine	2009/03/02	-29.77447	25.41153	1423 m
Central Section	Pump House	Cement Foundation	Mine	2009/03/02	-29.77165	25.40806	1421 m
Central Section	Stone Wall	Wall	Mine	2009/03/02	-29.77165	25.40806	1422 m
Central Section	Stone Wall	Wall	Mine	2009/03/02	-29.77159	25.40818	1421 m
Central Section	Stonetool Scatter	Stonetool Scatter	Stone Age	2009/03/02	-29.77214	25.4068	1424 m
Compound	Compound	Structure	Mine	2009/04/02	-29.76944	25.41771	1416 m
Compound	Compound	Structure	Mine	2009/04/02	-29.76963	25.41921	1406 m
Compound	Compound	Structure	Mine	2009/04/02	-29.77093	25.41929	1409 m
Compound	Compound	Structure	Mine	2009/04/02	-29.77079	25.4193	1408 m
Compound	Compound	Structure	Mine	2009/04/02	-29.77169	25.41735	
Compound	Compound	Structure	Mine	2009/04/02	-29.77187	25.41895	1409 m
Compound	Hospital	Structure	Mine	2009/04/02	-29.77181	25.41762	
Compound	Hospital	Structure	Mine	2009/04/02	-29.77174	25.41765	
Compound	Hospital	Structure	Mine	2009/04/02	-29.77191	25.4176	
Compound	Hospital	Structure	Mine	2009/04/02	-29.77172	25.41765	
Compound	Hospital	Structure	Mine	2009/04/02	-29.7718	25.41821	1413 m
Compound	Hospital	Structure	Mine	2009/04/02	-29.77169	25.41735	
Compound	Hospital	Structure	Mine	2009/04/02	-29.77187	25.4182	1413 m
Compound	Hospital	Structure	Mine	2009/04/02	-29.77189	25.41744	1409 m

Area	Map Name	Group Name	Related To/ Period	Date Recorded	Latitude	Longitude	Altitude
Compound	Hospital	Structure	Mine	2009/04/02	-29.77179	25.41746	
Compound	Hospital	Structure	Mine	2009/04/02	-29.77178	25.41734	1413 m
Compound	Isolation ward	Structure	Mine	2009/04/02	-29.77232	25.41813	1410 m
Compound	Isolation ward	Structure	Mine	2009/04/02	-29.77225	25.41838	1410 m
Compound	Isolation ward	Structure	Mine	2009/04/02	-29.77225	25.41818	
Compound	Isolation ward	Structure	Mine	2009/04/02	-29.77233	25.41835	1411 m
Compound	Mortuary	Structure	Mine	2009/04/02	-29.7721	25.4182	
Compound	Mortuary	Structure	Mine	2009/04/02	-29.77211	25.41824	
Compound	Mortuary	Structure	Mine	2009/04/02	-29.77212	25.41818	1410 m
Compound	Mortuary	Structure	Mine	2009/04/02	-29.77214	25.41823	1411 m
East Section	Ash heap	Midden	Mine	2009/02/02	-29.77524	25.41806	1420 m
East Section	Cement Foundation	Cement Foundation	Mine	2009/05/02	-29.77941	25.41789	1410 m
East Section	Coal Depot	Structure	Mine	2009/05/02	-29.78396	25.4272	1410 m
East Section	Coal Depot	Structure	Mine	2009/05/02	-29.78372	25.42694	1412 m
East Section	Coal Depot	Structure	Mine	2009/05/02	-29.78357	25.42711	1413 m
East Section	Coal Depot	Structure	Mine	2009/05/02	-29.78385	25.42717	1412 m
East Section	Coal Depot	Structure	Mine	2009/05/02	-29.78361	25.42716	1411 m
East Section	Coal Depot	Structure	Mine	2009/05/02	-29.78383	25.42721	1412 m
East Section	Coal Depot	Structure	Mine	2009/05/02	-29.7837	25.42707	
East Section	Coal Depot	Structure	Mine	2009/05/02	-29.78392	25.42725	
East Section	Loading Ramp	Structure	Mine	2009/05/02	-29.78368	25.42714	
East Section	Loading Ramp	Structure	Mine	2009/05/02	-29.78377	25.42721	1411 m
East Section	Loading Ramp	Structure	Mine	2009/05/02	-29.78375	25.42723	1412 m
East Section	Loading Ramp	Structure	Mine	2009/05/02	-29.7837	25.42711	1412 m
East Section	Mound Dam	Dam	Mine	2009/05/02	-29.78091	25.41861	1414 m
East Section	Powerstation	Cement Foundation	Mine	2009/06/02	-29.7728	25.4207	1411 m
East Section	Stores	Cement Foundation	Mine	2009/06/02	-29.77446	25.41935	1416 m
East Section	Train Bridge	Bridge	Historic	2009/03/02	-29.77778	25.42128	1411 m
Graveyard	Grave	Graveyard	Historic	2009/05/02	-29.77616	25.40599	1421 m
Graveyard	Grave	Graveyard	Historic	2009/05/02	-29.77615	25.406	1420 m
Graveyard	Grave	Graveyard	Historic	2009/05/02	-29.77613	25.40602	1421 m
Graveyard	Grave	Graveyard	Historic	2009/05/02	-29.77612	25.40603	1421 m

Area	Map Name	Group Name	Related To/ Period	Date Recorded	Latitude	Longitude	Altitude
Graveyard	Graveyard	Graveyard	Historic	2009/03/02	-29.77627	25.40578	1425 m
Graveyard	Graveyard	Graveyard	Historic	2009/03/02	-29.77624	25.40556	1425 m
Graveyard	Graveyard	Graveyard	Historic	2009/03/02	-29.77693	25.40551	1414 m
Graveyard	Graveyard	Graveyard	Historic	2009/03/02	-29.77619	25.40643	1420 m
Graveyard	Graveyard	Graveyard	Historic	2009/03/02	-29.77578	25.40636	1422 m
Graveyard	Graveyard	Graveyard	Historic	2009/03/02	-29.77575	25.40635	1423 m
Graveyard	Graveyard	Graveyard	Historic	2009/03/02	-29.77537	25.40568	1425 m
Graveyard	Graveyard	Graveyard	Historic	2009/03/02	-29.77537	25.40586	1423 m
Graveyard	Graveyard	Graveyard	Historic	2009/03/02	-29.77512	25.40567	
Graveyard	Graveyard	Graveyard	Historic	2009/03/02	-29.77621	25.40568	1423 m
Graveyard	Graveyard	Graveyard	Historic	2009/03/02	-29.776	25.40567	1428 m
Graveyard	Graveyard	Graveyard	Historic	2009/03/02	-29.77589	25.40566	1426 m
Graveyard	Graveyard	Graveyard	Historic	2009/03/02	-29.77571	25.40569	1426 m
Graveyard	Graveyard	Graveyard	Historic	2009/03/02	-29.77619	25.40573	1425 m
Graveyard	Graveyard	Graveyard	Historic	2009/03/02	-29.77561	25.40573	1426 m
Graveyard	Graveyard	Graveyard	Historic	2009/03/02	-29.77554	25.40634	1422 m
Graveyard	Graveyard	Graveyard	Historic	2009/03/02	-29.77523	25.40627	1421 m
Graveyard	Graveyard	Graveyard	Historic	2009/03/02	-29.77572	25.40581	1423 m
Graveyard	Graveyard	Graveyard	Historic	2009/03/02	-29.77576	25.40582	1423 m
Hospital Section	Building with Chimney	Cement Foundation	Mine	2009/02/02	-29.76025	25.41751	1418 m
Hospital Section	Cement foundation	Cement Foundation	Mine	2009/06/02	-29.75586	25.41912	1427 m
Hospital Section	Channel	Other	Mine	2009/02/02	-29.75928	25.41634	1420 m
Hospital Section	Cottage Hospital	Stone Foundation	Mine	2009/02/18	-29.75853	25.42115	1432 m
Hospital Section	Diggers Hospital	Structure	Mine	2009/02/18	-29.75784	25.42056	1427 m
Hospital Section	Diggers Hospital	Structure	Mine	2009/02/18	-29.75799	25.42072	1428 m
Hospital Section	Diggers Hospital	Structure	Mine	2009/02/18	-29.75796	25.42085	1428 m
Hospital Section	Farmstead Midden	Midden	Mine	2009/02/02	-29.75897	25.41551	1426 m
Hospital Section	Mechanical Haulage Foundatio	Cement Foundation	Mine	2009/06/02	-29.75656	25.41984	1430 m
Hospital Section	Mechanical Haulage Foundatio	Cement Foundation	Mine	2009/06/02	-29.75664	25.41992	1431 m
Hospital Section	Mechanical Haulage Foundatio	Cement Foundation	Mine	2009/06/02	-29.75651	25.41994	1432 m
Hospital Section	Mechanical Haulage Foundatio	Cement Foundation	Mine	2009/06/02	-29.75662	25.42	1432 m
Hospital Section	Moth Hall	Structure	Mine	2009/02/18	-29.75792	25.42111	1432 m

Area	Map Name	Group Name	Related To/ Period	Date Recorded	Latitude	Longitude	Altitude
Hospital Section	Moth Hall	Structure	Mine	2009/02/18	-29.75765	25.42104	1433 m
Hospital Section	Moth Hall	Structure	Mine	2009/02/18	-29.75787	25.42117	1433 m
Hospital Section	Stone Foundation 1	Stone Foundation	Mine	2009/06/02	-29.75597	25.41928	1427 m
Hospital Section	Stone Foundation 1	Stone Foundation	Mine	2009/06/02	-29.75599	25.41934	1427 m
Hospital Section	Stone Foundation 1	Stone Foundation	Mine	2009/06/02	-29.75605	25.41927	1428 m
Hospital Section	Stone Foundation 1	Stone Foundation	Mine	2009/06/02	-29.75608	25.41932	1427 m
Hospital Section	Stone Foundation 2	Stone Foundation	Mine	2009/06/02	-29.75676	25.41938	1429 m
Hospital Section	Stone Foundation 2	Stone Foundation	Mine	2009/06/02	-29.75652	25.41936	1427 m
Hospital Section	Stone Foundation 2	Stone Foundation	Mine	2009/06/02	-29.75653	25.41933	1428 m
Hospital Section	Stone Foundation 2	Stone Foundation	Mine	2009/06/02	-29.75704	25.41945	1428 m
Hospital Section	Stone Foundation 2	Stone Foundation	Mine	2009/06/02	-29.75706	25.41954	1427 m
Hospital Section	Stone Foundation 3	Stone Foundation	Mine	2009/02/18	-29.75748	25.42122	1432 m
Hospital Section	Stone Foundation 3	Stone Foundation	Mine	2009/02/18	-29.75752	25.42117	1432 m
Hospital Section	Stone Foundation 3	Stone Foundation	Mine	2009/02/18	-29.75764	25.42122	1432 m
Hospital Section	Stone Foundation 4	Stone Foundation	Mine	2009/02/18	-29.75774	25.42137	1436 m
Hospital Section	Stone Foundation 4	Stone Foundation	Mine	2009/02/18	-29.75767	25.42139	1436 m
Hospital Section	Stone Foundation 4	Stone Foundation	Mine	2009/02/18	-29.75777	25.42135	1435 m
Hospital Section	Stone Foundation 6	Structure	Mine	2009/02/02	-29.75847	25.41579	1427 m
Hospital Section	Stone walling	Structure	Mine	2009/02/02	-29.75867	25.41566	1426 m
Hospital Section	Stone walling	Structure	Mine	2009/02/02	-29.75863	25.41543	1428 m
Hospital Section	Stone walling	Structure	Mine	2009/02/02	-29.75849	25.41554	1428 m
Hospital Section	Stone walling	Structure	Mine	2009/02/02	-29.75831	25.41559	1429 m
Hospital Section	Stone walling	Structure	Mine	2009/02/02	-29.75821	25.41567	1426 m
Hospital Section	Stone walling	Structure	Mine	2009/02/02	-29.75793	25.41565	1429 m
Hospital Section	Stone walling	Structure	Mine	2009/02/02	-29.758	25.41572	1427 m
Hospital Section	Stone walling	Structure	Mine	2009/02/02	-29.75816	25.41627	1422 m
Hospital Section	Stone walling	Structure	Mine	2009/02/02	-29.75875	25.41606	1425 m
Hospital Section	Stone walling	Structure	Mine	2009/02/02	-29.75833	25.41624	1423 m
Hospital Section	Stone walling	Structure	Mine	2009/02/02	-29.75827	25.41627	1423 m
Hospital Section	Unidentified Structure	Stone Foundation	Mine	2009/02/18	-29.75775	25.42131	1437 m
Hospital Section	Unidentified Structure	Stone Foundation	Mine	2009/02/18	-29.75777	25.42127	1434 m
Hospital Section	Unidentified Structure	Stone Foundation	Mine	2009/02/18	-29.75776	25.42116	1433 m

Area	Map Name	Group Name	Related To/ Period	Date Recorded	Latitude	Longitude	Altitude
Hospital Section	Watershaft	Structure	Mine	2009/02/02	-29.75946	25.41682	1417 m
Mine Area a	Bathroom	Structure	Mine	2009/06/02	-29.76841	25.41871	1417 m
Mine Area a	Cement Foundation 1	Cement Foundation	Mine	2009/06/02	-29.76801	25.41875	1415 m
Mine Area a	Cement Foundation 2	Cement Foundation	Mine	2009/06/02	-29.76818	25.41874	1418 m
Mine Area a	Change House	Structure	Mine	2009/06/02	-29.76832	25.41892	1417 m
Mine Area a	Cooling Dam	Dam	Mine	2009/06/02	-29.76737	25.41851	1417 m
Mine Area a	Cooling Dam	Cement Foundation	Mine	2009/03/02	-29.76724	25.41792	1413 m
Mine Area a	Crushers	Cement Foundation	Mine	2009/06/02	-29.76848	25.41943	1417 m
Mine Area a	Dam	Dam	Mine	2009/06/02	-29.76862	25.41786	1416 m
Mine Area a	Dam	Dam	Mine	2009/06/02	-29.76864	25.41797	1415 m
Mine Area a	Engine Room	Structure	Mine	2009/02/02	-29.76714	25.41566	1418 m
Mine Area a	Engineers Offices	Structure	Mine	2009/02/02	-29.76834	25.41933	1414 m
Mine Area a	Offices	Structure	Mine	2009/06/02	-29.76904	25.41809	
Mine Area a	Offices	Structure	Mine	2009/06/02	-29.76912	25.41809	
Mine Area a	Offices	Structure	Mine	2009/06/02	-29.76912	25.41776	1414 m
Mine Area a	Offices	Structure	Mine	2009/06/02	-29.76904	25.41776	
Mine Area a	Riggers	Cement Foundation	Mine	2009/06/02	-29.76757	25.4198	1415 m
Mine Area a	Riggers	Cement Foundation	Mine	2009/06/02	-29.76741	25.4195	1415 m
Mine Area a	Settling Dam	Dam	Mine	2009/06/02	-29.76889	25.41757	1418 m
Mine Area a	Shaft Offices	Structure	Mine	2009/06/02	-29.76819	25.41905	1418 m
Mine Area a	Shaft Timbermen	Cement Foundation	Mine	2009/06/02	-29.76738	25.41922	1414 m
Mine Area a	Structure 2	Dam	Mine	2009/06/02	-29.76734	25.41869	1417 m
Mine Area a	Study Offices	Structure	Mine	2009/06/02	-29.76724	25.41935	1413 m
Mine Area a	Underground Tunnel Entrance	Structure	Mine	2009/06/02	-29.76831	25.41886	1416 m
Mine Area a	Unidentified 1	Structure	Mine	2009/06/02	-29.76841	25.41897	1418 m
Mine Area a	Washing Plant	Dam	Mine	2009/06/02	-29.76875	25.41817	1418 m
Mine Area a	Watershaft no 2 Rock Shaft	Structure	Mine	2009/02/02	-29.76708	25.41559	1418 m
Mine Area b	Bridge over No. 2 drain	Structure	Mine	2009/06/02	-29.76837	25.42055	1418 m
Mine Area b	Cement Dam	Dam	Mine	2009/06/02	-29.76792	25.4214	1419 m
Mine Area b	Cement foundation	Cement Foundation	Mine	2009/06/02	-29.76685	25.42214	1423 m
Mine Area b	Cement foundation 1	Cement Foundation	Mine	2009/06/02	-29.76753	25.42241	1424 m
Mine Area b	Cement foundation 2	Cement Foundation	Mine	2009/06/02	-29.766	25.42364	1438 m

Area	Map Name	Group Name	Related To/ Period	Date Recorded	Latitude	Longitude	Altitude
Mine Area b	Cement foundation 3	Cement Foundation	Mine	2009/06/02	-29.76681	25.42225	1423 m
Mine Area b	Cement foundation 3	Cement Foundation	Mine	2009/06/02	-29.76675	25.42222	1423 m
Mine Area b	Cement foundation 3	Cement Foundation	Mine	2009/06/02	-29.76678	25.42221	1423 m
Mine Area b	Clarification Dam	Dam	Mine	2009/06/02	-29.76548	25.42416	1433 m
Mine Area b	Clarification Dam	Dam	Mine	2009/06/02	-29.76578	25.42389	1432 m
Mine Area b	Clarification Dam	Dam	Mine	2009/06/02	-29.76582	25.42401	1433 m
Mine Area b	Clarification Dam	Dam	Mine	2009/06/02	-29.76546	25.42404	1432 m
Mine Area b	Fitter Shop	Stone Foundation	Mine	2009/06/02	-29.76699	25.42296	
Mine Area b	Fitter Shop	Stone Foundation	Mine	2009/06/02	-29.76696	25.42283	
Mine Area b	Fitter Shop	Stone Foundation	Mine	2009/06/02	-29.76687	25.42281	1432 m
Mine Area b	Fitter Shop	Stone Foundation	Mine	2009/06/02	-29.76675	25.42288	1432 m
Mine Area b	Fitter Shop	Stone Foundation	Mine	2009/06/02	-29.76671	25.42289	1431 m
Mine Area b	Fitter Shop	Stone Foundation	Mine	2009/06/02	-29.76698	25.423	1433 m
Mine Area b	Fitter Shop	Stone Foundation	Mine	2009/06/02	-29.76702	25.42284	1431 m
Mine Area b	Hydro Power plant	Structure	Mine	2009/05/02	-29.76677	25.4242	1447 m
Mine Area b	Loading Ramp	Structure	Mine	2009/06/02	-29.76792	25.4214	1419 m
Mine Area b	Pump House	Structure	Mine	2009/06/02	-29.76611	25.42398	1442 m
Mine Area b	Red Brick Building	Structure	Mine	2009/06/02	-29.76732	25.42099	1417 m
Mine Area b	Red Brick Building	Structure	Mine	2009/06/02	-29.76727	25.42123	
Mine Area b	Red Brick Building	Structure	Mine	2009/06/02	-29.76738	25.42102	1417 m
Mine Area b	Red Brick Building	Structure	Mine	2009/06/02	-29.76733	25.42126	1418 m
Mine Area b	Reservoir	Dam	Mine	2009/06/02	-29.76694	25.42461	1448 m
Mine Area b	Reservoir	Dam	Mine	2009/06/02	-29.76688	25.42439	1446 m
Mine Area b	Reservoir	Dam	Mine	2009/06/02	-29.76665	25.42469	1447 m
Mine Area b	Reservoir	Dam	Mine	2009/06/02	-29.7666	25.42449	1448 m
Mine Area b	Reservoir	Structure	Mine	2009/05/02	-29.76701	25.42449	
Mine Area b	Stone Foundation 2	Stone Foundation	Mine	2009/06/02	-29.76744	25.42247	1424 m
Mine Area b	Stone Foundation 2	Stone Foundation	Mine	2009/06/02	-29.76732	25.42291	1428 m
Mine Area b	Stone Foundation 2	Stone Foundation	Mine	2009/06/02	-29.76723	25.42287	1428 m
Mine Area b	Stone Foundation 2	Stone Foundation	Mine	2009/06/02	-29.76735	25.42243	1424 m
Mine Area b	Stone Foundation 3	Stone Foundation	Mine	2009/06/02	-29.76674	25.42222	1423 m
Mine Area b	Stone Foundation 3	Stone Foundation	Mine	2009/06/02	-29.76681	25.42226	1424 m

Area	Map Name	Group Name	Related To/ Period	Date Recorded	Latitude	Longitude	Altitude
Mine Area b	Stone Foundation 3	Stone Foundation	Mine	2009/06/02	-29.76677	25.42234	
Mine Area b	Stone Foundation 3	Stone Foundation	Mine	2009/06/02	-29.7667	25.42231	
Mine Area b	Stonetool Scatter	Stonetool Scatter	Stone Age	2009/05/02	-29.76622	25.42167	
Mine Area b	Unidentified Stone Foundation	Structure	Mine	2009/06/02	-29.7658	25.42365	1439 m
Mine Square	Acrobatic Club	Structure	Mine	2009/06/02	-29.76371	25.42381	1425 m
Mine Square	Bowling Clubhouse	Structure	Mine Square	2009/06/02	-29.76334	25.4237	1424 m
Mine Square	Bowling Green	Other	Mine Square	2009/06/02	-29.76318	25.42384	1425 m
Mine Square	Building	Structure	Mine	2009/06/02	-29.7648	25.42281	1421 m
Mine Square	Engineers Office	Structure	Mine	2009/05/02	-29.76399	25.42281	1422 m
Mine Square	Engineers Office	Structure	Mine Square	2009/06/02	-29.76407	25.42298	1418 m
Mine Square	Garage	Structure	Mine Square	2009/06/02	-29.76403	25.42341	1425 m
Mine Square	Head Office	Structure	Mine Square	2009/06/02	-29.76271	25.42318	
Mine Square	House	Structure	Mine Square	2009/06/02	-29.76434	25.42435	
Mine Square	House	Structure	Mine Square	2009/06/02	-29.7642	25.42443	
Mine Square	House	Structure	Mine Square	2009/06/02	-29.76351	25.42351	
Mine Square	House	Structure	Mine Square	2009/06/02	-29.76366	25.42282	
Mine Square	House	Structure	Mine Square	2009/06/02	-29.76437	25.42403	
Mine Square	House	Structure	Mine Square	2009/06/02	-29.76406	25.42452	
Mine Square	House	Structure	Mine Square	2009/06/02	-29.7645	25.42423	
Mine Square	House	Structure	Mine Square	2009/06/02	-29.76317	25.42302	
Mine Square	House	Structure	Mine Square	2009/06/02	-29.76332	25.42296	
Mine Square	House	Structure	Mine Square	2009/06/02	-29.76353	25.42287	
Mine Square	House	Structure	Mine Square	2009/06/02	-29.76376	25.42317	
Mine Square	House	Structure	Mine Square	2009/06/02	-29.76408	25.42494	
Mine Square	House	Structure	Mine Square	2009/06/02	-29.8305	25.42333	
Mine Square	House	Structure	Mine Square	2009/06/02	-29.76428	25.42386	
Mine Square	House	Structure	Mine Square	2009/06/02	-29.76444	25.42383	
Mine Square	Managers House	Structure	Mine Square	2009/06/02	-29.7618	25.42192	1426 m
Mine Square	Single Quarters	Structure	Mine Square	2009/06/02	-29.76246	25.42392	
Mine Square	Single Quarters	Structure	Mine Square	2009/06/02	-29.76229	25.42368	
Mine Square	Single Quarters	Structure	Mine Square	2009/06/02	-29.76215	25.42377	
Mine Square	Single Quarters	Structure	Mine Square	2009/06/02	-29.76183	25.42289	

Area	Map Name	Group Name	Related To/ Period	Date Recorded	Latitude	Longitude	Altitude
Mine Square	Survey Office	Structure	Mine Square	2009/06/02	-29.76296	25.42303	
Mine Square	Swimming pool	Other	Mine	2009/06/02	-29.76351	25.4248	1426 m
Mine Square	Tennis Courts	Other	Mine	2009/06/02	-29.76337	25.42432	1426 m
Mine Square	Underground Managers Office	Structure	Mine Square	2009/06/02	-29.76251	25.42271	
North Section	Cement Foundation with loose l	Cement Foundation	Mine	2009/06/02	-29.74956	25.41847	1436 m
North Section	Cement Foundation with loose l	Cement Foundation	Mine	2009/06/02	-29.74961	25.41844	1434 m
North Section	Cement Foundation with loose l	Cement Foundation	Mine	2009/06/02	-29.74957	25.41832	1437 m
North Section	Ostrich eggshell scatter	Other	Other	2009/06/02	-29.75143	25.41209	1435 m
North Section	Stone and Cement Channel	Structure	Mine	2009/06/02	-29.75518	25.41287	1429 m
North Section	Stone and Cement Wall	Wall	Mine	2009/06/02	-29.75299	25.40907	1437 m
North Section	Stone Bridge	Bridge	Mine	2009/06/02	-29.75575	25.414	1422 m
North Section	Stonetool Scatter	Stonetool Scatter	Stone Age	2009/06/02	-29.75276	25.40995	1436 m
North Section	Stonetool Scatter	Stonetool Scatter	Stone Age	2009/06/02	-29.75207	25.41148	1436 m
South Section	Mechanical Hauluge Foundatio	Cement Foundation	Mine	2009/05/02	-29.79005	25.39898	1434 m
South Section	Mechanical Hauluge Foundatio	Cement Foundation	Mine	2009/05/02	-29.79001	25.39887	1433 m
South Section	Mechanical Hauluge Foundatio	Cement Foundation	Mine	2009/05/02	-29.78996	25.39895	1434 m
South Section	Mechanical Hauluge Foundatio	Cement Foundation	Mine	2009/05/02	-29.79017	25.40338	1426 m
South Section	Mechanical Hauluge Foundatio	Cement Foundation	Mine	2009/05/02	-29.79011	25.39895	1433 m
South Section	Mechanical Hauluge Foundatio	Cement Foundation	Mine	2009/05/02	-29.78833	25.40036	1433 m
South Section	Mechanical Hauluge Foundatio	Cement Foundation	Mine	2009/05/02	-29.78229	25.40454	1430 m
South Section	Mechanical Hauluge Foundatio	Cement Foundation	Mine	2009/05/02	-29.7901	25.40344	1426 m
South Section	Mechanical Hauluge Foundatio	Cement Foundation	Mine	2009/05/02	-29.77938	25.40729	1429 m
South Section	Mechanical Hauluge Foundatio	Cement Foundation	Mine	2009/05/02	-29.77931	25.40731	1428 m
South Section	Mechanical Hauluge Foundatio	Cement Foundation	Mine	2009/05/02	-29.78832	25.40043	1432 m
South Section	Mechanical Hauluge Foundatio	Cement Foundation	Mine	2009/05/02	-29.78118	25.40587	1431 m
South Section	Mechanical Hauluge Foundatio	Cement Foundation	Mine	2009/05/02	-29.78114	25.4059	1431 m
South Section	Mechanical Hauluge Foundatio	Cement Foundation	Mine	2009/05/02	-29.78296	25.40449	1429 m
South Section	Mechanical Hauluge Foundatio	Cement Foundation	Mine	2009/05/02	-29.78648	25.40179	1433 m
South Section	Mechanical Hauluge Foundatio	Cement Foundation	Mine	2009/05/02	-29.78652	25.40173	1433 m
South Section	Packed stones	Structure	Mine	2009/05/02	-29.7904	25.39923	1432 m
South Section	Packed stones	Structure	Mine	2009/05/02	-29.79051	25.39939	1433 m
South Section	Packed stones	Structure	Mine	2009/05/02	-29.79049	25.39908	1432 m

Area	Map Name	Group Name	Related To/ Period	Date Recorded	Latitude	Longitude	Altitude
South Section	Stonewall/Retainerwall	Wall	Mine	2009/05/02	-29.7826	25.40438	1440 m
South Section	Stonewall/Retainerwall	Wall	Mine	2009/05/02	-29.78578	25.40021	1438 m
South Section	Stonewall/Retainerwall	Wall	Mine	2009/05/02	-29.78698	25.39862	1441 m
South Section	Stonewall/Retainerwall	Wall	Mine	2009/05/02	-29.78774	25.39757	1441 m
West Section	Airfield Bathroom	Structure	Mine	2009/03/02	-29.77421	25.38478	1460 m
West Section	Airfield Hanger	Cement Foundation	Mine	2009/05/02	-29.77431	25.38561	1460 m
West Section	Cattle Kraal	Kraal	Farming activities	2009/04/02	-29.76577	25.38248	1493 m
West Section	Dam Wall	Dam	Mine	2009/04/02	-29.77099	25.38596	1457 m
West Section	Dam Wall	Dam	Mine	2009/04/02	-29.77208	25.38563	1457 m
West Section	Dam Wall	Dam	Mine	2009/04/02	-29.77176	25.38599	1456 m
West Section	Dam Wall	Dam	Mine	2009/04/02	-29.77153	25.38622	1456 m
West Section	Dam Wall	Dam	Mine	2009/04/02	-29.77132	25.38627	1455 m
West Section	Grave	Graveyard	Historic	2009/05/02	-29.77747	25.39319	
West Section	Kraal	Kraal	Farming activities	2009/05/02	-29.78239	25.3868	1481 m
West Section	Stone Heap	Stone Heap	Mine	2009/04/02	-29.76704	25.3821	1489 m
West Section	Stone Heap	Stone Heap	Mine	2009/04/02	-29.76676	25.38228	1486 m
West Section	Stone Heap	Stone Heap	Mine	2009/04/02	-29.76655	25.38213	1488 m
West Section	Stone Heap	Stone Heap	Mine	2009/04/02	-29.7656	25.38204	1493 m
West Section	Stonetool Scatter	Stonetool Scatter	Stone Age	2009/04/02	-29.78321	25.3824	1473 m
West Section	Stonetool Scatter	Stonetool Scatter	Stone Age	2009/04/02	-29.76532	25.38187	1495 m

Table 1: Table showing archaeological artefacts (Philip, 2009)

A Heritage Impact Assessment was also conducted in 2020/2021, which yielded, and in some cases confirmed, the following artefacts:

ID	Structure	Latitude	Longitude	Significance	Author
JAG1	Old Mine Pit	-29.763698	25.419207	Local / Provincial Significance	P. Birkholst
JAG2	Historic mine structure	-29.763368	25.416068	Gen. Protected B - Medium Significance	P. Birkholst
JAG3A	Historic mine structure	-29.76398	25.415155	Gen. Protected A - High/Medium Significance	P. Birkholst
JAG3B	Historic mine structure	-29.763551	25.414986	Gen. Protected A - High/Medium Significance	P. Birkholst
JAG4A	Historic mine structure	-29.765302	25.416773	Gen. Protected B - Medium Significance	P. Birkholst
JAG4B	Historic mine structure	-29.765498	25.417141	Gen. Protected B - Medium Significance	P. Birkholst
JAG5	Historic mine structure	-29.767037	25.418602	Gen. Protected A - High/Medium Significance	P. Birkholst
JAG5A	Historic mine structure	-29.766257	25.417133	Gen. Protected A - High/Medium Significance	P. Birkholst
JAG5B	Historic mine structure	-29.7672	25.419106	Gen. Protected A - High/Medium Significance	P. Birkholst
JAG6	Historic mine structure	-29.767396	25.418994	Gen. Protected A - High/Medium Significance	P. Birkholst
JAG7A	Historic mine structure	-29.766365	25.42042	Gen. Protected B - Medium Significance	P. Birkholst
JAG7B	Historic mine structure	-29.76627	25.420423	Gen. Protected B - Medium Significance	P. Birkholst
JAG8	Historic mine structure	-29.766326	25.420229	Gen. Protected B - Medium Significance	P. Birkholst
JAG9	Historic mine structure	-29.766333	25.420064	Gen. Protected B - Medium Significance	P. Birkholst
JAG10A	Historic mine structure	-29.766492	25.419222	Gen. Protected B - Medium Significance	P. Birkholst
JAG10B	Historic mine structure	-29.76636	25.419147	Gen. Protected B - Medium Significance	P. Birkholst
JAG11	Historic mine structure	-29.766745	25.419001	Gen. Protected A - High/Medium Significance	P. Birkholst

JAG12	Historic mine structure	-29.761141	25.41681	Gen. Protected C - Low Significance	P. Birkholst
JAG13	Historic mine structure	-29.761755	25.419364	Gen. Protected B - Medium Significance	P. Birkholst
JAG14	Historic midden	-29.761322	25.419401	Gen. Protected B - Medium Significance	P. Birkholst
JAG15	Historic structure	-29.766146	25.414911	Gen. Protected B - Medium Significance	P. Birkholst
JAG16	Historic mine structure	-29.76741	25.420993	Gen. Protected B - Medium Significance	P. Birkholst
JAG17	Historic mine dump	-29.762792	25.416499	Gen. Protected B - Medium Significance	P. Birkholst
JAG18	Historic mine structure	-29.76475	25.422728	Gen. Protected B - Medium Significance	P. Birkholst
JAG19	Historic mine structure	-29.764137	25.422924	Gen. Protected A - High/Medium Significance	P. Birkholst
JAG20	Historic mine structure	-29.763765	25.422728	Gen. Protected A - High/Medium Significance	P. Birkholst
JAG21	Historic mine structure	-29.764354	25.422556	Gen. Protected B - Medium Significance	P. Birkholst
JAG22	Historic Depositing floor	-29.761534	25.419659	Gen. Protected B - Medium Significance	P. Birkholst
JAG23	Historic mine structure	-29.767114	25.415611	Gen. Protected C - Low Significance	P. Birkholst
JAG24	Historic mine structure	-29.767827	25.419441	Gen. Protected B - Medium Significance	P. Birkholst
JAG25	Stone age site	-29.76622	25.42167	Gen. Protected C - Low Significance	P. Birkholst

Table 2: Table showing archaeological artefacts / structures (Birkholst, 2021)

The above data was used to compile a map as below:

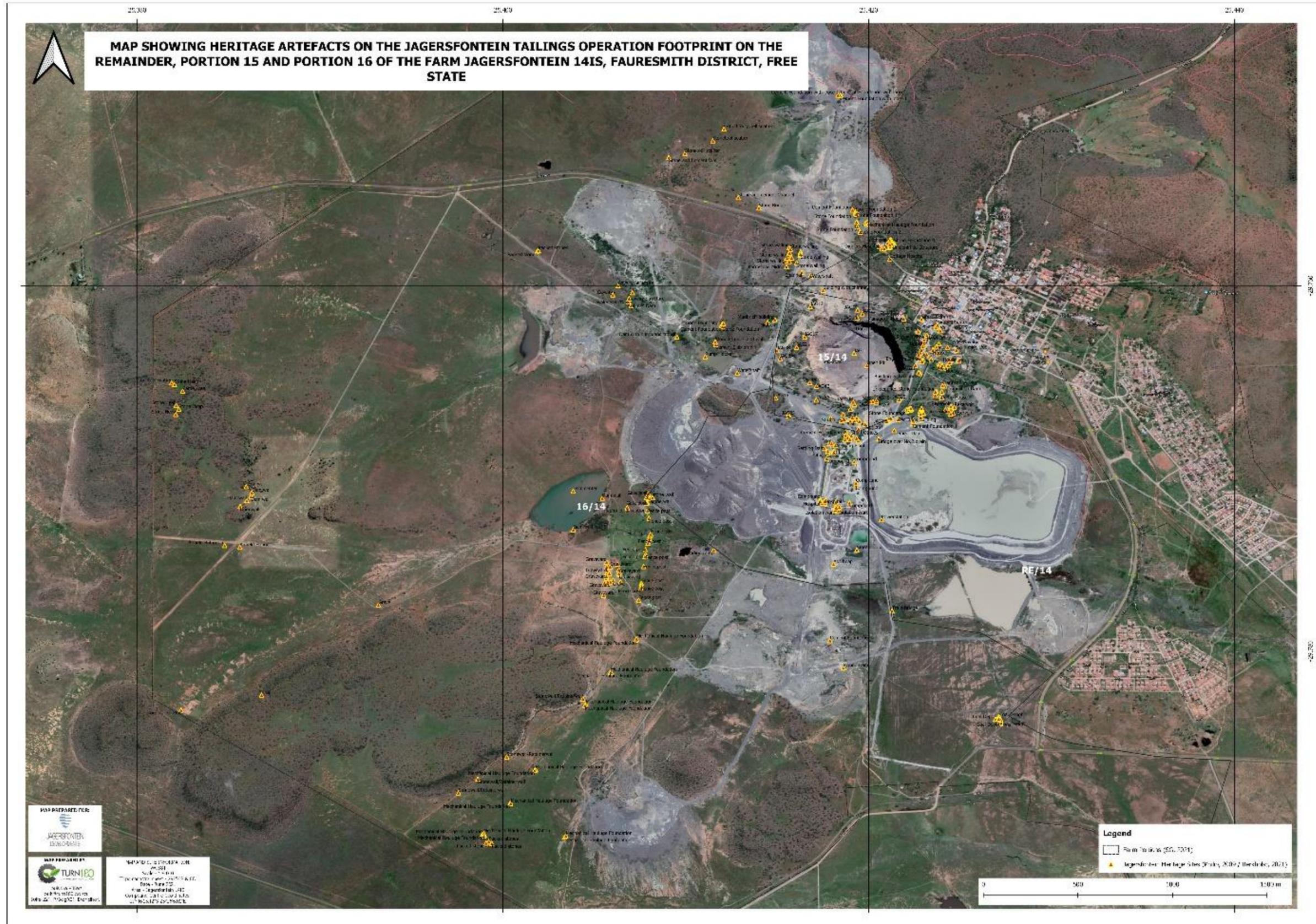


Figure 6: Map of the heritage resources and artefacts at Jagersfontein

5.1.2 Paleontology

According to Dr. L. Rossouw in 2013 (*Exemption of a Phase 1 Palaeontological Impact Assessment for a proposed pipeline on subdivision 16 & Remain Extent of the farm Jagersfontein no. 14, Kopanong Local Municipality, Free State Province*) “Bedrock geology along the proposed route is characterized by argillaceous rocks of the Tierberg Formation. The Formation represents the uppermost unit of the Ecca Group (Karoo Supergroup) and primarily comprises well-laminated, dark shales with abundant carbonate concretions, interbedded by siltstones and fine-grained sandstones. Fish scales and sponge spicules have previously been found in some of the carbonate concretions and trace fossils commonly occur throughout the sequence, but terrestrial vertebrates and plant remains are generally absent from the Tierberg Formation. Geologically recent sediments overlying the Tierberg Formation are made of Quaternary-aged channel fills and sheetwash deposits, including unconsolidated wind-blown sands and limited alluvium from the nearby Prosesspruit. Overbank deposits and alluvial terraces of large river courses, such as the nearby Riet River have previously yielded numerous Quaternary vertebrate fossil remains. Unfortunately, vertebrate fossils are usually not well-preserved in shallow alluvial deposits along small river courses and stream beds in this region”.

5.2 Present and future land use

The Operational Footprint consisting of the portion to the west of the R704 leading into Jagersfontein from the intersection at the R706 of the Remainder is mainly used for industrial purposes, of which the removal and reprocessing of the surface tailings dumps is the main land use. Due to the nature of the activities and land use, the property is secured; and access is not allowed without approval. The processing plant, FTSF, staff housing and eastern surface tailings dumps are located on this portion of the Remainder.

Portion 16 of Jagersfontein is mainly used for activities associated with the Tailings Operation, which includes the removal of surface tailings from the surface and transporting it to the processing plant. However, the western and northern portions of Portion 16 is vacant land and used for cattle and sheep grazing. Game is also present on this portion of the property, roaming especially in the vacant areas.

Portion 15 contains the open pit and other land use is limited to water abstraction from the Shaft and removal of surface tailings to be processed in the processing plant.

The Tailings Operation is regarded as a rehabilitation project, whereby surface tailings are removed from the land, processed in the plant, and returned to the FTSF as coarse and fine tailings. This activity creates areas, which have previously been disturbed by surface tailings, with a higher potential for animal grazing and agricultural activities in large. The landscape will change to such an extent that the surface will be cleaned of tailings, which will either be deposited inside the FTSF or the pit (if licensed).

The Remainder of Jagersfontein 14 is owned by the Kopanong Local Municipality (KLM) and will be returned to them upon completion of the removal of the tailings dumps and rehabilitation of the land. It is expected that the land will be used for communal grazing and agriculture.

6 HERITAGE IMPACT IDENTIFICATION, MITIGATION, AND MANAGEMENT

From the preceding sections of this report, the activities were identified and discussed and the following aspects which may impact on heritage resources were derived from the activities associated with the Tailings Operation:

- Loss of paleontological or archaeological artefacts
- Loss of educational value of the place
- Loss of historical value of the place
- Loss of scientific value of the place

The following section indicates the environmental impacts associated with all activities and aspects and proposed measures to mitigate and manage impacts which may occur because of the activities and aspects.

Table 3: Table showing the activities, aspects, impacts and mitigation of the tailings operations at Jagersfontein

Activity	Area(s) of interest / concern	Aspects	Possible Impact(s)	Mitigation and management of impacts	Monitoring, reporting and frequency	Performance indicator(s)	Responsible person(s)
OPERATIONAL PHASE							
Gathering and temporarily stockpiling tailings on tailings dumps ("TDs") using dozers.	<ul style="list-style-type: none"> All surface dumps. Surface water features 	<ul style="list-style-type: none"> Working near heritage artefacts. 	<ul style="list-style-type: none"> Loss or damage to heritage artefacts. 	<ul style="list-style-type: none"> Design and maintain operational areas to be as small as is reasonably practicable, Clearly demarcate the footprints of all TDs and operational areas and do not exceed the footprint of the TDs and operational areas, Identify topsoil below TDs and leave in-situ. Do not remove topsoil for processing or any other purposes, Clearly demarcate all archaeological and paleontological artefacts identified by L. Philip and P. Birkholtz and maintain safe distances from artefacts. 	<ul style="list-style-type: none"> Visually assess the depth of tailings to be removed before topsoil is reached prior to operations on each TD, to prevent disturbance of artefacts. Ensure all demarcated artefacts in the vicinity of the particular TD are intact before operations on each TD and keep a predetermined buffer around it during operations. Report incidents of damage or loss of artefacts immediately to the responsible person. 	<ul style="list-style-type: none"> No heritage artefacts damaged or lost on operational areas, 	Environmental Manager
Loading and hauling of tailings to plant and/or conveyor feeders	Roads	<ul style="list-style-type: none"> Damaging heritage artefacts. 	<ul style="list-style-type: none"> Loss or damage to heritage artefacts. 	<ul style="list-style-type: none"> Demarcate and monitor the road widths, Use of existing roads for haulage of material, No widening of existing roads, Clearly demarcate all archaeological and paleontological artefacts identified by L. Philip and P. Birkholtz and maintain safe distances from artefacts. 	<ul style="list-style-type: none"> Monitor the widths of roads monthly, Monitor demarcated artefacts monthly. Report incidents of damage or loss of artefacts immediately to the responsible person. 	<ul style="list-style-type: none"> Maintained road width, No disturbance on areas located adjacent to roads (i.e., surrounding environment), Incident reports available on site, No heritage artefacts damaged or lost on operational areas. 	Environmental Manager

Activity	Area(s) of interest / concern	Aspects	Possible Impact(s)	Mitigation and management of impacts	Monitoring, reporting and frequency	Performance indicator(s)	Responsible person(s)
<i>Processing of material in the processing plant and discharge into FTSF</i>	<ul style="list-style-type: none"> Processing plant, Water resources, FTSF. 						
<i>Vehicle, machinery and equipment maintenance and repair and refuelling</i>	<ul style="list-style-type: none"> Workshop, Parking areas and salvage yard, Diesel refuelling area and storage tank, 						
<i>Administrative duties and residential activities.</i>	<ul style="list-style-type: none"> Workshop, Offices, Housing and accommodations. 	<ul style="list-style-type: none"> Damaging heritage artefacts. 	<ul style="list-style-type: none"> Loss or damage to heritage artefacts. 	<ul style="list-style-type: none"> Clearly demarcate all archaeological and paleontological artefacts identified by L. Philip and P. Birkholst and maintain safe distances from artefacts. 	<ul style="list-style-type: none"> Report incidents of damage or loss of artefacts immediately to the responsible person. 	<ul style="list-style-type: none"> Incident reports available on site, No heritage artefacts damaged or lost in the relevant areas. 	Environmental Manager
REHABILITATION PHASE							
<i>TDs Infrastructure: Clearance and removing of infrastructure (i.e., feeders, conveyors, roads, culverts and</i>	<ul style="list-style-type: none"> Surface water features, Groundwater, Surface TDs. 	<ul style="list-style-type: none"> Moving near heritage artefacts. 	<ul style="list-style-type: none"> Loss or damage to heritage artefacts. 	<ul style="list-style-type: none"> Only areas surrounding structures and infrastructure to be impacted during removal. No natural vegetation to be disturbed during these activities, Clearly demarcate all archaeological and paleontological artefacts identified by L. Philip and P. 	<ul style="list-style-type: none"> Daily visual inspections of rehabilitation areas. Monthly compliance monitoring and reporting of findings. Report incidents of damage or loss of artefacts immediately to the responsible person. 	<ul style="list-style-type: none"> Incident reports available on site, No heritage artefacts damaged or lost on operational areas. 	Operational manager

Activity	Area(s) of interest / concern	Aspects	Possible Impact(s)	Mitigation and management of impacts	Monitoring, reporting and frequency	Performance indicator(s)	Responsible person(s)
<i>drainage structures, electrical cables, and transformers) from TDs and areas between TDs.</i>				Birkholtz and maintain safe distances from artefacts.	<ul style="list-style-type: none"> Annual update of RSIP. 		
Processing plant area Infrastructure Clearance and removing of all infrastructure and structures (i.e., offices, workshops, storage tanks, processing plant, including feeders, screens, conveyors, roads, culverts and drainage structures, electrical cables and transformers) from the	<ul style="list-style-type: none"> Processing plant, Process water dam and Swanepoel Dam, Administrative and office area, Workshop, Diesel storage areas, Housing area. 	<ul style="list-style-type: none"> Moving near heritage artefacts. 	<ul style="list-style-type: none"> Loss or damage to heritage artefacts. 	<ul style="list-style-type: none"> Clearly demarcate all archaeological and paleontological artefacts identified by L. Philip and P. Birkholtz and maintain safe distances from artefacts. No structures included in the Heritage Reports by L. Philip and P. Birkholtz will be damaged or demolished in any way. All heritage artefacts and structures that have been damaged to be repaired, as per specialist recommendations. 	<ul style="list-style-type: none"> Daily visual inspections by ECO. Monthly internal compliance monitoring reports. Annual external compliance monitoring reports. 	<ul style="list-style-type: none"> No damage to any heritage artefacts and the repair and reinstating of damaged structures where necessary. Incident reports available on site. 	Operational manager

Activity	Area(s) of interest / concern	Aspects	Possible Impact(s)	Mitigation and management of impacts	Monitoring, reporting and frequency	Performance indicator(s)	Responsible person(s)
<i>processing plant area.</i>							
Rehabilitation and closure of FTSF and related structures and infrastructure	<ul style="list-style-type: none"> • FTSF, • Dam 10, • Downstream wetlands, • Groundwater resources downstream of FTSF, • PCDs, • Environment surrounding FTSF. 	Damaging heritage artefacts.	Loss or damage to heritage artefacts.	<ul style="list-style-type: none"> • Clearly demarcate all archaeological and paleontological artefacts identified by L. Philip and P. Birkholtz and maintain safe distances from artefacts. • No structures included in the Heritage Reports by L. Philip and P. Birkholtz will be damaged or demolished in any way. • All heritage artefacts and structures that have been damaged to be repaired, as per specialist recommendations. 	<ul style="list-style-type: none"> • Daily visual inspections by ECO. • Monthly internal compliance monitoring reports. <p>Annual external compliance monitoring reports.</p>	<ul style="list-style-type: none"> • No damage to any heritage artefacts and the repair and reinstating of damaged structures where necessary. • Incident reports available on site. 	Operations manager

7 RESPONSIBILITIES OF THE COMPANY TO MITIGATE AND MANAGE POTENTIAL IMPACTS AND TO ENSURE COMPLIANCE:

- Maintenance and timeous repairs of all structures and infrastructure, to effectively preserve heritage resources;
- Implementation of all management measures and constant investigation of additional measures to limit and / or prevent any potential impacts on heritage resources;
- Do not allow any activities to occur at the Operation without the necessary authorizations (if required), planning and consultation with specialists and consultants before undertaking activities;
- Ensure that the CMP is always kept on site and all employees are aware of the contents;
- Appoint an approved heritage specialist to:
 - Review the CMP and amend it to ensure its applicability and sufficiency;
 - Conduct a survey to log all heritage resources and assess the condition of the resources.
- Ensure that heritage resources which is newly discovered is reported on and recorded with a description and its exact location.

7.1 Layout Plan and surveys

The layout plan of the site showing all structures and infrastructure will be updated annually and kept on site for inspection. The updates will include the reduced footprints of all surface dumps and rehabilitated areas and should indicate newly discovered, restored, maintained, protected, damaged and lost heritage resources. This will assist in monitoring and protecting heritage resources.

7.2 Protection of cultural and historical elements

- All heritage resources as described in the Heritage Impact Assessment by Me. L. Phillips, Mr. Polke Birkholtz and Mr. Stephan Gaigher will be delineated and protected.
- No structures and/or infrastructure on the site will be damaged or demolished in any way without the required permit from the South African Heritage Resource Agency and without being documented.

- If any artefacts of archaeological or paleontological significance be unearthed, a heritage specialist will be contacted to investigate, and no further operations will be allowed in the vicinity of the finding.
- Regular monitoring by an approved heritage specialist will take place to ensure the maintenance and preservation of heritage resources are taking place according to the applicable legislation and best practice guidelines, and for advice on the management of heritage resources.

8 INSPECTIONS, MONITORING AND COMPLIANCE REPORTING

- An inventory list will be kept of all heritage artefacts and these structures and/or artefacts will be reinstated after rehabilitation if they were to be damaged in any way. A heritage specialist must be consulted during rehabilitation.
- The necessary resources and funds for the implementation and maintenance of all infrastructure necessary to prevent any negative impacts on heritage resources will be provided. Dedicated budgetary provisions should be made towards maintenance of structures and infrastructure; protection of artefacts; enhancement and making aware of the educational, scientific and historical value (information centers, brochures, museum, etc.) of the place; monitoring; and legal compliance towards heritage resource legislation;
- An internal Dedicated Environmental Officer (“**DEO**”), with the necessary qualification and experience in the environmental and heritage management, must be appointed throughout the remainder of the Operations' lifetime. The DEO will be responsible to monitor all the heritage resource management measures and ensure compliance with the CMP, specialist recommendations, and other authorisations during all phases of the Operations.
- An independent heritage specialist will be appointed to conduct annual Heritage Conservation Compliance Monitoring and compile reports to identify any activities and/or processes which may have a negative impact on heritage resources. Furthermore, the heritage specialist will make recommendations on the remediation of findings.
- SAHRA will be allowed and accommodated to conduct inspections, as they deem necessary on an annual or bi-annual bases.

9 Failure to comply

Failure to comply to this management plan must be addressed and rectified as soon as possible to prevent any negative impacts and damage on heritage resources from occurring.

10 Review and Change

This management plan is to be reviewed at least annually for continued suitability to the site.

APPENDIX 1

Project Team CV's



Curriculum Vitae of

Louis de Villiers

Nationality : South Africa
Profession : Environmental Consultant
Specialization : Environmental Management and GIS
Date of birth : 22 December 1983
ID Number : 831222 5030 080

CONTACT DETAILS

Telephone number : 072 967 7962
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QUALIFICATIONS:

- **UNIVERSITY OF THE FREE STATE**

2010: B.Sc. Environmental Geography

- **NOSA Bloemfontein**

2013: SAMTRAC

EXPERIENCE:

2009:

Practical demonstrator at the UFS (Geography Department): Second Year Geographic Information Systems Students

2010:

Practical demonstrator at the UFS:

- First year Introduction to Chemistry
- Second year Soil Science
- First year Introduction to Geography
- First year Urban Geography
- Second year Geographic Information Systems

Dec 2010 – March 2018:

Environmental Consultant at Eko Environmental

April 2018 – Current:

Director and Environmental Consultant at Turn 180 Environmental Consultants

FIELD OF EXPERTISE AND PROJECTS:

Environmental Impact Assessments

Environmental Management Reports

Mining authorisations

Waste license applications

Atmospheric Emission license applications

Water Use Authorisations

Data and GIS management

Environmental Compliance Audits and Monitoring

*Refer to the Turn 180 Environmental Consultants Company Profile for a list of projects and experience.