

IMPACT ASSESSMENT: PREFERRED ALTERNATIVE (CONSTRUCTION PHASE)

NATURE OF IMPACT	DESCRIPTION	EXTENT	MAGNITUDE	DURATION	PROBABILITY	REVERSIBILITY	IRREPLACEABLE LOSS OF RESOURCES	MITIGATION RATING	CONFIDENCE RATING	CUMULATIVE IMPACTS	SIGNIFICANCE RATING		MITIGATION MEASURES
											PRE-MITIGATION	POST-MITIGATION	
Geological and Soils	Loss of topsoil and soil erosion through vegetation clearance, wind and stormwater.	Site	Medium	Short term	Definite	Reversible	Low	Medium	Certain	Low	Low	Very low	Refer to EMP Section 6.2.1 6.2.4
	Soil compaction by heavy duty vehicles	Site	Medium	Short term	Definite	Reversible	Low	Low	Certain	Medium	Medium	Low	Refer to EMP Section 6.2.1
	Contamination of soils through: <ul style="list-style-type: none"> Indiscriminate disposal of construction waste; and Accidental spillage of chemicals such as hydrocarbon-based fuels and oils or lubricants spilled from construction vehicles and other chemicals from construction activities e.g. paints. 	Site	Medium	Short term	Definite	Reversible	Low	Low	Certain	Medium	Medium	Low	Refer to EMP Section 6.2.1 6.2.2
Agricultural potential and land capability	Loss of soil resources for agricultural and other land uses.	Site	Medium	Short term	Definite	Reversible	Low	Low	Certain	Medium	Medium	Low	Refer to EMP Section 6.2.1
	Possibility of "hot" work (e.g. welding) and workers causing veld fires destroying veld and loss of flora and fauna on the study area and on adjacent farms, impacting on the livelihood of farmers.	Local	High	Short term	Possible	Reversible	Medium	High	Certain	High	Medium	Very Low	Refer to EMP Section 6.2.13
	Altered landforms due to construction of roads and excavation.	Site	Low	Long term	Definite	Reversible	Low	Medium	Certain	Medium	Low	Very Low	Refer to EMP Section 6.2.1
Existing Land Use of Surrounding Properties	Impact of blasting on existing infrastructure on surrounding land.	Local	Medium	Short term	Definite	Reversible	Low	Medium	Certain	Medium	Medium	Low	Refer to EMP Section 6.2.7 6.2.8
Hydrology Surface Water and Groundwater	Stormwater, erosion and siltation impacts due to a lack of implementing temporary measures to manage stormwater run-off quantity and quality during the construction phase.	Local	Medium	Short term	Possible	Reversible	Medium	High	Certain	Low	Medium	Very Low	Refer to EMP Section 6.2.4
	Contamination of stormwater runoff and groundwater, caused by: <ul style="list-style-type: none"> Spills and leaks of cement; Sediment release; Chemical toilets; Chemicals such as hydrocarbon-based fuels 	Local	Medium	Medium term	Possible	Reversible	High	Medium	Certain	Medium	Medium	Very Low	Refer to EMP Section 6.2.2 6.2.4

NATURE OF IMPACT	DESCRIPTION	EXTENT	MAGNITUDE	DURATION	PROBABILITY	REVERSIBILITY	IRREPLACEABLE LOSS OF RESOURCES	MITIGATION RATING	CONFIDENCE RATING	CUMULATIVE IMPACTS	SIGNIFICANCE RATING		MITIGATION MEASURES	
											PRE-MITIGATION	POST-MITIGATION		
	and oils or lubricants spilled from construction vehicles; <ul style="list-style-type: none"> Indiscriminate storage and disposal of hazardous waste; Other chemicals from construction activities e.g. paints; and Effluent discharges, due to a lack of stormwater management. 													
	Altered drainage patterns and stormwater runoff flows, especially due to vegetation clearance	Site	Very Low	Long term	Definite	Reversible	Low	High	Certain	Low	Low	Very Low	Refer to EMP Section 6.2.4	
	Dewatering of the groundwater aquifer	Local	Medium	Long term	Definite	Reversible	Medium	Medium	Sure	Medium	Medium	Low	Refer to EMP Section 6.2.16	
Biodiversity	Flora and Fauna	Decrease in biodiversity on the study and surrounding area.	Local	Medium	Medium term	Definite	Reversible	Medium	Low	Certain	Medium	Medium	Low	Refer to EMP Section 6.2.9
		Spill-over impacts, which may occur on adjacent ecological systems especially the sensitive riparian area.	Site	High	Medium term	Definite	Reversible	Medium	Low	Certain	Medium	High	Medium	Refer to EMP Section 6.2.9
		Spreading of alien and invasive species	Local	Medium	Short term	Definite	Reversible	Medium	Low	Certain	Medium	Low	Low	Refer to EMP Section 6.2.9
		Impact on natural migratory routes and faunal dispersal patterns.	Local	High	Long term	Definite	Reversible	Medium	Low	Sure	Medium	Medium	Medium	Refer to EMP Section 6.2.9
		Disturbance of fauna through noise, light and dust pollution and hunting, trapping and killing of fauna.	Local	High	Long term	Definite	Reversible	Low	Medium	Certain	Medium	Medium	Low	Refer to EMP Section 6.2.9
Archaeological/Heritage Resources	Potential for alteration of archaeological, historical and paleontological resources, should it be discovered during the construction phase.	Site	High	Short term	Possible	Irreversible	Medium	High	Uncertain	Low	Low	Very Low	Refer to EMP Section 6.2.5	
Visual and Lighting	Visibility from sensitive receptors / visual scarring of the landscape as a result of the construction activities.	Local	Medium	Medium term	Definite	Reversible	Low	Low	Certain	Medium	Medium	Medium	Refer to EMP Section 6.2.7	
	Visibility of solid domestic waste, building rubble and dust.	Local	Medium	Short term	Probable	Reversible	No loss	High	Certain	Low	Medium	Very Low	Refer to EMP Section 6.2.7	
	Impact of security lighting on surrounding landowners and animals.	Local	Medium	Short term	Definite	Reversible	Low	High	Certain	Medium	Medium	Very Low	Refer to EMP Section 6.2.7	
Noise and Vibration	Nuisance and health risks caused by an increase in the ambient noise level as a result of noise impacts associated with the operation of construction vehicles and equipment.	Site	Low	Short term	Definite	Reversible	No loss	Medium	Sure	Medium	Low	Very Low	Refer to EMP Section 6.2.7	

NATURE OF IMPACT	DESCRIPTION	EXTENT	MAGNITUDE	DURATION	PROBABILITY	REVERSIBILITY	IRREPLACEABLE LOSS OF RESOURCES	MITIGATION RATING	CONFIDENCE RATING	CUMULATIVE IMPACTS	SIGNIFICANCE RATING		MITIGATION MEASURES
											PRE-MITIGATION	POST-MITIGATION	
	Disturbance due to vibrations caused by construction vehicles and blasting.	Site	Medium	Short term	Definite	Reversible	No loss	Low	Certain	Medium	Low	Very Low	Refer to EMP Section 6.2.7
Air Quality	Increased dust pollution due to vegetation clearance as well as construction vehicles and activities.	Local	Medium	Short term	Definite	Reversible	Low	High	Certain	Medium	Medium	Very Low	Refer to EMP Section 6.2.8
	Settling of dust on the surrounding area and pasture for livestock may impact on livestock.	Local	Medium	Short term	Definite	Reversible	Low	High	Certain	Medium	Medium	Very Low	Refer to EMP Section 6.2.8
	Windborne dust (soil), vehicle fumes and stockpile particulate matter of PM ₁₀ and lower which alters air quality and pose a health risk.	Local	Medium	Short term	Definite	Reversible	Low	Medium	Sure	Medium	Medium	Low	Refer to EMP Section 6.2.8
Waste (including hazardous materials)	Generation of additional general waste/ litter / building rubble and hazardous material during the construction phase.	Site	Medium	Short term	Definite	Reversible	Low	Medium	Certain	Medium	Medium	Low	Refer to EMP Section 6.2.2
	Indiscriminate disposal of waste could pollute natural resources and ecosystems and pose a risk of injury and death of animals and people.	Local	Medium	Short term	Definite	Reversible	Low	High	Sure	Medium	Low	Very Low	Refer to EMP Section 6.2.2
Traffic	The change in the traffic patterns as a result of traffic entering and exiting the proposed mine on the surrounding road infrastructure and existing traffic.	Local	Medium	Short term	Definite	Reversible	No loss	Medium	Certain	Medium	Medium	Low	Refer to EMP Section 6.2.12
	Nuisance, health and safety risks caused by increased traffic on and adjacent to the study area including cars, busses and other heavy vehicles.	Local	Medium	Short term	Probable	Reversible	No loss	Medium	Sure	Medium	Medium	Low	Refer to EMP Section 6.2.12
Health and Safety	Possibility of construction activities and workers causing veld fires, which can potentially cause injury and or loss of life to construction workers and surrounding landowners, visitors and workers.	Local	High	Short term	Possible	Reversible	Medium	High	Sure	Medium	Medium	Very Low	Refer to EMP Section 6.2.11
	Increased risk to public health and safety: Dangerous areas and construction activities including blasting, pose health risks and possible loss of life to construction workers and visitors to the site.	Site	High	Short term	Possible	Reversible	High	High	Sure	Low	Low	Very Low	Refer to EMP Section 6.2.11
	Security risks: Trespassing of construction workers on adjacent properties and possible crime.	Local	Medium	Short term	Possible	Reversible	Low	High	Sure	Low	Medium	Very Low	Refer to EMP Section 6.2.11

NATURE OF IMPACT	DESCRIPTION	EXTENT	MAGNITUDE	DURATION	PROBABILITY	REVERSIBILITY	IRREPLACEABLE LOSS OF RESOURCES	MITIGATION RATING	CONFIDENCE RATING	CUMULATIVE IMPACTS	SIGNIFICANCE RATING		MITIGATION MEASURES
											PRE-MITIGATION	POST-MITIGATION	
	Spreading of diseases such as diarrhoea, HIV and TB.	Local	High	Short term	Possible	Irreversible	No loss	Medium	Sure	Medium	Medium	Low	Refer to EMP Section 6.2.11
Socio-economic	Creation of short term employment opportunities for the local communities, during the construction phase.	Local	High	Short term	Definite	N/A	N/A	N/A	Certain	Medium	Medium (+)	N/A	N/A
	Sourcing supplies from local residents and businesses.	Local	High	Short term	Definite	N/A	N/A	N/A	Certain	Medium	Medium (+)	N/A	N/A

IMPACT ASSESSMENT: PREFERRED ALTERNATIVE (OPERATIONAL PHASE)

NATURE OF IMPACT	DESCRIPTION	EXTENT	MAGNITUDE	DURATION	PROBABILITY	REVERSIBILITY	IRREPLACEABLE LOSS OF RESOURCES	MITIGATION RATING	CONFIDENCE RATING	CUMULATIVE IMPACTS	SIGNIFICANCE RATING		MITIGATION MEASURES
											PRE-MITIGATION	POST-MITIGATION	
Geological and Soils	Loss of topsoil, soil erosion and soil compaction by heavy duty vehicles on site.	Site	Medium	Medium term	Definite	Reversible	Low	Medium	Certain	Low	Medium	Very low	Refer to EMP Section 6.3.1
	Contamination of soils through: <ul style="list-style-type: none"> Indiscriminate disposal of waste; and Accidental spillage of chemicals such as hydrocarbon-based fuels and oils or lubricants spilled from vehicles and other chemicals from operational and maintenance activities e.g. paints. 	Site	Medium	Medium term	Definite	Reversible	Low	Low	Certain	Medium	Medium	Low	Refer to EMP Section 6.3.1 6.3.7 6.3.9
	Flooding of open cast pit.	Site	Medium	Medium term	Definite	Reversible	Low	Low	Certain	Medium	Medium	Low	Refer to EMP Section 6.3.2
Agricultural potential and land capability	Possibility of "hot" work (e.g. welding) and workers causing veld fires destroying veld and animals on the study area and on adjacent farms, impacting on the livelihood of farmers.	Local	High	Long term	Possible	Reversible	Medium	High	Certain	Medium	High	Very Low	Refer to EMP Section 6.3.1
Existing Land Use	Blasting may disturb infrastructure on surrounding land.	Local	Medium	Long term	Possible	Reversible	Medium	Medium	Certain	Medium	High	Low	Refer to EMP Section 6.3.3

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											PRE-MITIGATION	POST-MITIGATION			
Hydrology	Surface Water and Ground Water	Stormwater, erosion and siltation impacts due to a lack of implementing temporary measures to manage stormwater run-off quantity and quality during the operational phase.	Local	Medium	Long term	Definite	Reversible	Medium	High	Certain	Low	Medium	Very Low	Refer to EMP Section 6.3.2	
		Contamination of stormwater runoff and groundwater, caused by: <ul style="list-style-type: none"> Spills and leaks of cement; Sediment release; Chemical toilets; Chemicals such as hydrocarbon-based fuels and oils or lubricants spilled from construction vehicles; Indiscriminate storage and disposal of hazardous waste; Other chemicals from maintenance activities e.g. paints; and Effluent discharges, due to a lack of stormwater management. 	Local	Medium	Long term	Definite	Reversible	Low	Medium	Certain	Medium	Medium	Very Low	Refer to EMP Section 6.3.2 6.3.7 6.3.9	
		Altered drainage patterns and stormwater runoff flows.	Local	Medium	Long term	Probable	Reversible	Low	High	Certain	Low	Low	Low	Very Low	Refer to EMP Section 6.3.2
		Dewatering on the groundwater aquifer	Local	Medium	Long term	Definite	Reversible	Medium	Medium	Sure	Medium	Medium	Medium	Low	Refer to EMP Section 6.3.6
		Acid Mine Drainage	Local	High	Long term	Possible	Reversible	High	High	Sure	Medium	High	High	Low	Refer to EMP Section 6.3.5
		Seepage from product stockpiles and from mining operations could cause a contamination plume affecting the underground resources.	Local	High	Long term	Probable	Reversible	Medium	High	Sure	Medium	High	High	Low	Refer to EMP Section 6.3.5
		Decrease in biodiversity on the study and surrounding area.	Local	Medium	Long term	Definite	Reversible	Medium	Low	Certain	Medium	Medium	Medium	Low	Refer to EMP Section 6.3.8
Biodiversity	Flora and Fauna	Spill-over impacts, which may occur on adjacent ecological systems.	Local	Medium	Medium term	Definite	Reversible	Medium	Low	Certain	Medium	Medium	Low	Refer to EMP Section 6.3.8	
		Spreading of alien and invasive species	Local	High	Long term	Definite	Reversible	Medium	High	Certain	Medium	High	Low	Refer to EMP Section 6.3.8	

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											PRE-MITIGATION	POST-MITIGATION	
	Impact on natural migratory routes and faunal dispersal patterns.	Local	High	Long term	Definite	Reversible	Medium	Low	Sure	Medium	High	Medium	Refer to EMP Section 6.3.8
Archaeological/ Heritage Resources	Potential for alteration of archaeological, historical and paleontological resources, should it be discovered during the operational phase.	Site	High	Long term	Possible	Reversible	Medium	High	Certain	Low	Medium	Very Low	Refer to EMP Section 6.3.16
Visual and Lighting	Visibility from sensitive receptors / visual scarring of the landscape and impact on 'Sense of Place' as a result of the visibility of the mining site including stockpiles and waste dumps and activities.	Local	Medium	Medium term	Definite	Reversible	Low	Low	Certain	Medium	Medium	Medium	Refer to EMP Section 6.3.10
	Visibility of solid domestic, dust and operational waste.	Local	Medium	Medium term	Probable	Reversible	No loss	High	Certain	Low	Medium	Very Low	Refer to EMP Section 6.3.15
	Impact of security lighting on surrounding landowners and animals.	Local	Medium	Medium term	Definite	Reversible	Low	High	Certain	Medium	Medium	Very Low	Refer to EMP Section 6.3.13
Noise and Vibration	Nuisance and health risks caused by an increase in the ambient noise level as a result of noise impacts associated with the operation of the mine.	Site	Medium	Long term	Definite	Reversible	No loss	Medium	Sure	Medium	Medium	Very Low	Refer to EMP Section 6.3.10
	Disturbance due to vibrations caused by vehicles and blasting.	Site	Medium	Long term	Definite	Reversible	No loss	Medium	Certain	Medium	Medium	Low	Refer to EMP Section 6.3.10
Air Quality	CO ₂ and Methane emissions from coal mining.	Regional	Very Low	Long term	Definite	Reversible	Low	Low	Certain	Medium	Low	Low	Refer to EMP Section 6.3.3
	Increased dust pollution due to stockpiles and vehicles on gravel roads as well as other mining activities.	Local	Medium	Long term	Definite	Reversible	Low	High	Certain	Medium	Medium	Very Low	Refer to EMP Section 6.3.3
	Settling of dust on the surrounding area and pasture for livestock, may impact livestock.	Low	Medium	Long term	Definite	Reversible	Low	High	Certain	Medium	Medium	Very Low	Refer to EMP Section 6.3.3
	Windborne dust (soil and ore fines) as well as vehicle fumes and particulate matter of PM ₁₀ and smaller, altering air quality.	Site	Medium	Long term	Definite	Reversible	Low	Medium	Sure	Medium	Low	Very Low	Refer to EMP Section 6.3.3
Waste (including hazardous materials)	Generation of additional general waste/ litter / building rubble and hazardous material during the operational phase.	Local	Medium	Long term	Definite	Reversible	Low	Medium	Certain	Medium	Medium	Low	Refer to EMP Section 6.3.9
	Indiscriminate disposal of waste could pollute	Local	Medium	Long term	Definite	Reversible	Low	High	Sure	Medium	Medium	Very Low	Refer to EMP Section 6.3.9

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											PRE-MITIGATION	POST-MITIGATION	
	natural resources and ecosystems and poses a risk of injury and death of animals and people.												
Traffic	The change in the traffic patterns as a result of traffic entering and exiting the new mine, on the surrounding road infrastructure and existing traffic.	Local	Medium	Long term	Definite	Reversible	No loss	Medium	Certain	Medium	Medium	Low	Refer to EMP Section 6.3.14
	Nuisance, health and safety risks caused by increased traffic on and adjacent to the study area including cars, busses and other heavy vehicles.	Local	Medium	Long term	Probable	Reversible	No loss	Medium	Sure	Medium	Medium	Low	Refer to EMP Section 6.3.14
Health and Safety	Possibility of mining activities and workers causing veld fires, which can potentially cause injury and or loss of life to mine workers and surrounding landowners, visitors and workers.	Local	High	Long term	Possible	Reversible	Medium	High	Sure	Medium	Medium	Very Low	Refer to EMP Section 6.3.13
	Increased risk to public health and safety: Dangerous areas and mining activities including blasting, pose health risks and possible loss of life to mine workers and visitors to the site.	Site	High	Long term	Possible	Reversible	No loss	High	Sure	Low	Low	Very Low	Refer to EMP Section 6.3.13
	Security risks: Trespassing of mine workers on adjacent properties and possible crime.	Local	High	Long term	Possible	Reversible	Low	High	Sure	Low	Medium	Very Low	Refer to EMP Section 6.3.13
	Spreading of diseases such as diarrhoea, HIV and TB.	Local	High	Long term	Possible	Irreversible	No loss	Medium	Sure	Medium	Medium	Low	Refer to EMP Section 6.3.13
Socio-economic	Skills development for historically disadvantaged individuals (HDI's) and others from the local communities in the Mpumalanga Province. Individuals will be more employable after the operational phase, which will benefit themselves, the workforce, the community and the economy.	Local	High	Long term	Definite	N/A	N/A	N/A	Certain	Medium	Medium (+)	N/A	N/A
	Development and upliftment of the surrounding communities and infrastructure.	Local	High	Long term	Definite	N/A	N/A	N/A	Certain	Medium	Medium (+)	N/A	N/A
	Development of the economic environment, by job provision and sourcing supplies for and from local residents and businesses.	Local	High	Long term	Definite	N/A	N/A	N/A	Certain	Medium	Medium (+)	N/A	N/A

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											PRE-MITIGATION	POST-MITIGATION	
	Creation of short to long term employment during all the phases of mining for local residents and skills transfer to unskilled and semi-skilled unemployed individuals.	Local	High	Long term	Definite	N/A	N/A	N/A	Certain	Medium	Medium (+)	N/A	N/A
	Positive - Sourcing supplies from local residents and businesses.	Local	High	Long term	Definite	N/A	N/A	N/A	Certain	Medium	High (+)	N/A	N/A

IMPACT ASSESSMENT: PREFERRED ALTERNATIVE (DECOMMISSIONING AND REHABILITATION PHASE)

NATURE	IMPACT	EXTENT	MAGNITUDE	DURATION	PROBABILITY	REVERSIBILITY	IRREPLACEABLE LOSS OF RESOURCES	MITIGATION RATING	CONFIDENCE RATING	CUMULATIVE IMPACTS	SIGNIFICANCE RATING		MITIGATION MEASURES
											PRE-MITIGATION	POST-MITIGATION	
Geological and Soils	Loss of topsoil and soil erosion through vegetation clearance, wind and stormwater.	Site	Medium	Short term	Definite	Reversible	Low	Medium	Certain	Low	Low	Very low	Refer to EMP Section 6.4.1
	Soil compaction by heavy duty vehicles.	Site	Medium	Short term	Definite	Reversible	Low	Low	Certain	Medium	Medium	Low	Refer to EMP Section 6.4.1
	Contamination of soils through: - Indiscriminate disposal of construction waste; and - Accidental spillage of chemicals such as hydrocarbon-based fuels and oils or lubricants spilled from construction vehicles and other chemicals from construction activities e.g. paints.	Site	Medium	Short term	Definite	Reversible	Low	Low	Low	Certain	Medium	Medium	Low
Agricultural potential and land capability	Possibility of operational activities and workers causing veld fires destroying veld and animals on the study area and on adjacent farms, impacting on the livelihood of farmers.	Local	High	Short term	Possible	Reversible	Medium	High	Certain	Medium	Medium	Very Low	Refer to EMP Section 6.4.1
	Restoring altered landforms due to excavation.	Local	High	Short term	Possible	Reversible	Medium	High	Certain	Medium	Medium (+)	High (+)	N/A
Existing Land Use and Capability	Possibility of decommissioning and rehabilitation activities and workers causing veld fires destroying veld and animals on the study area and on adjacent farms, impacting on	Local	High	Short term	Possible	Reversible	Medium	High	Certain	High	Medium	Very Low	Refer to EMP Section 6.4.1

NATURE	IMPACT	EXTENT	MAGNITUDE	DURATION	PROBABILITY	REVERSIBILITY	IRREPLACEABLE LOSS OF RESOURCES	MITIGATION RATING	CONFIDENCE RATING	CUMULATIVE IMPACTS	SIGNIFICANCE RATING		MITIGATION MEASURES		
											PRE-MITIGATION	POST-MITIGATION			
	the livelihood of farmers.														
Hydrology	Surface water and Ground water	Stormwater, erosion and siltation impacts due to a lack of implementing temporary measures to manage stormwater run-off quantity and quality during the decommissioning phase.	Local	Medium	Short term	Definite	Reversible	Medium	High	Certain	Low	Medium	Very Low	Refer to EMP Section 6.4.2	
		Contamination of stormwater runoff and groundwater, caused by: <ul style="list-style-type: none"> - Spills and leaks of cement; - Sediment release; - Chemical toilets; - Chemicals such as hydrocarbon-based fuels and oils or lubricants spilled from construction vehicles; - Indiscriminate storage and disposal of hazardous waste; - Other chemicals from construction activities e.g. paints; and - Effluent discharges, due to a lack of stormwater management. 	Site	Medium	Short term	Probable	Reversible	Low	Medium	Certain	Medium	Low	Very Low	Refer to EMP Section 6.4.2 6.4.7 6.4.9	
		Altered drainage patterns and stormwater runoff flows.	Site	Very Low	Short term	Definite	Reversible	Low	High	Certain	Low	Low	Very Low	Very Low	Refer to EMP Section 6.4.2
		Impacts of dewatering on the groundwater aquifer should water be abstracted from groundwater during the decommissioning phase.	Local	Medium	Short term	Definite	Reversible	Medium	Medium	Medium	Sure	Medium	Medium	Low	Refer to EMP Section 6.4.6
		Acid Mine Drainage.	Local	High	Long term	Possible	Reversible	High	High	High	Sure	Medium	High	Low	Refer to EMP Section 6.4.6
		Biodiversity	Flora and Fauna	Disturbance of fauna through noise, light and dust pollution and hunting, trapping and killing of fauna.	Site	High	Short term	Definite	Reversible	Medium	High	Certain	Medium	Medium	Very Low
Spreading of alien invasive species.	Local			High	Short term	Definite	Reversible	Medium	High	Certain	Medium	Medium	Low	Refer to EMP Section 6.4.8	
Impact on natural migratory routes and faunal dispersal patterns.	Local			High	Short term	Definite	Reversible	Medium	Low	Sure	Medium	Medium	Medium	Refer to EMP Section 6.4.8	
Archaeological/Heritage Resources	Potential for alteration of archaeological, historical and paleontological resources, should it be discovered during the construction phase.	Site	High	Short term	Possible	Reversible	Medium	High	Uncertain	Low	Low	Very Low	Refer to EMP Section 6.4.16		
Visual and Lighting	Visibility from sensitive receptors / visual scarring of the landscape as a result of the	Local	Medium	Short term	Definite	Reversible	Low	Low	Certain	Medium	Medium	Medium	Refer to EMP Section 6.4.15		

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											PRE-MITIGATION	POST-MITIGATION	
	decommissioning and rehabilitation activities.												
	Visibility of solid domestic waste and building rubble.	Local	Medium	Short term	Probable	Reversible	No loss	High	Certain	Low	Medium	Very Low	Refer to EMP Section 6.4.15
	Impact of security lighting on surrounding landowners and animals.	Local	Medium	Short term	Definite	Reversible	Low	High	Certain	Medium	Medium	Very Low	Refer to EMP Section 6.4.15
Noise and Vibration	Nuisance and health risks caused by an increase in the ambient noise level as a result of noise impacts associated with heavy duty vehicles and equipment.	Site	Medium	Short term	Definite	Reversible	No loss	Medium	Sure	Medium	Low	Very Low	Refer to EMP Section 6.4.13
	Disturbance due to vibrations caused by construction vehicles.	Site	Medium	Short term	Definite	Reversible	No loss	Low	Certain	Medium	Low	Very Low	Refer to EMP Section 6.4.13
Air Quality	Increased dust pollution due to vegetation clearance and construction vehicles and decommissioning activities.	Local	Medium	Short term	Definite	Reversible	Low	High	Certain	Medium	Medium	Very Low	Refer to EMP Section 6.4.3
	Settling of dust on the surrounding area and pasture for livestock, may impact livestock.	Low	Medium	Short term	Definite	Reversible	Low	High	Certain	Medium	Medium	Very Low	Refer to EMP Section 6.4.3
	Windborne dust (soil), vehicle fumes and particulate matter of PM ₁₀ and smaller, altering air quality.	Site	Medium	Short term	Definite	Reversible	Low	Medium	Sure	Medium	Low	Very Low	Refer to EMP Section 6.4.3
Waste (including hazardous materials)	Generation of additional general waste/ litter / building rubble and hazardous material during the decommissioning phase.	Local	Medium	Short term	Definite	Reversible	Low	Medium	Certain	Medium	Medium	Low	Refer to EMP Section 6.4.7 6.4.10
	Indiscriminate disposal of waste could pollute natural resources and ecosystems and poses a risk of injury and death of animals and people.	Local	Medium	Short term	Definite	Reversible	Low	High	Sure	Medium	Low	Very Low	Refer to EMP Section 6.4.7 6.4.10
Traffic	The change in the traffic patterns as a result of traffic entering and exiting the proposed mine on the surrounding road infrastructure and existing traffic.	Local	Medium	Short term	Definite	Reversible	No loss	Medium	Certain	Medium	Medium	Low	Refer to EMP Section 6.4.14
	Nuisance, health and safety risks caused by increased traffic on and adjacent to the study area including cars, busses and other heavy vehicles.	Local	Medium	Short term	Probable	Reversible	No loss	Medium	Sure	Medium	Medium	Low	Refer to EMP Section 6.4.14
Health and Safety	Possibility of when 'hot' work is done (e.g. welding) and workers causing veld fires, which can potentially cause injury and or loss of life to construction workers and surrounding landowners, visitors and workers.	Local	High	Short term	Possible	Reversible	Medium	High	Sure	Medium	Medium	Very Low	Refer to EMP Section 6.4.13

NATURE	IMPACT	EXTENT	MAGNITUDE	DURATION	PROBABILITY	REVERSIBILITY	IRREPLACEABLE LOSS OF RESOURCES	MITIGATION RATING	CONFIDENCE RATING	CUMULATIVE IMPACTS	SIGNIFICANCE RATING		MITIGATION MEASURES
											PRE-MITIGATION	POST-MITIGATION	
	Increased risk to public health and safety: Dangerous areas and decommissioning activities poses health risks and possible loss of life to construction workers and visitors to the site.	Site	High	Short term	Possible	Reversible	No loss	High	Sure	Low	Low	Very Low	Refer to EMP Section 6.4.13
	Security risks: Trespassing of construction workers on adjacent properties and possible crime.	Local	High	Short term	Possible	Reversible	Low	High	Sure	Low	Medium	Very Low	Refer to EMP Section 6.4.13
	Spreading of diseases such as diarrhoea, HIV and TB.	Local	High	Short term	Possible	Irreversible	No loss	Medium	Sure	Medium	Medium	Low	Refer to EMP Section 6.4.13
Socio-economic	Positive – Creation of short term employment opportunities for the local communities, during the decommissioning phase.	Local	High	Short term	Definite	N/A	N/A	N/A	Certain	Medium	Medium (+)	N/A	N/A
	Positive - Sourcing supplies from local residents and businesses.	Local	High	Short term	Definite	N/A	N/A	N/A	Certain	Medium	Medium (+)	N/A	N/A

NO-GO ALTERNATIVE

NATURE	IMPACT	EXTENT	MAGNITUDE	DURATION	PROBABILITY	REVERSIBILITY	IRREPLACEABLE LOSS OF RESOURCES	MITIGATION RATING	CONFIDENCE RATING	CUMULATIVE IMPACTS	SIGNIFICANCE RATING		MITIGATION MEASURES
											PRE-MITIGATION	POST-MITIGATION	
Socio-Economic	No skills development for historically disadvantaged individuals (HDI's) and others from the local communities in the Mpumalanga Province. Individuals will be more employable after the operational phase, which will benefit themselves, the workforce, the community and the economy.	Local	High	Short term	Definite	N/A	N/A	N/A	Certain	Medium	Medium (+)	N/A	N/A
	No development and upliftment of the surrounding communities and infrastructure.	Local	High	Short term	Definite	N/A	N/A	N/A	Certain	Medium	Medium (+)	N/A	N/A
	No development of the economic environment, by job provision and sourcing supplies for and from local residents and businesses.	Local	High	Short term	Definite	N/A	N/A	N/A	Certain	Medium	Medium (+)	N/A	N/A
	No creation of short to long term employment during all the phases of mining for local residents and skills transfer to unskilled and semi-skilled unemployed individuals.	Local	High	Short term	Definite	N/A	N/A	N/A	Certain	Medium	Medium (+)	N/A	N/A
	No negative impacts on the biophysical and socio-economic environment	Regional	High	Long term	Definite	N/A	N/A	N/A	Certain	Medium	Very High (+)	N/A	N/A