

NOTES

Phase 1 Archaeological Impact Assessment

Site ID: Wessels Mine on the farm Wessels 227- NORTHERN CAPE

Phase 1 survey conducted				
CRM Archaeologist	Jan Engelbrecht		Date/s	2021-06-02
Additional surveyors	None			
Type of survey	Pedestrian/Vehicular		Transects	30-50m
Technical equipment	GPS	Garmin Etrex 10 and Locus Maps	Camera	Canon Ixus

PROJECT PARTICULARS

Technical information

Project description	
Project name	The proposed upgrade of an existing railway infrastructure by South 32 at Wessels Mine in the Northern Cape
Description	The upgrade will consist of modifications to the staging rail lines and the design of a new rail balloon. The extension of the railway into the new railway balloon measures at approximately 2 500 m long and 25 m wide.
Developer	
South 32: Wessels Mine	
Contact information	Cell: 072 429 6545
Development type	Mining/Industrial
Landowner	
South 32	
Contact information	Contact person: Mr. Wonder Sigwebela Cell: 072 429 6545
Consultants	

Environmental	South 32
Heritage and archaeological	UBIQUE Heritage Consultants and CTS Heritage
Paleontological	Unknown
Property details	
Province	Northern Cape
District municipality	John Taolo Gaetsewe
Local municipality	Joe Morolong
Topo-cadastral map	1:50 000
Farm name	Farm Wessels 227
Closest town	Black Rock, Hotazel and Kuruman
GPS Co-ordinates	27° 7'7.57"S 22°51'22.79"E
Property size	Unknown
Development footprint size	Approximately 4 ha
Land use	
Previous	Agriculture
Current	Mining
Rezoning required	No
Sub-division of land	No
Development criteria in terms of Section 38(1) NHRA	
Yes/No	
Construction of a road, wall, power line, pipeline, canal or other linear forms of development or barrier exceeding 300m in length.	Yes
Construction of bridge or similar structure exceeding 50m in length.	No
Construction exceeding 5000m ² .	No
Development involving three or more existing erven or subdivisions.	No
Development involving three or more erven or divisions that have been consolidated within the past five years.	No
Rezoning of site exceeding 10 000m ² .	No
Any other development category, public open space, squares, parks, recreation grounds.	No

GENERAL ENVIRONMENT, INFRASTRUCTURE AND LANDSCAPE

Site description

Description of the general area affected by development

Type of environment

The project area consists of flat sandy plains covered with vegetation towards the east. The largest part of the environment is currently used for mining activities.

Terrain description

The eastern section of the site footprint is situated just outside of the mine perimeter (fencing of 2,4m high). This section is located on open farmland and is undisturbed, except for a few cement abandoned foundations and one prospecting borehole. This area is mostly flat and sandy.

Towards the north and south of the balloon, the terrain is previously very disturbed by various mining activities such as burrow pit excavations, road construction, construction of clear areas to process ore and loading zones. There is also a large mining heap just east of the mining plant. The area is also scattered with old machinery and industrial debris in certain areas. It is obvious that mining operations in the area have altered this landscape through the years due to construction and ground movement operations.

Geology

A few scatters of dolomite could be identified on the surface of the ground. Except for the Manganese ore mined at this plant, no significant Geology was identified.

Vegetation	
The undisturbed area as well as certain parts within the mine perimeter the following vegetation was identified:	
<ul style="list-style-type: none"> • <i>Schmidtia kalahariensis</i> (Kalahari Sour Grass) • <i>Acacia melifera</i> (Blackthorn acacia) • <i>Rhigozum trichotomum</i> (Three-Thorn) • <i>Acacia eriloba</i> (Camelthorn Tree) • <i>Stipagrostis uniplumis</i> (Silky Bushman Grass) • <i>Aristida adscensionis</i> (Annual Bristle Grass) 	
Waterways/sources	
No prominent natural waterways were identified on the site footprint. Man made furrows and trenches are present within the disturbed areas.	
Site boundaries	
North: Mining area and neighbouring farms towards the NE. East: Neighbouring farms. West: Mining plant and mining area. South: Mining area.	
Site access	GPS Co-ordinates
South 32 Wessels Mine Security gate then towards the site in a southern, eastern and northern direction from the mining plant	27° 7'7.57"S 22°51'22.79"E
Disturbances	
Natural erosion	No significant natural erosion
Human-made	<ol style="list-style-type: none"> 1. Various two track gravel/sand roads throughout the site. 2. Excavated borrow pits, quarries present at several places on the site especially around the mine plant. 3. Large areas cleared for processing and loading of ore. 4. Various disturbed areas previously constructions, abandoned cement foundations in certain areas and the presence of previous prospecting boreholes.
Notes	
The entire site is very disturbed except for the eastern section of the loop/balloon which is situated in an undisturbed landscape. This undisturbed area covers a minimal area of approximately 1-2 ha.	

Environmental recording

Way point	Photo number	Description	Location
Site-specific points of interest/ natural significance			
N/A	1 to 4	Contextual images taken from South to North within the undisturbed area adjacent to the mine perimeter.	N/A
N/A	5 to 8	Contextual images taken from North to South within the undisturbed area adjacent to the mine perimeter.	N/A

N/A	9 to 13	Contextual images taken in the NE section of the site footprint towards various directions (NEWS 360°panorama view)	N/A
N/A	14 to 22	Contextual images taken in the Northern section of the site footprint towards various directions (NEWS 360° panorama view)	N/A
N/A	23 to 40	Contextual images taken from within the mine perimeter. This area is significantly disturbed by previous mining activities and construction.	N/A

HERITAGE RESOURCES RECORDING

Stone Age Resources Identified

Point ID & Site #	Photo #	Description	Period	Location	Field rating/ Significance/ Recommended Mitigation
N/A	N/A	Type lithic/s Raw material N in m ² . Context Additional	No finds	N/A	N/A

HERITAGE RESOURCES RECORDING

Historical Period Resources Identified

Point ID & Site #	Photo #	Description	Period	Location	Field rating/ Significance/ Recommended Mitigation
N/A	N/A	Type of feature Material N in m ² . Context Additional	No finds	N/A	N/A

HERITAGE RESOURCES RECORDING

Iron Age/ Agri-pastoral Early Farming Communities Resources Identified

Point ID & Site #	Photo #	Description	Period	Location	Field rating/ Significance/ Recommended Mitigation	
N/A	N/A	Material N in m ² . Context Additional	No finds	N/A	N/A	N/A

HERITAGE RESOURCES RECORDING

Graves Identified

Point ID & Site #	Photo #	Description	Period	Location	Field rating/ Significance/ Recommended Mitigation	
N/A	N/A	Grave markers Inscription Graves' Orientation Dimensions/ Extent Additional	No graves located and/or identified	N/A	N/A	N/A

HERITAGE RESOURCES RECORDING

Intangible Heritage Resources/ Cultural Landscape Identified

Point ID & Site #	Photo #	Description	Period	Location	Field rating/ Significance/ Recommended Mitigation	
N/A	N/A	Nature Cultural evidence Access Affected community	No intangible resources identified. Interviews with mining officials revealed no oral history or remnants of graves or symbolic heritage.	N/A	N/A	N/A

IDENTIFIED HERITAGE RESOURCES DISCUSSION

Specialist comments

Stone Age finds
No Stone Age finds located, identified or recorded.
Iron Age/ Agri-pastoralist Early Farming communities finds
No Iron Age finds located, identified or recorded.
Historical finds
No Historical finds located, identified or recorded.
Identified graves
No graves identified, rcor ded or located on site footprint.
Intangible Heritage/ Cultural Landscape
No intangible heritage recorded. Interviews were done with mining officials.
Other
Due to the extensive disturbed area identified as the proposed development footprint, we concluded that all heritage resources have been destroyed by such disturbances caused by construction and mining activities. The small eastern section of the balloon/ site footprint located within a mostly undisturbed landscape that was thoroughly surveyed on foot and no evidence of any heritage or cultural material was identified in this area on the surface of the ground.

IDENTIFIED HERITAGE RESOURCES MITIGATION

Specialist recommendations

Stone Age finds
No mitigation measures. Project may continue.
Iron Age/ Agri-pastoralist Early Farming communities finds
No mitigation measures. Project may continue.
Historical finds
No mitigation measures. Project may continue.
Identified graves
No mitigation measures. Project may continue.
Intangible Heritage/ Cultural Landscape
No mitigation measures. Project may continue.
Other
Due to the nature of the landscape and disturbed site footprint and after our field survey, we see no reason for the development not to continue from a Heritage perspective.

ADDITIONAL NOTES AND RESOURCES

Attached Field Data

Filename	File type	Description
HIA Wessels Mine CTS Hotazel	Folder	<ul style="list-style-type: none"> • 40 Jpeg numbered images • 3 GPX files with survey tracks • 1 KMZ file with polygons of disturbed and undisturbed areas • 1 Field Report of AIA and survey
Additional Notes		
<p>We have to mention that it was quite difficult to gain access to all the areas of the footprint due to the high security level of the mine. Certain areas were out of bounds to survey, but these areas were within the mine perimeter where the site footprint is very disturbed.</p>		



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Declaration of independence:

I, Jan Engelbrecht, hereby confirm my independence as a heritage specialist and declare that:

- I am suitably qualified and accredited to act as an independent specialist in this application;
- I do not have any vested interests (either business, financial, personal or other) in the proposed development project other than remuneration for the heritage assessment and heritage management services performed;
- The work was conducted objectively and ethically, in

accordance with a professional code of conduct and within the framework of South African heritage legislation.


Signature
JAC. Engelbrecht

Date: 2021-06-04
UBIQUE Heritage Consultants