

Environmental impact statement

Taking the assessment of potential impacts into account, herewith please receive an environmental impact statement that summarises the impact that the proposed activity may have on the environment after the management and mitigation of impacts have been taken into account, with specific reference to types of impact, duration of impacts, likelihood of potential impacts actually occurring and the significance of impacts.

ENVIRONMENTAL IMPACT ASSESSMENT RESULTS

SITE ESTABLISHMENT PHASE - STRIPPING AND STOCKPILING OF TOPSOIL	
Biodiversity: Loss of areas classified as CBA (Free State CBA, 2014) and sensitive rocky ridges	Low - Medium
Biodiversity: Loss of area of plant endemism (Mucina and Rutherford, 2006)	Low - Medium
Biodiversity: Loss of Endangered & Vulnerable habitat (MBSP, 2014) (NBA, 2011)	Low
Biodiversity: Loss of Endangered & Vulnerable habitat (MBSP, 2014) (NBA, 2011)	Low
Flora: Loss of plant species of conservation importance (IUCN, 2018)	Low
Flora: Encroachment of alien invasive plant species	Low-Medium
Fauna: Loss of habitat for species of conservation concern (NBA, 2011)	Low
Fauna: Displacement, direct mortalities and disturbance of faunal community (including multiple threatened species) due to habitat	Low

loss and disturbances (such as dust and noise), and poaching	
Aquatic and wetland biodiversity: Displacement, direct mortalities and disturbance	Low-Medium
Aquatic and wetland biodiversity: Reduction in surface water quality affecting third party users	Low-Medium
Surface water: Some of the proposed mining deposits occur within drainage lines. The function of these drainage lines is to drain the area during and post rainfall. Mining through drainage lines may result in flooding of pits and other infrastructure, as well as a loss of runoff reporting to the Vaal River	Low-Medium
Ground water: Reduction in groundwater quantity affecting third party users	Low-Medium
Ground water: Groundwater seepage into the open pits	Medium
Alteration of the agricultural sense of place	High
Loss of agricultural land for duration of mining	Low
Visual intrusion as a result of mining	Medium
Potential impact on vegetation and listed and protected plant species	Low
Loss of topsoil and fertility during mining and stockpiling	Low

Dust nuisance as a result of the mining activities	Low-Medium
Noise nuisance as a result of the mining activities	Low-Medium
Potential impact on archaeological artefacts	Low
Potential increased erosion risk	Low-Medium
Potential socio-economic Impacts	High – Positive Impact
OPERATIONAL PHASE - EXCAVATION OF SAND FROM THE MINING FOOTPRINT AND LOADING ONTO TRUCKS	
Change in land use affecting surrounding land uses	High
Reduction in groundwater quantity affecting third party users	Low-Medium
Groundwater seepage into the open pits, resulting in dirty water. The pits may also become flooded due to high seepage rates	Medium
Reduction in groundwater quantity affecting third party users	Low-Medium
Loss of water volumes and a reduction of flows in the Vaal River	Low-Medium
Runoff from the plant area and stockpiles is likely to contain high levels of TSS and potentially high dissolved solids that could runoff into the environment	Low-Medium
Decrease in air quality from project emissions	Low-Medium

Visual intrusion associated with the extraction of the mineral	Medium
Creating steep slopes and uneven surfaces	Low-Medium
Soil contamination from hydrocarbon spills	Low-Medium
Disturbance to fauna within the footprint area	Low
Dust nuisance as a result of the mining activities	Low
Noise nuisance as a result of the mining activities	Low-Medium
Potential impact associated with littering at the mining area	Low-Medium
Potential impact on areas of palaeontological concern	Low
Facilitation of erosion	Low-Medium
Economic development contributions	High – Positive Impact
Potential impact on Tourism in the area	High
OPERATIONAL PHASE - TRANSPORTING OF MINERAL	
Dust nuisance caused by vehicles transporting the mineral	Low-Medium
Traffic impact road as a result of the mining activity	Low-Medium
OPERATIONAL PHASE - CUMULATIVE IMPACTS	

Reduced ability to meet conservation obligations and targets	Low-Medium
Impact the broad-scale ecological processes	Low-Medium
DISCOMMISSIONING PHASE - SLOPING AND LANDSCAPING (MEDIUM- & LONG TERM)	
Erosion of returned topsoil after rehabilitation	Low-Medium
Infestation of the reinstated area with invader plant species	Low-Medium
Potential impact associated with litter left at the mining area	Low-Medium
Uneven surfaces or steep slopes left upon closure of the site	Low-Medium
Return of the mining area to agricultural / ECO Estate use upon closure (Positive Impact)	High – Positive Impact