Activity	Project Phase	Aspect	Impact Description	Status	Mitigation status	Duration	Scale/Extent	Magnitude	Sensitivity	Consequence	Probability	Frequency	Likelihood	SIGNIFICANCE RATINGS (score of 200)		Mitigation measures	Time period of implementation	Monitoring Method (Implementation & Compliance)	Monitoring Frequency	Person(s) Responsible for Monitoring	Compliance with Standards
Site clearing (remove soils and vegetation) and construction of infrastructure, roads and stockpiles.	**Construction**	**Wetland**	Loss of Wetland Ecological structure due to: increased runoff, erosion and sedimentation of wetlands as well as contamination from waste generation.	Neg	**Pre-mitigation**	3	2	2	4	11	2	1	3	**33**	**Low**	AVOID: Wetland areas and regulatory buffers must be avoided. Wetland areas must be designated on the ground as no go areas. MINIMIZE/ CONTROL: Footprint area must be kept to the smallest possible area. Mining activities and infrastructure must remain out of the ephemeral drainage lines and wetlands. Vehicles must not be allowed to drive in or around wetland areas; vehicles must remain in designated areas and roads. Storm water management must be designed to protect wetlands and put in place as soon as possible to separate clean and dirty areas, where dirty water can be contaminated or loaded with sediment. REMEDY: Ensure all spills (hydrocarbon or other) are cleaned and remedied immediately.	Design and Construction phase. However, measures are continued throughout LOM.	Inspection that wetlands are designated correctly as no-go areas. Monitoring of construction activities and potential residual impacts.	Once off inspection of designated wetlands. Weekly and repair as necessary	Wetland specialist. On site ECO	National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA); National Water Act, 1998 (Act 36 of 1998) (NWA); General Notice 509 as published in the Government Gazette 40229 of 2016 as it relates the NWA (Act 36 of 1998); and Requirements of the Government Notice 704 in Government Gazette 20119.
				Neg	**Post-mitigation**	1	2	2	2	7	1	1	2	**14**	**Low**						
Mining activities, stockpiling and continued disturbance to soils and surrounding environment.	**Operational**	**Wetland**	Loss of Wetland Ecological structure due to: increased runoff, erosion and sedimentation of wetlands, contaminated groundwater as well as contamination from waste generation.	Neg	**Pre-mitigation**	3	2	2	4	11	2	1	3	**33**	**Low**	AVOID: Wetland areas and regulatory buffers must continue to be avoided by all mining activities. Wetland areas must be designated on the ground as no go areas. MINIMIZE/ CONTROL: Storm water management must be operational throughout LOM. Berms must be used to prevent sedimentation of downstream environment and wetlands. Implement an Alien Invasive Plant management plan throughout the life of mine. Waste storage areas must be managed to minimize impact to surface and groundwater resources. REMEDY: Ensure all spills (hydrocarbon, gypsum, sediment or other) are cleaned and the area rehabilitated immediately. Trench mining area must be rehabilitated as the mining progresses according to the rehabilitation plan and recommendations of the floral specialist.	Continuous or as needed through Operational phase of mine.	Ongoing monitoring of: AIPs, Wetlands and Rehabilitated areas.	Annually.	External EAP	NEMA); NWA); General Notice 509 in terms of the NWA; and Requirements of the Government Notice 704 in Government Gazette 20119.
				Neg	**Post-mitigation**	1	2	2	2	7	1	1	2	**14**	**Low**						
Rehabilitation and Closure of mine areas.	**Decommissioning**	**Wetland**	Loss of Wetland Ecological structure due to: continued sedimentation from rehabilitated areas, contaminated surface and groundwater, and spread of AIP's.	Neg	**Pre-**	2	2	1	2	7	2	1	3	**21**	**Low**	AVOID: Wetland areas and regulatory buffers must continue to be avoided by all decommissioning and rehabilitation activities. MINIMIZE/ CONTROL: Rehabilitation footprint must not exceed that of the designated footprint of the mining areas. Waste must be removed in accordance with relevant regulations REMEDY: Ensure all spills (hydrocarbon, gypsum, sediment or other) are cleaned and the area rehabilitated immediately. Final rehabilitation of mining areas as well as infrastructure areas must be done according to the rehabilitation plan and recommendations of the floral specialist.	Decommissioning and rehabilitation phase.	Monitoring of: Wetlands and Rehabilitated areas.	Biannually for three years post-closure. Thereafter annually or as required for closure.	Wetland / Ecological specialist.	NEMA); NWA); General Notice 509 in terms of the NWA; and Requirements of the Government Notice 704 in Government Gazette 20119.
				Neg	**Post-mitigation**	1	2	1	1	5	1	1	2	**10**	**Low**						

Activity	Project Phase	Aspect	Impact Description	Status	Mitigation status	Duration	Scale/Extent	Magnitude	Sensitivity	Consequence	Probability	Frequency	Likelihood	SIGNIFICANCE RATINGS (score of 200)		Mitigation measures	Time period of implementation	Monitoring Method (Implementation & Compliance)	Monitoring Frequency	Person(s) Responsible for Monitoring	Compliance with Standards
Site clearing (remove soils and vegetation) and construction of infrastructure, roads and stockpiles.	**Construction**	**Wetland**	Changes to wetland ecological and socio-cultural service provision due to: increased runoff, erosion and sedimentation of wetlands, altered flow patterns, as well as contamination from waste generation.	Neg	**Pre-mitigation**	3	2	2	2	9	3	1	4	**36**	**Low**	AVOID: Wetland areas and regulatory buffers must be avoided. Wetland areas must be designated on the ground as no go areas. MINIMIZE/ CONTROL: Footprint area must be kept to the smallest possible area. Mining activities and infrastructure must remain out of the ephemeral drainage lines and wetlands. Vehicles must not be allowed to drive in or around wetland areas; vehicles must remain in designated areas and roads. Storm water management must be designed to protect wetlands and put in place as soon as possible to separate clean and dirty areas, where dirty water can be contaminated or loaded with sediment. REMEDY: Ensure all spills (hydrocarbon or other) are cleaned and remedied immediately.	Design and Construction phase. However, measures are continued throughout LOM.	Inspection that wetlands are designated correctly as no-go areas. Monitoring of construction activities and potential residual impacts.	Once off inspection of designated wetlands. Continued weekly monitoring of demarcations throughout construction phase	Wetland specialist. On-site environmental officer	NEMA); NWA); General Notice 509 in terms of the NWA; and Requirements of the Government Notice 704 in Government Gazette 20119.
				Neg	**Post-mitigation**	1	2	2	2	7	1	1	2	**14**	**Low**						
Mining activities, stockpiling and continued disturbance to soils and surrounding environment.	**Operational**	**Wetland**	Changes to wetland ecological and socio-cultural service provision due to: increased runoff, erosion and sedimentation of wetlands, contaminated groundwater as well as contamination from waste generation.	Neg	**Pre-mitigation**	3	2	2	2	9	3	1	4	**36**	**Low**	AVOID: Wetland areas and regulatory buffers must continue to be avoided by all mining activities. Wetland areas must be designated on the ground as no go areas. MINIMIZE/ CONTROL: Storm water management must be operational throughout LOM. Berms must be used to prevent sedimentation of downstream environment and wetlands. Implement an Alien Invasive Plant management plan throughout the life of mine. Waste storage areas must be managed to minimize impact to surface and groundwater resources. REMEDY: Ensure all spills (hydrocarbon, gypsum, sediment or other) are cleaned and the area rehabilitated immediately. Trench mining area must be rehabilitated as the mining progresses according to the rehabilitation plan and recommendations of the floral specialist.	Continuous or as needed through Operational phase of mine.	Ongoing monitoring of: AIPs, Wetlands and Rehabilitated areas.	Annually.	External EAP	NEMA); NWA); General Notice 509 in terms of the NWA; and Requirements of the Government Notice 704 in Government Gazette 20119.
				Neg	**Post-mitigation**	1	1	2	2	6	1	1	2	**12**	**Low**						
Rehabilitation and Closure of mine areas.	**Decommissioning**	**Wetland**	Changes to wetland ecological and socio-cultural service provision due to: continued sedimentation from rehabilitated areas, contaminated surface and groundwater, and spread of AIP's.	Neg	**Pre-**	3	2	2	2	9	2	1	3	**27**	**Low**	AVOID: Wetland areas and regulatory buffers must continue to be avoided by all decommissioning and rehabilitation activities. MINIMIZE/ CONTROL: Rehabilitation footprint must not exceed that of the designated footprint of the mining areas. Waste must be removed in a way that prevents undesired impacts pollution. REMEDY: Ensure all spills (hydrocarbon, gypsum, sediment or other) are cleaned and the area rehabilitated immediately. Final rehabilitation of mining areas as well as infrastructure areas must be done according to the rehabilitation plan and recommendations of the floral specialist.	Decommissioning and rehabilitation phase.	Monitoring of: Wetlands and Rehabilitated areas.	Biannually for three years post-closure. Thereafter annually or as required for closure.	Wetland / Ecological specialist.	NEMA); NWA); General Notice 509 in terms of the NWA; and Requirements of the Government Notice 704 in Government Gazette 20119.
				Neg	**Post-mitigation**	1	1	1	1	4	1	1	2	**8**	**Low**						

Activity	Project Phase	Aspect	Impact Description	Status	Mitigation status	Duration	Scale/Extent	Magnitude	Sensitivity	Consequence	Probability	Frequency	Likelihood	SIGNIFICANCE RATINGS (score of 200)		Mitigation measures	Time period of implementation	Monitoring Method (Implementation & Compliance)	Monitoring Frequency	Person(s) Responsible for Monitoring	Compliance with Standards
Site clearing (remove soils and vegetation) and construction of infrastructure, roads and stockpiles.	**Construction**	**Wetland**	Altered wetland hydrological functioning due to: increased runoff & erosion, sedimentation of wetlands, and altered flow patterns and volumes.	Neg	**Pre-mitigation**	4	2	2	2	10	3	2	5	**50**	**Mod**	AVOID: Wetland areas and regulatory buffers must be avoided. Wetland areas must be designated on the ground as no go areas. MINIMIZE/ CONTROL: Footprint area must be kept to the smallest possible area. Mining activities and infrastructure must remain out of the ephemeral drainage lines and wetlands. Vehicles must not be allowed to drive in or around wetland areas; vehicles must remain in designated areas and roads. Storm water management must be designed to protect wetlands and put in place as soon as possible to separate clean and dirty areas, where dirty water can be contaminated or loaded with sediment. REMEDY: Ensure all spills (hydrocarbon or other) are cleaned and remedied immediately.	Design and Construction phase. However, measures are continued throughout LOM.	Inspection that wetlands are designated correctly as no-go areas. Monitoring of construction activities and potential residual impacts.	Once off inspection if designated wetlands.	Wetland specialist.	NEMA); NWA); General Notice 509 in terms of the NWA; and Requirements of the Government Notice 704 in Government Gazette 20119.
				Neg	**Post-mitigation**	1	1	2	2	6	1	1	2	**12**	**Low**						
Mining activities, stockpiling and continued disturbance to soils and surrounding environment.	**Operational**	**Wetland**	Altered wetland hydrological functioning due to: increased runoff & erosion, sedimentation of wetlands, and altered flow patterns and volumes.	Neg	**Pre-mitigation**	4	2	2	2	10	3	2	5	**50**	**Mod**	AVOID: Wetland areas and regulatory buffers must continue to be avoided by all mining activities. Wetland areas must be designated on the ground as no go areas. MINIMIZE/ CONTROL: Storm water management must be operational throughout LOM. Berms must be used to prevent sedimentation of downstream environment and wetlands. Implement an Alien Invasive Plant management plan throughout the life of mine. Waste storage areas must be managed to minimize impact to surface and groundwater resources. REMEDY: Ensure all spills (hydrocarbon, gypsum, sediment or other) are cleaned and the area rehabilitated immediately. Trench mining area must be rehabilitated as the mining progresses according to the rehabilitation plan and recommendations of the floral specialist.	Continuous or as needed through Operational phase of mine.	Ongoing monitoring of: AIPs, Wetlands and Rehabilitated areas.	Annually.	External EAP	NEMA); NWA); General Notice 509 in terms of the NWA; and Requirements of the Government Notice 704 in Government Gazette 20119.
				Neg	**Post-mitigation**	1	1	2	2	6	1	1	2	**12**	**Low**						
Rehabilitation and Closure of mine areas.	**Decommissioning**	**Wetland**	Altered wetland hydrological functioning due to: increased runoff & erosion, sedimentation of wetlands, and altered flow patterns and volumes.	Neg	**Pre-mitigation**	3	2	1	1	7	2	1	3	**21**	**Low**	AVOID: Wetland areas and regulatory buffers must continue to be avoided by all decommissioning and rehabilitation activities. MINIMIZE/ CONTROL: Rehabilitation footprint must not exceed that of the designated footprint of the mining areas. Waste must be removed in a way that prevents undesired impacts. REMEDY: Ensure all spills (hydrocarbon, gypsum, sediment or other) are cleaned and the area rehabilitated immediately. Final rehabilitation of mining areas as well as infrastructure areas must be done so that the flow patterns and volumes return to the pre-mining situation.	Decommissioning and rehabilitation phase.	Monitoring of: Wetlands and Rehabilitated areas.	Biannually for three years post-closure. Thereafter annually or as required for closure.	Wetland / Ecological specialist.	NEMA); NWA); General Notice 509 in terms of the NWA; and Requirements of the Government Notice 704 in Government Gazette 20119.
				Neg	**Post-mitigation**	1	1	1	1	4	1	1	2	**8**	**Low**						

Activity	Project Phase	Aspect	Impact Description	Status	Mitigation status	Duration	Scale/Extent	Magnitude	Sensitivity	Consequence	Probability	Frequency	Likelihood	SIGNIFICANCE RATINGS (score of 200)		Mitigation measures	Time period of implementation	Monitoring Method (Implementation & Compliance)	Monitoring Frequency	Person(s) Responsible for Monitoring	Compliance with Standards
Site clearing (remove soils and vegetation) and construction of infrastructure, roads and stockpiles.	**Construction**	**Surface Water**	Sedimentation to downstream drainage lines/ watercourses.	Neg	**Pre-mitigation**	2	2	3	4	11	3	3	6	**66**	**Mod**	AVOID: Regulatory buffers of surface water resources including wetlands must be avoided. MINIMIZE/ CONTROL: Construction should take place in dry conditions. Footprint area must be kept to the smallest possible area. Storm water management must be implemented as per specialist recommendations. REMEDY: None	Design and Construction phase. However, measures are continued throughout LOM.	Visual inspection of demarcation of sensitive areas Visual inspection of Stormwater management infrastructure	Weekly Weekly Annually	ECO ECO Independent Auditor	National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA); National Water Act, 1998 (Act 36 of 1998) (NWA); General Notice 509 as published in the Government Gazette 40229 of 2016 as it relates to the NWA (Act 36 of 1998); and Requirements of the Government Notice 704 in Government Gazette 20119.
				Neg	**Post-mitigation**	2	2	2	3	9	2	2	4	**36**	**Low**						
Site clearing (remove soils and vegetation) and construction of infrastructure, roads and stockpiles.	**Construction**	**Surface Water**	Hydrocarbon fuel spillage and contamination of downstream surface water resources.	Neg	**Pre-mitigation**	2	2	3	4	11	3	3	6	**66**	**Mod**	AVOID: Regulatory buffers of surface water resources including wetlands must be avoided. MINIMIZE/ CONTROL: Storm water management must be implemented as per specialist recommendations to ensure dirty water is captured. Vehicles must be services timeously to prevent leakages. Good housekeeping for parking areas including use drip trays. REMEDY: Ensure all spills (hydrocarbon or other) are cleaned and remedied immediately.	Continuous or as needed through Operational phase of mine.	Visual inspection of demarcation of sensitive areas Visual inspection of Stormwater management infrastructure	Weekly Weekly Annually	ECO ECO Independent Auditor	National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA); National Water Act, 1998 (Act 36 of 1998) (NWA); General Notice 509 as published in the Government Gazette 40229 of 2016 as it relates to the NWA (Act 36 of 1998); and Requirements of the Government Notice 704 in Government Gazette 20119.
				Neg	**Post-mitigation**	2	2	2	3	9	2	2	4	**36**	**Low**						
Site clearing (remove soils and vegetation) and construction of infrastructure, roads and stockpiles.	**Construction**	**Surface Water**	Reduction of catchment yield from storm and dirty water containment. Project area total less that 1% of catchment.	Neg	**Pre-mitigation**	4	2	1	2	9	2	2	4	**36**	**Low**	AVOID: Only way to avoid the (low) impact is no go option. MINIMIZE/ CONTROL: None. REMEDY: None	NA				National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA); National Water Act, 1998 (Act 36 of 1998) (NWA); General Notice 509 as published in the Government Gazette 40229 of 2016 as it relates to the NWA (Act 36 of 1998); and Requirements of the Government Notice 704 in Government Gazette 20119.
				Neg	**Post-mitigation**	4	2	1	2	9	2	2	4	**36**	**Low**						
Site clearing (remove soils and vegetation) and	**Operational**	**Surface Water**	Flooding of infrastructure area and mining blocks.	Neg	**Pre-mitigation**	4	2	5	4	15	4	2	6	**90**	**High**	AVOID: Regulatory buffers of surface water resources including wetlands, rivers and drainage lines must be avoided and all activities must be outside the 1:100 year floodline. MINIMIZE/ CONTROL:	Design and Construction phase. However, measures are	GN 704 Audits (simultaneous with WUL Audit and/or Annual	Annually	Independent Auditor	National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA); National Water Act, 1998 (Act 36 of 1998) (NWA);

Activity	Project Phase	Aspect	Impact Description	Status	Mitigation status	Duration	Scale/Extent	Magnitude	Sensitivity	Consequence	Probability	Frequency	Likelihood	SIGNIFICANCE RATINGS (score of 200)		Mitigation measures	Time period of implementation	Monitoring Method (Implementation & Compliance)	Monitoring Frequency	Person(s) Responsible for Monitoring	Compliance with Standards
construction of infrastructure, roads and stockpiles.				Neg	**Post-mitigation**	4	2	2	2	10	2	1	3	**30**	**Low**	Construction should take place in dry conditions. Storm water management must be implemented as per specialist recommendations.	continued throughout LOM.	EMP compliance audit)			General Notice 509 as published in the Government Gazette 40229 of 2016 as it relates to the NWA (Act 36 of 1998); and Requirements of the Government Notice 704 in Government Gazette 20119.
Mining activities, stockpiling and continued disturbance to soils and surrounding environment.	**Operational**	**Surface Water**	Pollution of downstream surface water resources due to contaminated and sediment loaded storm water.	Neg	**Pre-mitigation**	4	2	3	4	13	4	3	7	**91**	**High**	AVOID: Regulatory buffers of surface water resources must be avoided. MINIMIZE/ CONTROL: Storm water management plan must be implemented as per specialist recommendations to ensure dirty water is captured. Vehicles must be services timeously to prevent leakages. Good housekeeping must be employed for all areas for example all hydrocarbon areas to be bunded and roofed. REMEDY: Ensure all spills (hydrocarbon, sediment loaded or other) are cleaned and remedied immediately. Concurrent rehabilitation of mining areas to be undertaken as per the rehabilitation plan.	Continuous or as needed through Operational phase of mine.	GN704 audits Annual EMP Compliance Audits	Annually	Independent Auditor	National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA); National Water Act, 1998 (Act 36 of 1998) (NWA); General Notice 509 as published in the Government Gazette 40229 of 2016 as it relates to the NWA (Act 36 of 1998); and Requirements of the Government Notice 704 in Government Gazette 20119.
				Neg	**Post-mitigation**	4	2	2	4	12	2	1	3	**36**	**Low**						
Rehabilitation and Closure of mine areas.	**Decommissioning**	**Surface Water**	Siltation of water resources due to erosion of post-mining landscape.	Neg	**Pre-mitigation**	4	2	3	4	13	4	2	6	**78**	**Mod**	AVOID: None MINIMIZE/ CONTROL: Rehabilitation footprint must not exceed that of the designated footprint of the mining areas. REMEDY: . Final rehabilitation of mining areas as well as infrastructure areas must be done according to the final closure and rehabilitation plan with recommendations from a floral and soil specialist. Rehabilitation must promote natural runoff of areas. Ensure all spills (hydrocarbon, gypsum, sediment or other) are cleaned and the area rehabilitated immediately.	Decommissioning and rehabilitation phase.	Post-rehabilitation monitoring on all rehabilitated areas annually with update of rehabilitation / closure plan and financial provision	Annually (per concurrent rehabilitation) and upon closure	Independent EAP	National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA); National Water Act, 1998 (Act 36 of 1998) (NWA); General Notice 509 as published in the Government Gazette 40229 of 2016 as it relates to the NWA (Act 36 of 1998); and Requirements of the Government Notice 704 in Government Gazette 20119.
				Neg	**Post-mitigation**	4	2	2	4	12	2	1	3	**36**	**Low**						
Site clearing (remove soils and vegetation) and construction of infrastructure, roads and stockpiles.	**Construction**	**Air Quality**	Dust generation	Neg	**Pre-mitigation**	1	2	2	2	7	3	5	8	**56**	**Mod**	AVOID: None MINIMIZE/ CONTROL: Limit the use of untreated roads as far as possible. REMEDY: Have clearly defined hauling routes/vehicle access areas. All main hauling roads should be treated for dust suppression. Conduct regular cleaning/sweeping of paved road surfaces to prevent the accumulation of dust. Conduct regular maintenance and checks for haul road surfaces. Immediate clean-up of any spillage.	Continuous or as needed through Operational phase of mine.	Dust fallout monitoring as per the National Dust Control Regulations (2013) and reporting. NAIES Reporting	Monthly dust fallout monitoring NAIES Reporting (annual)	External EAP or on site ECO	National Environmental Management: Air Quality Act National Dust Control Regulations (2013). National Atmospheric Emissions Reporting Regulations Gazette No 38633 of 2015 and associated regulations.
				Neg	**Post-mitigation**	1	2	2	2	7	2	3	5	**35**	**Low**						

Activity	Project Phase	Aspect	Impact Description	Status	Mitigation status	Duration	Scale/Extent	Magnitude	Sensitivity	Consequence	Probability	Frequency	Likelihood	SIGNIFICANCE RATINGS (score of 200)		Mitigation measures	Time period of implementation	Monitoring Method (Implementation & Compliance)	Monitoring Frequency	Person(s) Responsible for Monitoring	Compliance with Standards
																All material that is being transported should be covered during transport.					
Site clearing (remove soils and vegetation) and construction of infrastructure, roads and stockpiles.	**Construction**	**Air Quality**	Particulates- PM10 & PM 2.5	Neg	**Pre-mitigation**	2	3	2	3	10	3	5	8	**80**	**Mod**	AVOID: None MINIMIZE/ CONTROL: Limit the use of untreated roads as far as possible. REMEDY: Have clearly defined hauling routes/vehicle access areas. All main hauling roads should be treated for dust suppression. Conduct regular cleaning/sweeping of paved road surfaces to prevent the accumulation of dust. Conduct regular maintenance and checks for haul road surfaces. Immediate clean-up of any spillage. All material that is being transported should be covered during transport.	Continuous or as needed through Operational phase of mine.	PM10 & PM2.5 ambient monitoring and reporting. NAIES Reporting	Continuous PM10 and PM2.5 monitoring, with annual reporting. NAIES Reporting (annual)	External EAP or on site ECO	National Environmental Management: Air Quality Act National Dust Control Regulations (2013). National Atmospheric Emissions Reporting Regulations Gazette No 38633 of 2015 and associated regulations.
				Neg	**Post-mitigation**	1	2	2	2	7	2	3	5	**35**	**Low**						
Site clearing (remove soils and vegetation) and construction of infrastructure, roads and stockpiles.	**Construction**	**Air Quality**	Emissions	Neg	**Pre-mitigation**	1	2	2	2	7	3	1	4	**28**	**Low**	AVOID: Speeding, overloading trucks and non-fuel efficient vehicles. MINIMIZE/CONTROL: The number of trucks on the road, weight of trucks and the travelling speed. REMEDY: Implement strict vehicle speed limits. Consider use of cleaner fuel types and more fuel-efficient vehicles/mobile equipment/trucks. Make use of more modern, fuel efficient trucks/vehicles; which have improved exhaust emission control devices/systems in place; Switch off engines whilst not in use; Determine desired emission rates and measure/monitor truck exhaust emissions against these desired levels (if practical). Establish a maintenance schedule to ensure proper maintenance of the trucks & mobile equipment; Conduct regular maintenance and quality checks (engines/tyres) for all heavy mobile equipment/trucks. Ensure optimal fuel combustion efficiency; Develop an integrated emission control strategy that involves all departments of mine (i.e. management, production, maintenance and environment, health & safety).	Continuous or as needed through Operational phase of mine.	Monitor truck exhaust emissions where possible	Only if required as per internal emission control strategy	Air Quality Specialist	National Environmental Management: Air Quality Act National Dust Control Regulations (2013). National Atmospheric Emissions Reporting Regulations Gazette No 38633 of 2015 and associated regulations.
				Neg	**Post-mitigation**	1	2	2	2	7	2	1	3	**21**	**Low**						

Activity	Project Phase	Aspect	Impact Description	Status	Mitigation status	Duration	Scale/Extent	Magnitude	Sensitivity	Consequence	Probability	Frequency	Likelihood	SIGNIFICANCE RATINGS (score of 200)		Mitigation measures	Time period of implementation	Monitoring Method (Implementation & Compliance)	Monitoring Frequency	Person(s) Responsible for Monitoring	Compliance with Standards
Mining activities, stockpiling and continued disturbance to soils and surrounding environment.	**Operational**	**Air Quality**	Dust generation	Neg	**Pre-mitigation**	4	2	1	2	9	3	5	8	**72**	**Mod**	AVOID: None MINIMIZE/ CONTROL: Limit the use of untreated roads as far as possible. REMEDY: Enforce speed limits. Dust suppression. Cover stockpiles. Reduce tipping heights.	Continuous or as needed through Operational phase of mine.	Dust fallout monitoring as per the National Dust Control Regulations (2013) and reporting. NAIES Reporting	Monthly dust fallout monitoring NAIES Reporting (annual)	External EAP or on site ECO	National Environmental Management: Air Quality Act National Dust Control Regulations (2013). National Atmospheric Emissions Reporting Regulations Gazette No 38633 of 2015 and associated regulations.
				Neg	**Post-mitigation**	4	1	1	2	8	2	2	4	**32**	**Low**						
Mining activities, stockpiling and continued disturbance to soils and surrounding environment.	**Operational**	**Air Quality**	Particulates- PM10 & PM 2.5	Neg	**Pre-mitigation**	4	3	2	3	12	3	5	8	**96**	**High**	AVOID: None MINIMIZE/ CONTROL: Limit the use of untreated roads as far as possible. REMEDY: Have clearly defined hauling routes/vehicle access areas. All main hauling roads should be treated for dust suppression. Conduct regular cleaning/sweeping of paved road surfaces to prevent the accumulation of dust. Conduct regular maintenance and checks for haul road surfaces. Immediate clean-up of any spillage. All material that is being transported should be covered during transport.	Continuous or as needed through Operational phase of mine.	PM10 & PM2.5 ambient monitoring and reporting. NAIES Reporting	Continuous PM10 and PM2.5 monitoring, with annual reporting. NAIES Reporting (annual)	External EAP or on site ECO	National Environmental Management: Air Quality Act National Dust Control Regulations (2013). National Atmospheric Emissions Reporting Regulations Gazette No 38633 of 2015 and associated regulations.
				Neg	**Post-mitigation**	4	1	2	2	9	2	2	4	**36**	**Low**						
Mining activities, stockpiling and continued disturbance to soils and surrounding environment.	**Operational**	**Air Quality**	Emissions	Neg	**Pre-mitigation**	4	2	1	2	9	3	1	4	**36**	**Low**	AVOID: Speeding, overloading trucks and non-fuel efficient vehicles. MINIMIZE/CONTROL: The number of trucks on the road, weight of trucks and the travelling speed. REMEDY: Implement strict vehicle speed limits. Consider use of cleaner fuel types and more fuel-efficient vehicles/mobile equipment/trucks. Make use of more modern, fuel efficient trucks/vehicles; which have improved exhaust emission control devices/systems in place; Switch off engines whilst not in use; Determine desired emission rates and measure/monitor truck exhaust emissions against these desired levels (if practical). Establish a maintenance schedule to ensure proper maintenance of the trucks & mobile equipment; Conduct regular maintenance and quality checks (engines/tyres) for all heavy mobile equipment/trucks. Ensure optimal fuel combustion efficiency; Develop an integrated emission control strategy that involves all departments of mine (i.e. management, production,	Continuous or as needed through Operational phase of mine.	Monitor truck exhaust emissions where possible	Only if required as per internal emission control strategy	Air Quality Specialist	National Environmental Management: Air Quality Act National Dust Control Regulations (2013). National Atmospheric Emissions Reporting Regulations Gazette No 38633 of 2015 and associated regulations.
				Neg	**Post-mitigation**	4	2	1	2	9	2	1	3	**27**	**Low**						

Activity	Project Phase	Aspect	Impact Description	Status	Mitigation status	Duration	Scale/Extent	Magnitude	Sensitivity	Consequence	Probability	Frequency	Likelihood	SIGNIFICANCE RATINGS (score of 200)		Mitigation measures	Time period of implementation	Monitoring Method (Implementation & Compliance)	Monitoring Frequency	Person(s) Responsible for Monitoring	Compliance with Standards
																maintenance and environment, health & safety).					
Decommissioning & Rehabilitation	**Decommissioning**	**Air Quality**	Dust generation	Neg	**Pre-mitigation**	1	3	2	2	8	3	3	6	**48**	**Mod**	AVOID: None MINIMIZE/ CONTROL: Limit the use of untreated roads as far as possible. REMEDY: Have clearly defined hauling routes/vehicle access areas. All main hauling roads should be treated for dust suppression. Conduct regular cleaning/sweeping of paved road surfaces to prevent the accumulation of dust. Conduct regular maintenance and checks for haul road surfaces. Immediate clean-up of any spillage. All material that is being transported should be covered during transport (where possible).	Continuous or as needed through Operational phase of mine.	Monitor truck exhaust emissions where possible	Only if required as per internal emission control strategy	Air Quality Specialist	National Environmental Management: Air Quality Act National Dust Control Regulations (2013). National Atmospheric Emissions Reporting Regulations Gazette No 38633 of 2015 and associated regulations.
				Neg	**Post-mitigation**	1	2	2	2	7	2	1	3	**21**	**Low**					Air Quality Specialist	
Decommissioning & Rehabilitation	**Decommissioning**	**Air Quality**	Particulates- PM10 & PM 2.5	Neg	**Pre-mitigation**	1	2	2	2	7	2	1	3	**21**	**Low**	AVOID: None MINIMIZE/ CONTROL: Limit the use of untreated roads as far as possible. REMEDY: Have clearly defined hauling routes/vehicle access areas. All main hauling roads should be treated for dust suppression. Conduct regular cleaning/sweeping of paved road surfaces to prevent the accumulation of dust. Conduct regular maintenance and checks for haul road surfaces. Immediate clean-up of any spillage. All material that is being transported should be covered during transport (where possible).	Continuous or as needed through Operational phase of mine.	Monitor truck exhaust emissions where possible	Only if required as per internal emission control strategy	Air Quality Specialist	National Environmental Management: Air Quality Act National Dust Control Regulations (2013). National Atmospheric Emissions Reporting Regulations Gazette No 38633 of 2015 and associated regulations.
				Neg	**Post-mitigation**	1	2	2	2	7	2	1	3	**21**	**Low**					Air Quality Specialist	
Decommissioning & Rehabilitation	**Decommissioning**	**Air Quality**	Emissions	Neg	**Pre-mitigation**	1	3	1	2	7	3	5	8	**56**	**Mod**	AVOID: Speeding, overloading trucks and non-fuel efficient vehicles. MINIMIZE/CONTROL: The number of trucks on the road, weight of trucks and the travelling speed. REMEDY: Implement strict vehicle speed limits. Consider use of cleaner fuel types and more fuel-efficient vehicles/mobile equipment/trucks. Make use of more modern, fuel efficient trucks/vehicles; which have improved exhaust emission control devices/systems in place; Switch off engines whilst not in use; Determine desired emission rates and	Continuous or as needed through Operational phase of mine.	Monitor truck exhaust emissions where possible	Only if required as per internal emission control strategy	Air Quality Specialist	National Environmental Management: Air Quality Act National Dust Control Regulations (2013). National Atmospheric Emissions Reporting Regulations Gazette No 38633 of 2015 and associated regulations.
				Neg	**Post-mitigation**	1	2	1	2	6	3	1	4	**24**	**Low**					Air Quality Specialist	

Activity	Project Phase	Aspect	Impact Description	Status	Mitigation status	Duration	Scale/Extent	Magnitude	Sensitivity	Consequence	Probability	Frequency	Likelihood	SIGNIFICANCE RATINGS (score of 200)		Mitigation measures	Time period of implementation	Monitoring Method (Implementation & Compliance)	Monitoring Frequency	Person(s) Responsible for Monitoring	Compliance with Standards
																measure/monitor truck exhaust emissions against these desired levels (if practical). Establish a maintenance schedule to ensure proper maintenance of the trucks & mobile equipment; Conduct regular maintenance and quality checks (engines/tyres) for all heavy mobile equipment/trucks. Ensure optimal fuel combustion efficiency; Develop an integrated emission control strategy that involves all departments of mine (i.e. management, production, maintenance and environment, health & safety).					
Delivery of materials to site during the construction phase and transport of personnel to and from site etc.	**Construction**	**Traffic**	Increase in traffic	Neg	**Pre-mitigation**	1	3	1	1	6	1	5	6	**36**	**Low**	AVOID: None MINIMIZE/ CONTROL: The Mine must not generate additional trips unnecessarily (e.g. provide lunch on site instead of driving construction employees between town and the site several times per day). Strict implementation of road safety laws (speed limits, ensuring vehicles are roadworthy, ensuring drivers are appropriately licensed) will minimize the occurrence of traffic nuisance REMEDY: ▪Enforce speed limits. Implement emergency response plan that includes road traffic incidents / accidents	Continuous	Internal inspections External EMP Audit Visual inspection – traffic signs (allowable speed)	Weekly/monthly Annual	ECO EAP	National Road Traffic Act 93 of 1996 the National Land Transport Act (Act No 5 of 2009) Section 35
				Neg	**Post-mitigation**	1	3	1	1	6	1	5	6	**36**	**Low**					ECO EAP	
Delivery of materials to site during the construction phase and transport of personnel to and from site etc.	**Construction**	**Traffic**	Increase in road incidences (safety)	Neg	**Pre-mitigation**	1	3	1	1	6	2	2	4	**24**	**Low**	AVOID: Speeding will not be allowed on site or by any vehicle associated with the Construction Activities MINIMIZE/ CONTROL: None REMEDY: ▪Enforce speed limits ▪Follow road rules ▪Trucks to not over take ▪Trucks drivers to undertake a driving safety course	Continuous	Internal inspections EMP Audit	Weekly/monthly Annual	ECO EAP	National Road Traffic Act 93 of 1996 the National Land Transport Act (Act No 5 of 2009) Section 35
				Neg	**Post-mitigation**	1	3	1	1	6	2	1	3	**18**	**Low**					ECO EAP	
Delivery of materials to site during the construction phase and transport of personnel to and from site etc.	**Construction**	**Traffic**	Wear and tear on road	Neg	**Pre-mitigation**	1	3	2	1	7	3	2	5	**35**	**Low**	AVOID: Speeding will not be allowed on site or by any vehicle associated with the Construction Activities MINIMIZE/ CONTROL: None REMEDY: ▪Enforce speed limits ▪Follow road rules ▪The mine will have to undertake regular maintenance of the service road and the R355 and will contribute towards the costs of the maintenance in agreement with Transnet and the Northern Cape Provincial Department of Transport. This will include the re-cutting and cleaning of side-drains	Continuous	Monitor the traffic conditions on the roads which are used by the mine-generated-traffic by means of sample traffic counts	Every three years	Traffic engineer	National Road Traffic Act 93 of 1996 the National Land Transport Act (Act No 5 of 2009) Section 35
				Neg	**Post-mitigation**	1	3	2	1	7	3	1	4	**28**	**Low**					Traffic engineer	

Activity	Project Phase	Aspect	Impact Description	Status	Mitigation status	Duration	Scale/Extent	Magnitude	Sensitivity	Consequence	Probability	Frequency	Likelihood	SIGNIFICANCE RATINGS (score of 200)		Mitigation measures	Time period of implementation	Monitoring Method (Implementation & Compliance)	Monitoring Frequency	Person(s) Responsible for Monitoring	Compliance with Standards
																and pipes and grading and shaping as well as dust suppression (where required).					
Mining activities, stockpiling and continued disturbance to soils and surrounding environment.	**Operational**	**Traffic**	Increase in traffic	Neg	**Pre-mitigation**	4	3	1	1	9	1	5	6	**54**	**Mod**	AVOID: Speeding will not be allowed MINIMIZE/ CONTROL: None Unnecessary trips to and from the mine will be minimised REMEDY: ▪Enforce speed limits	Continuous	Internal inspections External EMP Audit	Weekly/monthly Annual	ECO EAP	National Road Traffic Act 93 of 1996 the National Land Transport Act (Act No 5 of 2009) Section 35
				Neg	**Post-mitigation**	4	3	1	1	9	1	3	4	**36**	**Low**					ECO EAP	
Mining activities, stockpiling and continued disturbance to soils and surrounding environment.	**Operational**	**Traffic**	Increase in road incidences (safety)	Neg	**Pre-mitigation**	4	3	1	1	9	2	2	4	**36**	**Low**	AVOID: Speeding will not be allowed MINIMIZE/ CONTROL: Road traffic accidents can be minimised by ensuring drivers are adequately trained, adhere to speed limits and road safety rules. No driving to or from the site will be allowed in the dark REMEDY: ▪Enforce speed limits ▪Follow road rules ▪Trucks to not over take ▪Trucks drivers to undertake a driving safety course	Continuous	Internal inspections External EMP Audit	Weekly/monthly Annual	ECO EAP	National Road Traffic Act 93 of 1996 the National Land Transport Act (Act No 5 of 2009) Section 35
				Neg	**Post-mitigation**	4	3	1	1	9	2	1	3	**27**	**Low**					ECO EAP	
Mining activities, stockpiling and continued disturbance to soils and surrounding environment.	**Operational**	**Traffic**	Wear and tear on road	Neg	**Pre-mitigation**	4	3	2	1	10	4	2	6	**60**	**Mod**	AVOID: Speeding will not be allowed. MINIMIZE/ CONTROL: None REMEDY: ▪Enforce speed limits ▪Follow road rules ▪The mine will have to undertake regular maintenance of the service road and the R355 and will contribute towards the costs of the maintenance in agreement with Transnet and the Northern Cape Provincial Department of Transport. This will include the re-cutting and cleaning of side-drains and pipes and grading and shaping as well as dust suppression (where required).	Continuous	Monitor the traffic conditions on the roads which are used by the mine-generated-traffic by means of sample traffic counts	Every three years	Traffic engineer	National Road Traffic Act 93 of 1996 the National Land Transport Act (Act No 5 of 2009) Section 35
				Neg	**Post-mitigation**	3	3	1	2	9	3	1	4	**36**	**Low**					Traffic engineer	
Site clearing (remove soils and vegetation) and construction of infrastructure, roads and stockpiles. Mining	**Construction & Operation**	**Heritage**	Heritage site discovered and potentially destroyed	Neg	**Pre-mitigation**	4	5	5	5	19	2	1	3	**57**	**Mod**	AVOID: Areas that could have heritage significance such as grave sites if any are discovered on or around the site. MINIMIZE/ CONTROL: None. REMEDY: Immediately contact a qualified archaeologist if there is any suspicion that a heritage site may have been uncovered. 'Chance find Procedure' should be followed: ▪ Upon finding any archaeological or historical material all work at the affected	Throughout life of mine / as relevant if / when potential sites of heritage significance are uncovered	Official monitoring will not occur but as a site is come across an archaeologist will be contacted	Official monitoring will not occur if a site is identified / suspected an archaeologist will be contacted	If heritage site is discovered an archaeologist will assess	National Heritage Resources Act (Act 25 of 1999)
				Neg	**Post-mitigation**	4	2	2	2	10	1	1	2	**20**	**Low**						

Activity	Project Phase	Aspect	Impact Description	Status	Mitigation status	Duration	Scale/Extent	Magnitude	Sensitivity	Consequence	Probability	Frequency	Likelihood	SIGNIFICANCE RATINGS (score of 200)		Mitigation measures	Time period of implementation	Monitoring Method (Implementation & Compliance)	Monitoring Frequency	Person(s) Responsible for Monitoring	Compliance with Standards
activities, stockpiling and continued disturbance to soils and surrounding environment.																area must cease. ▪ The area should be demarcated to prevent any further work there until an investigation has been completed. ▪ An archaeologist should be contacted immediately to provide advice on the matter. ▪ If needed the necessary permit will be applied for with SAHRA. This will be done in conjunction with the appointed archaeologist. ▪ The removal of such archaeological material will only be done by the archaeologist in lieu of the approval given by SAHRA, including any conditions stipulated by the latter. ▪ Work on site will only continue after the archaeologist/ SAHRA has agreed to such continuance.					
Site clearing (remove soils and vegetation) and construction of infrastructure, roads and stockpiles. Mining activities, stockpiling and continued disturbance to soils and surrounding environment.	**Construction & Operation**	**Paleontological**	Loss of fossils found in gypsum	Neg	**Pre-mitigation**	4	1	1	5	11	1	1	2	**22**	**Low**	Based on the lack of any previously recorded fossils from the area, it is extremely unlikely any fossils would be identified in the proposed site.	N/A	N/A	N/A	N/A	National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA); NHRA
				Neg	**Post-mitigation**	4	2	2	2	10	1	1	2	**20**	**Low**						
Site clearing (remove soils and vegetation) and construction of infrastructure, roads and stockpiles. Mining activities, stockpiling and continued disturbance to soils and	**Construction, Operation & Decommissioning**	**Safety & Security**	Crime & security/safety incidences	Neg	**Pre-mitigation**	4	2	2	2	10	2	2	4	**40**	**Mod**	AVOID: None MINIMIZE/ CONTROL: Sign in upon entering site. Breathalyzer tests to be given to all entering site. Complaints register to be available at security. Visitors to be inducted before going on site. Mine and dangerous areas to be fenced off for safety. All employees and visitors to wear PPE on site. REMEDY: None	Throughout life of mine	Monitoring of complaints register and if complaints have been addressed. Monitoring to ensure that fences are all intact and that visitors are undergoing induction. Monitoring to ensure that all employees and visitors are wearing PPE.	Weekly/monthly inspections of complaints register and mine fencing Ongoing inspections of PPE being worn on site Annual internal EMP audit	Internal ECO undertaking inspections EAP undertaking annual EMP audit	Mine Health and Safety Act (Act 29 of 1996) as amended
				Neg	**Post-mitigation**	4	1	1	2	8	2	1	3	**24**	**Low**						

Activity	Project Phase	Aspect	Impact Description	Status	Mitigation status	Duration	Scale/Extent	Magnitude	Sensitivity	Consequence	Probability	Frequency	Likelihood	SIGNIFICANCE RATINGS (score of 200)		Mitigation measures	Time period of implementation	Monitoring Method (Implementation & Compliance)	Monitoring Frequency	Person(s) Responsible for Monitoring	Compliance with Standards
surrounding environment. Rehabilitation and Closure of mine areas.																		Monitoring to ensure that all employees and visitors are wearing PPE.	Ongoing inspections of PPE being worn on site Annual internal EMP audit Annual external EMP audit		
Site clearing (remove soils and vegetation) and construction of infrastructure, roads and stockpiles. Mining activities, stockpiling and continued disturbance to soils and surrounding environment. Rehabilitation and Closure of mine areas.	**Construction, Operation & Decommissioning**	**Noise**	Noise pollution and damage of hearing to workers near loud machinery	Neg	**Pre-mitigation**	4	2	2	2	10	3	1	4	**40**	**Mod**	AVOID: Use of loud machinery at night-latest operating hours are until 7pm. MINIMIZE/ CONTROL: Sound mufflers to be used on vehicles. Reverse beeping to have a reverse flashing light if vehicles used at night. Workers to wear PPE (ear plugs) when near loud machinery. REMEDY: None	Throughout life of mine	Inspection of usage of PPE	Ongoing inspections of PPE being worn on site	Internal ECO	Mine Health and Safety Act (Act 29 of 1996) as amended
				Neg	**Post-mitigation**	4	1	2	2	9	2	1	3	**27**	**Low**						
Non-mineral waste management	**Construction, Operation & Decommissioning**	**Waste**	Pollution	Neg	**Pre-mitigation**	1	2	2	2	7	3	5	8	**56**	**Mod**	AVOID: Littering MINIMIZE/CONTROL: Waste to be separated and hazardous waste to be disposed of at a reputable hazardous waste service provider REMEDY: Weekly inspections of littering/hazardous spills	Continuous or as needed through Operational phase of mine.	Monitoring of site to ensure no hazardous spills or littering Inspections that there are safety disposal certificates	Weekly	ECO	National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA); National Water Act, 1998 (Act 36 of 1998) (NWA); General Notice 509 as published in the Government Gazette 40229 of 2016 as it relates to the NWA (Act 36 of 1998); and Requirements of the Government Notice 704 in Government Gazette 20119.
				Neg	**Post-mitigation**	1	1	1	2	5	2	3	5	**25**	**Low**						
Site clearing (remove soils and vegetation)	**Construction**	**Ground water**	Impacts on groundwater volumes to to	Neg	**Pre-**	2	2	1	1	6	2	1	3	**18**	**Low**	No impact expected, no mitigation required	N/A	N/A	N/A	N/A	National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) Waste Classification

Activity	Project Phase	Aspect	Impact Description	Status	Mitigation status	Duration	Scale/Extent	Magnitude	Sensitivity	Consequence	Probability	Frequency	Likelihood	SIGNIFICANCE RATINGS (score of 200)		Mitigation measures	Time period of implementation	Monitoring Method (Implementation & Compliance)	Monitoring Frequency	Person(s) Responsible for Monitoring	Compliance with Standards
and construction of infrastructure, roads and stockpiles.			active dewatering of the trench area	Neg	**Post-mitigation**	0	0	0	0	0	0	0	0	**0**	**Low**						Regulations Regulation 634 do: NEM:WA: Waste Classification and Management Regulations; Regulation 635 do.: National Norms and Standards for the assessment of waste for landfill disposal; Regulation 636 do.: National norms and Standards for disposal of waste to landfill.
Site clearing (remove soils and vegetation) and construction of infrastructure, roads and stockpiles.	**Construction**	**Ground water**	Impacts on groundwater quality due to poor quality seepage from the operational area	Neg	**Pre-mitigation**	5	2	1	1	9	1	2	3	**27**	**Low**	No impact expected, no mitigation required	N/A	N/A	N/A	N/A	NEMA:WA, GN 634, GN 635 & GN 636
				Neg	**Post-mitigation**	0	0	0	0	0	0	0	0	**0**	**Low**						
Mining activities, stockpiling and continued disturbance to soils and surrounding environment.	**Operation**	**Ground water**	Impacts on groundwater volumes to to active dewatering of the trench area	Neg	**Pre-mitigation**	0	0	0	5	5	0	0	0	**0**	**Low**	No impact expected, because the groundwater table is deeper than the mining depth and no dewatering will take place. No mitigation required	N/A	N/A	N/A	N/A	NEMA:WA, GN 634, GN 635 & GN 639
				Neg	**Post-mitigation**	0	0	0	5	5	0	0	0	**0**	**Low**						
Mining activities, stockpiling and continued disturbance to soils and surrounding environment.	**Operation**	**Ground water**	Impacts on groundwater quality due to poor quality seepage from the operational area	Neg	**Pre-mitigation**	5	1	3	4	13	3	2	5	**65**	**Mod**	AVOID: Use of hydrocarbons and hazardous chemicals on bare soil MINIMIZE/ CONTROL: None REMEDY: Refuelling and hydrocarbon stores to be cemented floors so that no seepage can occur. Leaking machinery to have drip trays beneath them. Monitor groundwater quality. Implement management measures as necessary The product stockpile will continuously be removed when the product is sold and transported off site. Rainfall in the area is low and intermittent and it is not expected that there will be significant seepage from the product stockpile towards the underlying aquifers	Continuous	Inspection of fuel storage, hydrocarbon storage and that spill kits are used Groundwater sampling	Weekly Groundwater sampling to occur on a monthly basis during the first year of operation and quarterly after the first year of operation	ECO/EAP	NEMA:WA, GN 634, GN 635 & GN 640
				Neg	**Post-mitigation**	2	1	2	4	9	2	2	4	**36**	**Low**						

Activity	Project Phase	Aspect	Impact Description	Status	Mitigation status	Duration	Scale/Extent	Magnitude	Sensitivity	Consequence	Probability	Frequency	Likelihood	SIGNIFICANCE RATINGS (score of 200)		Mitigation measures	Time period of implementation	Monitoring Method (Implementation & Compliance)	Monitoring Frequency	Person(s) Responsible for Monitoring	Compliance with Standards
Mining activities, stockpiling and continued disturbance to soils and surrounding environment.	**Operation**	**Ground water**	Impacts on surface water and wetland volumes due to active dewatering of the trench area	Neg	**Pre-mitigation**	2	2	1	1	6	1	1	2	**12**	**Low**	No impact expected, no mitigation required	N/A	N/A	N/A	N/A	NEMA:WA, GN 634, GN 635 & GN 639
				Neg	**Post-mitigation**	0	0	0	0	0	0	0	0	**0**	**Low**						
Mining activities, stockpiling and continued disturbance to soils and surrounding environment.	**Operation**	**Ground water**	Impacts on surface water quality due to poor quality seepage from the pollution source areas	Neg	**Pre-mitigation**	5	2	1	3	11	1	2	3	**33**	**Low**	AVOID: Use of hydrocarbons and hazardous chemicals on bare soil MINIMIZE/ CONTROL: None REMEDY: Refuelling and hydrocarbon stores to be cemented floors so that no seepage can occur. Leaking machinery to have drip trays beneath them. Monitor surface water quality	Continuous or as needed through Operational phase of mine.	Monitoring of surface water	Monthly	ECO/EAP	NEMA:WA, GN 634, GN 635 & GN 642
				Neg	**Post-mitigation**	0	0	0	0	0	0	0	0	**0**	**Low**						
Rehabilitation	**Post-Operational**	**Ground water**	Groundwater level recovery	Pos	**Pre-mitigation**	2	2	1	1	6	1	1	2	**12**	**Low**	Positive impact, no mitigation required	N/A	N/A	N/A	N/A	NEMA:WA, GN 634, GN 635 & GN 643
				Pos	**Post-mitigation**	0	0	0	0	0	0	0	0	**0**	**Low**						
Rehabilitation	**Post-Operational**	**Ground water**	Impacts on groundwater quality due to poor quality seepage from the trench area	Neg	**Pre-mitigation**	5	3	4	3	15	3	1	4	**60**	**Mod**	Calculations show that the contaminant plume will migrate up to 250 m from the edge of the trench in a down gradient direction. Plume migration must be monitored for a period of at least 5 years post-closure and mitigation (cut-off trenches or intercepting drains) implemented if required	Continuous	Groundwater monitoring	Quarterly for 5 years post closure	ECO/EAP	NEMA:WA, GN 634, GN 635 & GN 644
				Neg	**Post-mitigation**	5	2	2	3	12	2		2	**24**	**Low**						
Rehabilitation	**Post-Operational**	**Ground water**	Groundwater level recovery	Pos	**Pre-mitigation**	2	2	1	1	6	1	1	2	**12**	**Low**	Positive impact, no mitigation required	N/A	N/A	N/A	N/A	NEMA:WA, GN 634, GN 635 & GN 643

Activity	Project Phase	Aspect	Impact Description	Status	Mitigation status	Duration	Scale/Extent	Magnitude	Sensitivity	Consequence	Probability	Frequency	Likelihood	SIGNIFICANCE RATINGS (score of 200)		Mitigation measures	Time period of implementation	Monitoring Method (Implementation & Compliance)	Monitoring Frequency	Person(s) Responsible for Monitoring	Compliance with Standards
				POS	Post-mitigation	0	0	0	0	0	0	0	0	**0**	**Low**						
Rehabilitation	**Post-Operational**	**Ground water**	Impacts on groundwater quality due to poor quality seepage from the operational area	Neg	Pre-mitigation	5	3	4	3	15	3	1	4	**60**	**Mod**	AVOID: Use of hydrocarbons on bare soil MINIMIZE/ CONTROL: None REMEDY: Refuelling and hydrocarbon stores to be cemented floors so that no seepage can occur. Leaking machinery to have drip trays beneath them. Monitor groundwater quality. Implement management measures as necessary	Continuous	Inspection of fuel storage, hydrocarbon storage and that spill kits are used Groundwater sampling	Weekly Groundwater sampling to occur on a monthly basis during the first year of operation and quarterly after the first year of operation	ECO/EAP	NEMA:WA, GN 634, GN 635 & GN 644
				Neg	Post-mitigation	5	2	2	1	10	2		2	**20**	**Low**						
Rehabilitation	**Post-Operational**	**Ground water**	Impacts on surface quality due to poor quality seepage from the pollution source areas	Neg	Pre-mitigation	5	2	1	2	10	2	1	3	**30**	**Low**	*					
				Neg	Post-mitigation	0	0	0	0	0	0	0	0	**0**	**Low**						
Site clearing (remove soils and vegetation) and construction of infrastructure, roads and stockpiles.	**Construction**	**Visual**	Impact on landscape character and sense of place due to: alteration of topography, increased vehicular activity and dust.	Neg	Pre-mitigation	1	3	4	3	11	5	1	6	**66**	**Mod**	AVOID: Fires must be prevented. Uplighting and unshielded lighting must be avoided. MINIMIZE/ CONTROL: Footprint area must be made to be the smallest possible area. Activities must be restricted to daylight hours. Colours of buildings must match surrounding landscape as far as possible. Vehicles must stick to speed limit on site. Stockpiles must not exceed 3m in height. Good housekeeping must be in place for all areas, keeping the project site neat and orderly. REMEDY: Ensure all litter or disorderly areas are cleaned and remedied immediately.	Design and Construction phase. However, measures are continued throughout LOM.	Visual Monitoring Plan must be designed and implemented as per specialist recommendations.	Weekly	ECO	National Environmental Management Act (NEMA) (Act 107 of 1998) ; 2014 NEMA EIA regulations as amended (published in General Notice (GN) No. R.982 as well as R 983 Listing Notice 1, R 984 Listing Notice 2 and R 985 Listing Notice 3). National Environmental Management: Protected Areas Act (Act 57 of 2003)NEM:PAA National Heritage Resources Act (Act 25 of 1999)NHRA Advertising on Roads and Ribbons Act (Act 21 of 1940) Municipal Systems Act (Act 32 of 2000)
				Neg	Post-mitigation	1	2	2	3	8	5	1	6	**48**	**Mod**						

Activity	Project Phase	Aspect	Impact Description	Status	Mitigation status	Duration	Scale/Extent	Magnitude	Sensitivity	Consequence	Probability	Frequency	Likelihood	SIGNIFICANCE RATINGS (score of 200)		Mitigation measures	Time period of implementation	Monitoring Method (Implementation & Compliance)	Monitoring Frequency	Person(s) Responsible for Monitoring	Compliance with Standards
Mining activities, stockpiling and continued disturbance to soils and surrounding environment.	**Operation**	**Visual**	Impact on landscape character and sense of place due to: alteration of topography through the growth in stockpiles, erosion + AIPs altering the landscape, and continued earthworks and vehicular activity leading to generation of dust.	Neg	**Pre-mitigation**	4	2	4	3	13	5	1	6	**78**	**Mod**	AVOID: Fires must be prevented. Uplighting and unshielded lighting must be avoided. MINIMIZE/ CONTROL: Vehicles must not be allowed to drive around site or around sensitive areas; they must remain in designated areas and roads. Stockpiles must not exceed 3m in height and must be shaped to match undulating landscape. Good housekeeping must be in place for all areas, keeping the project site neat and orderly at all times. Alien Invasive Plant management plan must be implemented. Waste storage areas must be screened if needed. Dust management plan must be implemented. REMEDY: Ensure all spills (hydrocarbon, gypsum, sediment or other) and litter incidents are cleaned and the area rehabilitated immediately. Erosion must be rehabilitated as soon as it is observed. Trench mining area must be rehabilitated as the mining progresses according to the rehabilitation plan and recommendations of the floral specialist.	Continuous or as needed through Operational phase of mine.	Visual Monitoring Plan must be implemented as per specialist recommendations. Visual impact must be included as part of annual external environmental audit.	Monthly monitoring. Annual external audit.	ECO for monthly (ongoing) monitoring. External EAP for annual audit of EMP.	NEMA ; 2014 NEMA EIA regulations as amended NEM:PAA NHRA Advertising on Roads and Ribbons Act (Act 21 of 1940) Municipal Systems Act (Act 32 of 2000)
				Neg	**Post-mitigation**	4	2	2	3	11	5	1	6	**66**	**Mod**						
Decommissioning, Rehabilitation and Closure of mine areas.	**Decommissioning**	**Visual**	Impact on landscape character and sense of place due to: erosion, AIPs and dust generation from rehabilitated landscape.	Neg	**Pre-mitigation**	3	3	3	3	12	3	1	4	**48**	**Mod**	AVOID: Fires must be prevented. MINIMIZE/ CONTROL: Rehabilitation footprint must not exceed that of the designated footprint of the mining areas. REMEDY: Ensure all spills (hydrocarbon, gypsum, sediment, litter or other) are cleaned and the area rehabilitated immediately. Final rehabilitation of mining areas as well as infrastructure areas must be done according to the rehabilitation plan and recommendations of the floral specialist with visual appeal in mind.	Decommissioning and rehabilitation phase.	Visual impact monitoring can continue with assessment of rehabilitation success as per rehabilitation plan.	Biannually for three years post-closure. Thereafter annually or as required for closure.	Rehabilitation specialist.	NEMA ; 2014 NEMA EIA regulations as amended NEM:PAA NHRA Advertising on Roads and Ribbons Act (Act 21 of 1940) Municipal Systems Act (Act 32 of 2000)
				Neg	**Post-mitigation**	2	2	2	3	9	3	1	4	**36**	**Low**						
Site clearing (remove soils and vegetation) and construction of infrastructure, roads and stockpiles.	**Construction**	**Visual**	Visual Intrusion and VAC Impacts due to: alteration of topography, landscape scarring, and increased vehicular activity.	Neg	**Pre-mitigation**	1	3	4	3	11	5	1	6	**66**	**Mod**	AVOID: Fires must be prevented. MINIMIZE/ CONTROL: Footprint area must be made to be the smallest possible area. Activities must be restricted to daylight hours. Colours of buildings must match surrounding landscape as far as possible. Mining activities and vehicles must remain out of sensitive areas. Vehicles must stick to speed limit on site. Stockpiles must not exceed 3m in height. Good housekeeping must be in place for all areas, keeping the project site neat and orderly. REMEDY: Ensure all litter or disorderly areas are cleaned and remedied immediately.	Design and Construction phase. However, measures are continued throughout LOM.	Visual Monitoring Plan must be designed and implemented as per specialist recommendations.	Weekly	ECO	NEMA ; 2014 NEMA EIA regulations as amended NEM:PAA NHRA Advertising on Roads and Ribbons Act (Act 21 of 1940) Municipal Systems Act (Act 32 of 2000)
				Neg	**Post-mitigation**	1	3	2	3	9	5	1	6	**54**	**Mod**						
Mining activities, stockpiling and continued	**Operation**	**Visual**	Visual Intrusion and VAC Impacts due to: alteration of topography through the	Neg	**Pre-mitigation**	4	4	4	3	15	5	1	6	**90**	**High**	AVOID: Fires must be prevented. MINIMIZE/ CONTROL: Vehicles must not be allowed to drive around site or around sensitive areas unnecessarily; they must remain in designated areas and roads. Stockpiles	Continuous or as needed through Operational phase of mine.	Visual Monitoring Plan must be implemented as per specialist recommendatio	Monthly monitoring. Annual external audit.	ECO for monthly (ongoing) monitoring. External	NEMA ; 2014 NEMA EIA regulations as amended NEM:PAA NHRA Advertising on Roads and

Activity	Project Phase	Aspect	Impact Description	Status	Mitigation status	Duration	Scale/Extent	Magnitude	Sensitivity	Consequence	Probability	Frequency	Likelihood	SIGNIFICANCE RATINGS (score of 200)		Mitigation measures	Time period of implementation	Monitoring Method (Implementation & Compliance)	Monitoring Frequency	Person(s) Responsible for Monitoring	Compliance with Standards
disturbance to soils and surrounding environment.			growth in stockpiles, erosion + AIPs scarring the landscape, with continued earthworks and vehicular activity.	Neg	**Post-mitigation**	4	3	2	3	12	5	1	6	**72**	**Mod**	must not exceed 3m in height and must be shaped to match undulating landscape. Good housekeeping must be in place for all areas, keeping the project site neat and orderly at all times. Alien Invasive Plant management plan must be implemented. Waste storage areas must be screened if needed. Dust management plan must be implemented. REMEDY: Ensure all spills (hydrocarbon, gypsum, sediment or other) and litter incidents are cleaned and the area rehabilitated immediately. Erosion must be rehabilitated as soon as it is observed. Trench mining area must be rehabilitated as the mining progresses according to the rehabilitation plan and recommendations of the floral specialist.		ns. Visual impact must be included as part of annual external environmental audit.		EAP for annual audit of EMP.	Ribbons Act (Act 21 of 1940) Municipal Systems Act (Act 32 of 2000)
Decommissioning, Rehabilitation and Closure of mine areas.	**Decommissioning**	**Visual**	Visual Intrusion and VAC Impacts due to: rehabilitated landscape resulting in erosion, AIPs and bare ground scarring the landscape.	Neg	**Pre-mitigation**	4	3	3	3	13	4	1	5	**65**	**Mod**	AVOID: Fires must be prevented. Uplighting and unshielded lighting must be avoided. MINIMIZE/ CONTROL: Rehabilitation footprint must not exceed that of the designated footprint of the mining areas. REMEDY: Ensure all spills (hydrocarbon, gypsum, sediment or other) are cleaned and the area rehabilitated immediately. Final rehabilitation of mining areas as well as infrastructure areas must be done according to the rehabilitation plan and recommendations of the floral specialist with visual appeal in mind.	Decommissioning and rehabilitation phase.	Visual impact monitoring can continue with assessment of rehabilitation success as per rehabilitation plan.	Biannually for three years post-closure. Thereafter annually or as required for closure.	Rehabilitation specialist.	NEMA ; 2014 NEMA EIA regulations as amended NEM:PAA NHRA Advertising on Roads and Ribbons Act (Act 21 of 1940) Municipal Systems Act (Act 32 of 2000)
				Neg	**Post-mitigation**	2	2	2	3	9	3	1	4	**36**	**Low**						
Site clearing (remove soils and vegetation) and construction of infrastructure, roads and stockpiles.	**Construction**	**Visual**	Visual exposure and Visibility Impacts due to: alteration of topography, erosion, AIPs and vehicular activity leading to site in contrast to the landscape.	Neg	**Pre-mitigation**	1	4	4	3	12	5	1	6	**72**	**Mod**	AVOID: Fires must be prevented. MINIMIZE/ CONTROL: Footprint area must be made to be the smallest possible area. Activities must be restricted to daylight hours. Colours of buildings must match surrounding landscape as far as possible. Mining activities and vehicles must remain out of sensitive areas. Vehicles must stick to speed limit ton site. Stockpiles must not exceed 3m in height. Good housekeeping must be in place for all areas, keeping the project site neat and orderly. REMEDY: Ensure all litter or disorderly areas are cleaned and remedied immediately.	Design and Construction phase. However, measures are continued throughout LOM.	Visual Monitoring Plan must be designed and implemented as per specialist recommendations.	Weekly	ECO	NEMA ; 2014 NEMA EIA regulations as amended NEM:PAA NHRA Advertising on Roads and Ribbons Act (Act 21 of 1940) Municipal Systems Act (Act 32 of 2000)
				Neg	**Post-mitigation**	1	2	2	3	8	4	1	5	**40**	**Mod**						
Mining activities, stockpiling and continued	**Operation**	**Visual**	Visual exposure and Visibility Impacts due to: alteration of topography,	Neg	**Pre-mitigation**	4	4	4	3	15	5	1	6	**90**	**High**	AVOID: Fires must be prevented. MINIMIZE/ CONTROL: Vehicles must not be allowed to drive outside of designated areas and must stick to speed limit. Stockpiles must not exceed 3m in height and must be	Continuous or as needed through Operational phase of mine.	Visual Monitoring Plan must be implemented as per specialist recommendatio	Monthly monitoring. Annual external audit.	ECO for monthly (ongoing) monitoring. External	NEMA ; 2014 NEMA EIA regulations as amended NEM:PAA NHRA Advertising on Roads and

Activity	Project Phase	Aspect	Impact Description	Status	Mitigation status	Duration	Scale/Extent	Magnitude	Sensitivity	Consequence	Probability	Frequency	Likelihood	SIGNIFICANCE RATINGS (score of 200)		Mitigation measures	Time period of implementation	Monitoring Method (Implementation & Compliance)	Monitoring Frequency	Person(s) Responsible for Monitoring	Compliance with Standards
disturbance to soils and surrounding environment.			erosion, AIPs, continued earthworks and vehicular activity leading to site in contrast to the landscape.	Neg	**Post-mitigation**	3	3	2	3	11	4	1	5	**55**	**Mod**	shaped to match undulating landscape. Good housekeeping must be in place for all areas, keeping the project site neat and orderly at all times. Alien Invasive Plant management plan must be implemented. Waste storage areas must be screened if needed. Dust management plan must be implemented. REMEDY: Ensure all spills (hydrocarbon, gypsum, sediment or other) and litter incidents are cleaned and the area rehabilitated immediately. Erosion must be rehabilitated as soon as it is observed. Trench mining area must be rehabilitated as the mining progresses according to the rehabilitation plan and recommendations of the floral specialist.		ns. Visual impact must be included as part of annual external environmental audit.		EAP for annual audit of EMP.	Ribbons Act (Act 21 of 1940) Municipal Systems Act (Act 32 of 2000)
Decommissioning, Rehabilitation and Closure of mine areas.	**Decommissioning**	**Visual**	Visual exposure and Visibility Impacts due to: rehabilitated landscape resulting in erosion, AIPs and bare ground scarring the landscape.	Neg	**Pre-mitigation**	3	3	3	3	12	3	1	4	**48**	**Mod**	AVOID: Sensitive areas must continue to be avoided. MINIMIZE/ CONTROL: Rehabilitation footprint must not exceed that of the designated footprint of the mining areas. REMEDY: Ensure all spills (hydrocarbon, gypsum, sediment or other) are cleaned and the area rehabilitated immediately. Final rehabilitation of mining areas as well as infrastructure areas must be done according to the rehabilitation plan and recommendations of the floral specialist with visual appeal in mind.	Decommissioning and rehabilitation phase.	Visual impact monitoring can continue with assessment of rehabilitation success as per rehabilitation plan.	Biannually for three years post-closure. Thereafter annually or as required for closure.	Rehabilitation specialist.	NEMA ; 2014 NEMA EIA regulations as amended NEM:PAA NHRA Advertising on Roads and Ribbons Act (Act 21 of 1940) Municipal Systems Act (Act 32 of 2000)
				Neg	**Post-mitigation**	2	2	2	3	9	3	1	4	**36**	**Low**						
Site clearing (remove soils and vegetation) and construction of infrastructure, roads and stockpiles.	**Construction**	**Visual**	Impacts due to Night time lighting resulting in light pollution.	Neg	**Pre-mitigation**	1	1	1	3	6	4	1	5	**30**	**Low**	AVOID: Uplighting and unshielded lighting must be avoided. MINIMIZE/ CONTROL: Activities must be restricted to daylight hours. Lighting must be: low-level, of limited height and lumen/wattage and designed as per specialist recommendations.	Design and Construction phase. However, measures are continued throughout LOM.	Visual Monitoring Plan must be designed and implemented as per specialist recommendations.	Weekly	ECO	NEMA ; 2014 NEMA EIA regulations as amended NEM:PAA NHRA Advertising on Roads and Ribbons Act (Act 21 of 1940) Municipal Systems Act (Act 32 of 2000)
				Neg	**Post-mitigation**	1	1	1	3	6	4	1	5	**30**	**Low**						
Mining activities, stockpiling and continued disturbance to soils and surrounding environment.	**Operation**	**Visual**	Impacts due to Night time lighting resulting in light pollution.	Neg	**Pre-mitigation**	4	4	4	3	15	5	1	6	**90**	**High**	AVOID: Uplighting and unshielded lighting must be avoided. MINIMIZE/ CONTROL: Activities must be restricted to daylight hours. Lighting must be: low-level, of limited height and lumen/wattage and designed as per specialist recommendations.	Continuous or as needed through Operational phase of mine.	Visual Monitoring Plan must be implemented as per specialist recommendations. Visual impact must be included as part of annual external environmental audit.	Monthly monitoring. Annual external audit.	ECO for monthly (ongoing) monitoring. External EAP for annual audit of EMP.	NEMA ; 2014 NEMA EIA regulations as amended NEM:PAA NHRA Advertising on Roads and Ribbons Act (Act 21 of 1940) Municipal Systems Act (Act 32 of 2000)
				Neg	**Post-mitigation**	4	3	3	3	13	2	1	3	**39**	**Low**						

Activity	Project Phase	Aspect	Impact Description	Status	Mitigation status	Duration	Scale/Extent	Magnitude	Sensitivity	Consequence	Probability	Frequency	Likelihood	SIGNIFICANCE RATINGS (score of 200)		Mitigation measures	Time period of implementation	Monitoring Method (Implementation & Compliance)	Monitoring Frequency	Person(s) Responsible for Monitoring	Compliance with Standards
Decommissioning, Rehabilitation and Closure of mine areas.	**Decommissioning**	**Visual**	Impacts due to Night time lighting resulting in light pollution.	Neg	**Pre-mitigation**	3	4	3	3	13	4	1	5	**65**	**Mod**	AVOID: Uplighting and unshielded lighting must be avoided. MINIMIZE/ CONTROL: Activities must be restricted to daylight hours. Lighting must be: low-level, of limited height and lumen/wattage and designed as per specialist recommendations.	Decommissioning and rehabilitation phase.	Visual impact monitoring can continue with assessment of rehabilitation success as per rehabilitation plan.	Biannually for three years post-closure. Thereafter annually or as required for closure.	Rehabilitation specialist.	NEMA ; 2014 NEMA EIA regulations as amended NEM:PAA NHRA Advertising on Roads and Ribbons Act (Act 21 of 1940) Municipal Systems Act (Act 32 of 2000)
				Neg	**Post-mitigation**	1	3	2	3	9	2	1	3	**27**	**Low**						
Site clearing (remove soils and vegetation) and construction of infrastructure, roads and stockpiles.	**Construction**	**Visual**	Impact on landscape character and sense of place due to: alteration of topography, increased vehicular activity and dust.	Neg	**Pre-mitigation**	1	3	4	3	11	5	1	6	**66**	**Mod**	AVOID: Fires must be prevented. Uplighting and unshielded lighting must be avoided. MINIMIZE/ CONTROL: Footprint area must be made to be the smallest possible area. Activities must be restricted to daylight hours. Colours of buildings must match surrounding landscape as far as possible. Vehicles must stick to speed limit on site. Stockpiles must not exceed 3m in height. Good housekeeping must be in place for all areas, keeping the project site neat and orderly. REMEDY: Ensure all litter or disorderly areas are cleaned and remedied immediately.	Design and Construction phase. However, measures are continued throughout LOM.	Visual Monitoring Plan must be designed and implemented as per specialist recommendations.	Weekly	ECO	National Environmental Management Act (NEMA) (Act 107 of 1998) ; 2014 NEMA EIA regulations as amended (published in General Notice (GN) No. R.982 as well as R 983 Listing Notice 1, R 984 Listing Notice 2 and R 985 Listing Notice 3). National Environmental Management: Protected Areas Act (Act 57 of 2003)NEM:PAA National Heritage Resources Act (Act 25 of 1999)NHRA Advertising on Roads and Ribbons Act (Act 21 of 1940) Municipal Systems Act (Act 32 of 2000)
				Neg	**Post-mitigation**	1	2	2	3	8	5	1	6	**48**	**Mod**						
Mining activities, stockpiling and continued disturbance to soils and surrounding environment.	**Operation**	**Visual**	Impact on landscape character and sense of place due to: alteration of topography through the growth in stockpiles, erosion + AIPs altering the landscape, and continued earthworks and vehicular activity leading to generation of dust.	Neg	**Pre-mitigation**	4	2	4	3	13	5	1	6	**78**	**Mod**	AVOID: Fires must be prevented. Uplighting and unshielded lighting must be avoided. MINIMIZE/ CONTROL: Vehicles must not be allowed to drive around site or around sensitive areas; they must remain in designated areas and roads. Stockpiles must not exceed 3m in height and must be shaped to match undulating landscape. Good housekeeping must be in place for all areas, keeping the project site neat and orderly at all times. Alien Invasive Plant management plan must be implemented. Waste storage areas must be screened if needed. Dust management plan must be implemented. REMEDY: Ensure all spills (hydrocarbon, gypsum, sediment or other) and litter incidents are cleaned and the area rehabilitated immediately. Erosion must be rehabilitated as soon as it is observed. Trench mining area must be rehabilitated as the mining progresses according to the	Continuous or as needed through Operational phase of mine.	Visual Monitoring Plan must be implemented as per specialist recommendations. Visual impact must be included as part of annual external environmental audit.	Monthly monitoring. Annual external audit.	ECO for monthly (ongoing) monitoring. External EAP for annual audit of EMP.	NEMA ; 2014 NEMA EIA regulations as amended NEM:PAA NHRA Advertising on Roads and Ribbons Act (Act 21 of 1940) Municipal Systems Act (Act 32 of 2000)
				Neg	**Post-mitigation**	4	2	2	3	11	5	1	6	**66**	**Mod**						

Activity	Project Phase	Aspect	Impact Description	Status	Mitigation status	Duration	Scale/Extent	Magnitude	Sensitivity	Consequence	Probability	Frequency	Likelihood	SIGNIFICANCE RATINGS (score of 200)		Mitigation measures	Time period of implementation	Monitoring Method (Implementation & Compliance)	Monitoring Frequency	Person(s) Responsible for Monitoring	Compliance with Standards
																rehabilitation plan and recommendations of the floral specialist.					
Decommissioning, Rehabilitation and Closure of mine areas.	**Decommissioning**	**Visual**	Impact on landscape character and sense of place due to: erosion, AIPs and dust generation from rehabilitated landscape.	Neg	**Pre-mitigation**	3	3	3	3	12	3	1	4	**48**	**Mod**	AVOID: Fires must be prevented. MINIMIZE/ CONTROL: Rehabilitation footprint must not exceed that of the designated footprint of the mining areas. REMEDY: Ensure all spills (hydrocarbon, gypsum, sediment, litter or other) are cleaned and the area rehabilitated immediately. Final rehabilitation of mining areas as well as infrastructure areas must be done according to the rehabilitation plan and recommendations of the floral specialist with visual appeal in mind.	Decommissioning and rehabilitation phase.	Visual impact monitoring can continue with assessment of rehabilitation success as per rehabilitation plan.	Biannually for three years post-closure. Thereafter annually or as required for closure.	Rehabilitation specialist.	NEMA ; 2014 NEMA EIA regulations as amended NEM:PAA NHRA Advertising on Roads and Ribbons Act (Act 21 of 1940) Municipal Systems Act (Act 32 of 2000)
				Neg	**Post-mitigation**	2	2	2	3	9	3	1	4	**36**	**Low**						
Site clearing (remove soils and vegetation) and construction of infrastructure, roads and stockpiles.	**Construction**	**Visual**	Visual Intrusion and VAC Impacts due to: alteration of topography, landscape scarring, and increased vehicular activity.	Neg	**Pre-mitigation**	1	3	4	3	11	5	1	6	**66**	**Mod**	AVOID: Fires must be prevented. MINIMIZE/ CONTROL: Footprint area must be made to be the smallest possible area. Activities must be restricted to daylight hours. Colours of buildings must match surrounding landscape as far as possible. Mining activities and vehicles must remain out of sensitive areas. Vehicles must stick to speed limit on site. Stockpiles must not exceed 3m in height. Good housekeeping must be in place for all areas, keeping the project site neat and orderly. REMEDY: Ensure all litter or disorderly areas are cleaned and remedied immediately.	Design and Construction phase. However, measures are continued throughout LOM.	Visual Monitoring Plan must be designed and implemented as per specialist recommendations.	Weekly	ECO	NEMA ; 2014 NEMA EIA regulations as amended NEM:PAA NHRA Advertising on Roads and Ribbons Act (Act 21 of 1940) Municipal Systems Act (Act 32 of 2000)
				Neg	**Post-mitigation**	1	3	2	3	9	5	1	6	**54**	**Mod**						
Mining activities, stockpiling and continued disturbance to soils and surrounding environment.	**Operation**	**Visual**	Visual Intrusion and VAC Impacts due to: alteration of topography through the growth in stockpiles, erosion + AIPs scarring the landscape, with continued earthworks and vehicular activity.	Neg	**Pre-mitigation**	4	4	4	3	15	5	1	6	**90**	**High**	AVOID: Fires must be prevented. MINIMIZE/ CONTROL: Vehicles must not be allowed to drive around site or around sensitive areas unnecessarily; they must remain in designated areas and roads. Stockpiles must not exceed 3m in height and must be shaped to match undulating landscape. Good housekeeping must be in place for all areas, keeping the project site neat and orderly at all times. Alien Invasive Plant management plan must be implemented. Waste storage areas must be screened if needed. Dust management plan must be implemented. REMEDY: Ensure all spills (hydrocarbon, gypsum, sediment or other) and litter incidents are cleaned and the area rehabilitated immediately. Erosion must be rehabilitated as soon as it is observed. Trench mining area must be rehabilitated as the mining progresses according to the rehabilitation plan and recommendations of the floral specialist.	Continuous or as needed through Operational phase of mine.	Visual Monitoring Plan must be implemented as per specialist recommendations. Visual impact must be included as part of annual external environmental audit.	Monthly monitoring. Annual external audit.	ECO for monthly (ongoing) monitoring. External EAP for annual audit of EMP.	NEMA ; 2014 NEMA EIA regulations as amended NEM:PAA NHRA Advertising on Roads and Ribbons Act (Act 21 of 1940) Municipal Systems Act (Act 32 of 2000)
				Neg	**Post-mitigation**	4	3	2	3	12	5	1	6	**72**	**Mod**						

Activity	Project Phase	Aspect	Impact Description	Status	Mitigation status	Duration	Scale/Extent	Magnitude	Sensitivity	Consequence	Probability	Frequency	Likelihood	SIGNIFICANCE RATINGS (score of 200)		Mitigation measures	Time period of implementation	Monitoring Method (Implementation & Compliance)	Monitoring Frequency	Person(s) Responsible for Monitoring	Compliance with Standards
Decommissioning, Rehabilitation and Closure of mine areas.	**Decommissioning**	**Visual**	Visual Intrusion and VAC Impacts due to: rehabilitated landscape resulting in erosion, AIPs and bare ground scarring the landscape.	Neg	**Pre-mitigation**	4	3	3	3	13	4	1	5	**65**	**Mod**	AVOID: Fires must be prevented. Uplighting and unshielded lighting must be avoided. MINIMIZE/ CONTROL: Rehabilitation footprint must not exceed that of the designated footprint of the mining areas. REMEDY: Ensure all spills (hydrocarbon, gypsum, sediment or other) are cleaned and the area rehabilitated immediately. Final rehabilitation of mining areas as well as infrastructure areas must be done according to the rehabilitation plan and recommendations of the floral specialist with visual appeal in mind.	Decommissioning and rehabilitation phase.	Visual impact monitoring can continue with assessment of rehabilitation success as per rehabilitation plan.	Biannually for three years post-closure. Thereafter annually or as required for closure.	Rehabilitation specialist.	NEMA ; 2014 NEMA EIA regulations as amended NEM:PAA NHRA Advertising on Roads and Ribbons Act (Act 21 of 1940) Municipal Systems Act (Act 32 of 2000)
				Neg	**Post-mitigation**	2	2	2	3	9	3	1	4	**36**	**Low**						
Site clearing (remove soils and vegetation) and construction of infrastructure, roads and stockpiles.	**Construction**	**Visual**	Visual exposure and Visibility Impacts due to: alteration of topography, erosion, AIPs and vehicular activity leading to site in contrast to the landscape.	Neg	**Pre-mitigation**	1	4	4	3	12	5	1	6	**72**	**Mod**	AVOID: Fires must be prevented. MINIMIZE/ CONTROL: Footprint area must be made to be the smallest possible area. Activities must be restricted to daylight hours. Colours of buildings must match surrounding landscape as far as possible. Mining activities and vehicles must remain out of sensitive areas. Vehicles must stick to speed limit ton site. Stockpiles must not exceed 3m in height. Good housekeeping must be in place for all areas, keeping the project site neat and orderly. REMEDY: Ensure all litter or disorderly areas are cleaned and remedied immediately.	Design and Construction phase. However, measures are continued throughout LOM.	Visual Monitoring Plan must be designed and implemented as per specialist recommendations.	Weekly	ECO	NEMA ; 2014 NEMA EIA regulations as amended NEM:PAA NHRA Advertising on Roads and Ribbons Act (Act 21 of 1940) Municipal Systems Act (Act 32 of 2000)
				Neg	**Post-mitigation**	1	2	2	3	8	4	1	5	**40**	**Mod**						
Mining activities, stockpiling and continued disturbance to soils and surrounding environment.	**Operation**	**Visual**	Visual exposure and Visibility Impacts due to: alteration of topography, erosion, AIPs, continued earthworks and vehicular activity leading to site in contrast to the landscape.	Neg	**Pre-mitigation**	4	4	4	3	15	5	1	6	**90**	**High**	AVOID: Fires must be prevented. MINIMIZE/ CONTROL: Vehicles must not be allowed to drive outside of designated areas and must stick to speed limit. Stockpiles must not exceed 3m in height and must be shaped to match undulating landscape. Good housekeeping must be in place for all areas, keeping the project site neat and orderly at all times. Alien Invasive Plant management plan must be implemented. Waste storage areas must be screened if needed. Dust management plan must be implemented. REMEDY: Ensure all spills (hydrocarbon, gypsum, sediment or other) and litter incidents are cleaned and the area rehabilitated immediately. Erosion must be rehabilitated as soon as it is observed. Trench mining area must be rehabilitated as the mining progresses according to the rehabilitation plan and recommendations of the floral specialist.	Continuous or as needed through Operational phase of mine.	Visual Monitoring Plan must be implemented as per specialist recommendations. Visual impact must be included as part of annual external environmental audit.	Monthly monitoring. Annual external audit.	ECO for monthly (ongoing) monitoring. External EAP for annual audit of EMP.	NEMA ; 2014 NEMA EIA regulations as amended NEM:PAA NHRA Advertising on Roads and Ribbons Act (Act 21 of 1940) Municipal Systems Act (Act 32 of 2000)
				Neg	**Post-mitigation**	3	3	2	3	11	4	1	5	**55**	**Mod**						
Decommissioning, Rehabilitation and	**Decommissioning**	**Visual**	Visual exposure and Visibility Impacts due to: rehabilitated landscape	Neg	**Pre-mitigation**	3	3	3	3	12	3	1	4	**48**	**Mod**	AVOID: Sensitive areas must continue to be avoided. MINIMIZE/ CONTROL: Rehabilitation footprint must not exceed that of the designated footprint of the mining areas. REMEDY: Ensure all spills	Decommissioning and rehabilitation phase.	Visual impact monitoring can continue with assessment of rehabilitation	Biannually for three years post-closure. Thereafter	Rehabilitation specialist.	NEMA ; 2014 NEMA EIA regulations as amended NEM:PAA NHRA Advertising on Roads and

Activity	Project Phase	Aspect	Impact Description	Status	Mitigation status	Duration	Scale/Extent	Magnitude	Sensitivity	Consequence	Probability	Frequency	Likelihood	SIGNIFICANCE RATINGS (score of 200)		Mitigation measures	Time period of implementation	Monitoring Method (Implementation & Compliance)	Monitoring Frequency	Person(s) Responsible for Monitoring	Compliance with Standards
Closure of mine areas.			resulting in erosion, AIPs and bare ground scarring the landscape.	Neg	**Post-mitigation**	2	2	2	3	9	3	1	4	**36**	**Low**	(hydrocarbon, gypsum, sediment or other) are cleaned and the area rehabilitated immediately. Final rehabilitation of mining areas as well as infrastructure areas must be done according to the rehabilitation plan and recommendations of the floral specialist with visual appeal in mind.		success as per rehabilitation plan.	annually or as required for closure.		Ribbons Act (Act 21 of 1940) Municipal Systems Act (Act 32 of 2000)
Site clearing (remove soils and vegetation) and construction of infrastructure, roads and stockpiles.	**Construction**	**Visual**	Impacts due to Night time lighting resulting in light pollution.	Neg	**Pre-mitigation**	1	1	1	3	6	4	1	5	**30**	**Low**	AVOID: Uplighting and unshielded lighting must be avoided. MINIMIZE/ CONTROL: Activities must be restricted to daylight hours. Lighting must be: low-level, of limited height and lumen/wattage and designed as per specialist recommendations.	Design and Construction phase. However, measures are continued throughout LOM.	Visual Monitoring Plan must be designed and implemented as per specialist recommendations.	Weekly	ECO	NEMA ; 2014 NEMA EIA regulations as amended NEM:PAA NHRA Advertising on Roads and Ribbons Act (Act 21 of 1940) Municipal Systems Act (Act 32 of 2000)
				Neg	**Post-mitigation**	1	1	1	3	6	4	1	5	**30**	**Low**						
Mining activities, stockpiling and continued disturbance to soils and surrounding environment.	**Operation**	**Visual**	Impacts due to Night time lighting resulting in light pollution.	Neg	**Pre-mitigation**	4	4	4	3	15	5	1	6	**90**	**High**	AVOID: Uplighting and unshielded lighting must be avoided. MINIMIZE/ CONTROL: Activities must be restricted to daylight hours. Lighting must be: low-level, of limited height and lumen/wattage and designed as per specialist recommendations.	Continuous or as needed through Operational phase of mine.	Visual Monitoring Plan must be implemented as per specialist recommendations. Visual impact must be included as part of annual external environmental audit.	Monthly monitoring. Annual external audit.	ECO for monthly (ongoing) monitoring. External EAP for annual audit of EMP.	NEMA ; 2014 NEMA EIA regulations as amended NEM:PAA NHRA Advertising on Roads and Ribbons Act (Act 21 of 1940) Municipal Systems Act (Act 32 of 2000)
				Neg	**Post-mitigation**	4	3	3	3	13	2	1	3	**39**	**Low**						
Decommissioning, Rehabilitation and Closure of mine areas.	**Decommissioning**	**Visual**	Impacts due to Night time lighting resulting in light pollution.	Neg	**Pre-mitigation**	3	4	3	3	13	4	1	5	**65**	**Mod**	AVOID: Uplighting and unshielded lighting must be avoided. MINIMIZE/ CONTROL: Activities must be restricted to daylight hours. Lighting must be: low-level, of limited height and lumen/wattage and designed as per specialist recommendations.	Decommissioning and rehabilitation phase.	Visual impact monitoring can continue with assessment of rehabilitation success as per rehabilitation plan.	Biannually for three years post-closure. Thereafter annually or as required for closure.	Rehabilitation specialist.	NEMA ; 2014 NEMA EIA regulations as amended NEM:PAA NHRA Advertising on Roads and Ribbons Act (Act 21 of 1940) Municipal Systems Act (Act 32 of 2000)
				Neg	**Post-mitigation**	1	3	2	3	9	2	1	3	**27**	**Low**						
Site clearing (remove soils and vegetation) and construction of infrastructure, roads and stockpiles.	**Construction**	**Soil and land capability**	Soil erosion	Neg	**Pre-mitigation**	2	3	4	3	12	4	1	5	**60**	**Mod**	AVOID: None. MINIMIZE/ CONTROL: The footprint of the proposed mining area and associated infrastructure area should be clearly demarcated to restrict vegetation clearing activities within the infrastructure footprint. - Infrastructure sites should be accessed through existing road network, if feasible. REMEDY: The Overburden must be stockpiled according to the required process and adequate measures will be in place to protect the surrounding environmental receptors. Stockpiled material should not stand for too long to avoid erosion to the	Construction Demarcation of site should occur prior to construction commencing	Once off assessment undertaken during EIA phase Demarcation to be visually inspected weekly	n/a	Soil Specialist	Conservation of Agricultural Resources Act (CARA), 1983 (Act No. 43 of 1983).
				Neg	**Post-mitigation**	2	1	4	3	10	2	1	3	**30**	**Low**				Weekly	ECO	

Activity	Project Phase	Aspect	Impact Description	Status	Mitigation status	Duration	Scale/Extent	Magnitude	Sensitivity	Consequence	Probability	Frequency	Likelihood	SIGNIFICANCE RATINGS (score of 200)		Mitigation measures	Time period of implementation	Monitoring Method (Implementation & Compliance)	Monitoring Frequency	Person(s) Responsible for Monitoring	Compliance with Standards
																downgradient receiving environment Recovered soils should be re-used to rehabilitate the mine footprint concurrently as rollover mining progresses; Cleared vegetation should be protected at a nursery for use during rehabilitation phase; All disturbed areas must be re-vegetated with indigenous vegetation to re-establish a protective cover and to minimize the risk of soil erosion. All disturbed areas can be re-vegetated with indigenous vegetation to re-establish a protective cover, to minimize soil erosion.					
Site clearing (remove soils and vegetation) and construction of infrastructure, roads and stockpiles.	**Construction**	**Soil and land capability**	Soil compaction	Neg	**Pre-mitigation**	4	2	5	2	13	3	1	4	**52**	**Mod**	AVOID: Unnecessary surface disturbance of the identified Kimberly/Plooysburg soil forms must be avoided where possible to minimise the intensity of compaction due to their loamy sand texture. MINIMIZE/CONTROL: None. REMEDY: All vehicular traffic should be restricted to the existing service roads as far as practically possible; Vegetation clearance and commencement of construction activities can be scheduled to coincide with low rainfall conditions when soil moisture is anticipated to be relatively low, such that the soils are less prone to compaction; Soil that have been compacted must be ripped up to 25 cm upon rehabilitation of each section.	Construction	Once off assessment undertaken during EIA phase	n/a		Conservation of Agricultural Resources Act (CARA), 1983 (Act No. 43 of 1983).
				Neg	**Post-mitigation**	3	1	5	1	10	2	1	3	**30**	**Low**						
Site clearing (remove soils and vegetation) and construction of infrastructure, roads and stockpiles.	**Construction**	**Soil and land capability**	Soil contamination	Neg	**Pre-mitigation**	2	2	4	4	12	3	2	5	**60**	**Mod**	AVOID: Burying of any waste including rubble, domestic waste, empty containers etc. on the site is strictly prohibited, all construction rubble waste must be removed to an approved disposal site. - Unauthorized discharge of potentially contaminated water should be strictly prohibited on site. MINIMIZE/ CONTROL: None. REMEDY: Clean and dirty water area separation must take place in compliance with Regulation GN704 of the NWA; The potentially contaminated surface runoff must be captured in the vicinity of the mining activities and infrastructure areas in compliance with Regulation GN704, to minimise runoff and/or leaching on to the surrounding soils, and to prevent ingress of potentially contaminated water into the drainage lines within the proposed focus area. this EMP should be implemented and made available and accessible at all	Construction	Once off assessment undertaken during EIA phase	n/a		Conservation of Agricultural Resources Act (CARA), 1983 (Act No. 43 of 1983).
				Neg	**Post-mitigation**	3	1	4	3	11	2	1	3	**33**	**Low**						

Activity	Project Phase	Aspect	Impact Description	Status	Mitigation status	Duration	Scale/Extent	Magnitude	Sensitivity	Consequence	Probability	Frequency	Likelihood	SIGNIFICANCE RATINGS (score of 200)		Mitigation measures	Time period of implementation	Monitoring Method (Implementation & Compliance)	Monitoring Frequency	Person(s) Responsible for Monitoring	Compliance with Standards
																times to the contractors and construction crew conducting the works on site for reference; A spill prevention and emergency spill response plan, as well as dust suppression, and fire prevention plans should also be compiled to guide the construction works; An emergency response contingency plan should be put in place to address clean-up measures should a spill and/or a leak occur, as well as preventative measures to prevent ingress; and Contaminated soils can be ameliorated onsite using suitable soil ameliorants determined by a qualified soil scientist after a soil contamination assessment has been conducted. This will potentially reinstate the natural soil chemistry post mine closure, which will therefore allow for current land use to commence post closure. For small spills the contaminated soils are to be removed off site and disposed of as hazardous waste, and replaced with healthy soils at the contractor's cost Small spills- contaminated soils be removed off site and disposed of as hazardous waste, and replaced with healthy soils at the contractor's cost.					
Site clearing (remove soils and vegetation) and construction of infrastructure, roads and stockpiles.	**Construction**	**Soil and land capability**	Loss of agricultural land capability	Neg	**Pre-mitigation**	2	2	4	4	12	3	2	5	**60**	**Mod**	AVOID: Construction during wet season should be avoided where possible. MINIMIZE/ CONTROL: Project footprint should be minimised/ restricted to the approved areas, to ensure that there are sufficient soil resources for the duration of mining activities to support potential grazing REMEDY: Disturbed soils can be lightly ripped to at least 25 cm, where feasible to alleviate soil compaction and subsequently re-vegetated with indigenous grass to alleviate soil compaction and minimize erosion. The recommended ripping and re-vegetation must be implemented concurrently on the subsections where construction works are complete;	Construction	Once off assessment undertaken during EIA phase	n/a		Conservation of Agricultural Resources Act (CARA), 1983 (Act No. 43 of 1983).
				Neg	**Post-mitigation**	2	1	4	2	9	3	1	4	**36**	**Low**						
Mining activities, stockpiling and continued	**Operational**	**Soil and land capability**	Soil erosion	Neg	**Pre-mitigation**	2	3	4	3	12	4	1	5	**60**	**Mod**	AVOID: None. MINIMIZE/ CONTROL: The footprint of the proposed mining area and associated infrastructure area should be clearly demarcated to restrict vegetation clearing activities to within the approved	Continuous or as needed through Operational phase of mine.	Once off assessment undertaken during EIA phase	n/a		Conservation of Agricultural Resources Act (CARA), 1983 (Act No. 43 of 1983).

Activity	Project Phase	Aspect	Impact Description	Status	Mitigation status	Duration	Scale/Extent	Magnitude	Sensitivity	Consequence	Probability	Frequency	Likelihood	SIGNIFICANCE RATINGS (score of 200)		Mitigation measures	Time period of implementation	Monitoring Method (Implementation & Compliance)	Monitoring Frequency	Person(s) Responsible for Monitoring	Compliance with Standards
disturbance to soils and surrounding environment.				Neg	**Post-mitigation**	3	1	4	3	11	2	1	3	**33**	**Low**	infrastructure footprint. - Infrastructure sites should be accessed through existing road network, if feasible. REMEDY: The materials should be stockpiled as needed according to the required process and adequate measures will be in place to protect the surrounding environmental receptors. Stockpiled material should not stand for too long to minimise the potential for erosion to the downgradient receiving environment Recovered soils should be re-used to rehabilitate the mine footprint following mine closure; Cleared vegetation (SCC/indigenous) should be preserved at a nursery for use during rehabilitation phase; All disturbed areas must be re-vegetated with indigenous vegetation to re-establish a protective cover, to minimize soil erosion.					
Mining activities, stockpiling and continued disturbance to soils and surrounding environment.	**Operational**	**Soil and land capability**	Soil compaction	Neg	**Pre-mitigation**	4	2	5	2	13	3	1	4	**52**	**Mod**	AVOID: Unnecessary surface disturbance of the identified Kimberly/Plooysburg soil forms must be avoided where possible to minimise the intensity of compaction due to their loamy sand texture. MINIMIZE/CONTROL: None. REMEDY: All vehicular traffic should be restricted to the existing service roads as far as practically possible; Disturbed soils should be lightly ripped to at least 25 cm, where feasible to alleviate soil compaction and subsequently re-vegetated with indigenous grass to alleviate soil compaction and minimize erosion	Continuous or as needed through Operational phase of mine.	Once off assessment undertaken during EIA phase	n/a		Conservation of Agricultural Resources Act (CARA), 1983 (Act No. 43 of 1983).
				Neg	**Post-mitigation**	3	1	5	1	10	2	1	3	**30**	**Low**						
Mining activities, stockpiling and continued disturbance to soils and surrounding environment.	**Operational**	**Soil and land capability**	Soil contamination	Neg	**Pre-mitigation**	4	2	4	4	14	3	2	5	**70**	**Mod**	AVOID: Burying of any waste including rubble, domestic waste, empty containers etc. on the site will be strictly prohibited, all operational waste must be removed to an approved disposal site. - Unauthorized discharge of potentially contaminated stormwater should be strictly prohibited on site. MINIMIZE/ CONTROL: None. REMEDY: Clean and dirty water area separation must take place in compliance with Regulation GN704 as it pertains to the NWA; The potentially contaminated surface runoff must be captured in the vicinity of the mining activities and infrastructure areas in compliance with Regulation GN704 as it pertains to the NWA, to minimise runoff and/or leaching on to the surrounding soils, and to prevent ingress of potentially contaminated water into the	Continuous or as needed through Operational phase of mine.	Once off assessment undertaken during EIA phase	n/a		Conservation of Agricultural Resources Act (CARA), 1983 (Act No. 43 of 1983).
				Neg	**Post-mitigation**	4	1	4	3	12	2	1	3	**36**	**Low**						

Activity	Project Phase	Aspect	Impact Description	Status	Mitigation status	Duration	Scale/Extent	Magnitude	Sensitivity	Consequence	Probability	Frequency	Likelihood	SIGNIFICANCE RATINGS (score of 200)		Mitigation measures	Time period of implementation	Monitoring Method (Implementation & Compliance)	Monitoring Frequency	Person(s) Responsible for Monitoring	Compliance with Standards
																drainage lines within the proposed focus area. Contamination prevention measures contained in this Environmental Management Programme (EMP) for the proposed development should be implemented and made available and accessible at all times to the contractors and construction crew conducting the works on site for reference; A spill prevention and emergency spill response plan, as well as dust suppression, and fire prevention plans should also be compiled to guide the operations; An emergency response contingency plan should be put in place to address clean-up measures should a spill and/or a leak occur, as well as preventative measures to prevent ingress; and Contaminated soils must be ameliorated onsite using suitable soil ameliorants determined by a qualified soil scientist after a soil contamination assessment has been conducted. This will potentially reinstate the natural soil chemistry post mine closure, which will allow for current landuse to commence post closure					
Mining activities, stockpiling and continued disturbance to soils and surrounding environment.	**Operational**	**Soil and land capability**	Loss of agricultural land capability	Neg	**Pre-mitigation**	4	2	4	4	14	3	2	5	**70**	**Mod**	AVOID: none MINIMIZE/ CONTROL: Project footprint should be minimised, where feasible, to ensure that there are sufficient soil resources for the duration of mining activities to support potential grazing REMEDY: Disturbed soils should be lightly ripped to at least 25 cm, to alleviate soil compaction and subsequently re-vegetated with indigenous grass to alleviate soil compaction and minimize erosion. The recommended ripping and re-vegetation will be implemented concurrently on the subsections where construction works are complete;	Continuous or as needed through Operational phase of mine.	Once off assessment undertaken during EIA phase	n/a		Conservation of Agricultural Resources Act (CARA), 1983 (Act No. 43 of 1983).
				Neg	**Post-mitigation**	2	1	3	2	8	2	1	3	**24**	**Low**						
Decommissioning, Rehabilitation and Closure of mine areas	**Decommissioning and rehabilitation**	**Soil and land capability**	Soil erosion	Neg	**Pre-mitigation**	2	3	4	3	12	4	1	5	**60**	**Mod**	AVOID: None. MINIMIZE/ CONTROL: - The footprint of the proposed mining area and associated infrastructure area should be clearly demarcated to restrict vegetation clearing activities within the infrastructure footprint. - Infrastructure sites should be accessed through existing road network, if feasible. REMEDY: Recovered soils should be re-used to rehabilitate the mine footprint following mine closure; Vegetation from the nursery should be used during the rehabilitation phase; All disturbed areas must be re-vegetated	Decommissioning and rehabilitation phase.	Once off assessment undertaken during EIA phase	n/a		Conservation of Agricultural Resources Act (CARA), 1983 (Act No. 43 of 1983).
				Neg	**Post-mitigation**	2	1	4	3	10	2	1	3	**30**	**Low**						

Activity	Project Phase	Aspect	Impact Description	Status	Mitigation status	Duration	Scale/Extent	Magnitude	Sensitivity	Consequence	Probability	Frequency	Likelihood	SIGNIFICANCE RATINGS (score of 200)		Mitigation measures	Time period of implementation	Monitoring Method (Implementation & Compliance)	Monitoring Frequency	Person(s) Responsible for Monitoring	Compliance with Standards
																with indigenous vegetation to re-establish a protective cover, to minimize soil erosion.					
Decommissioning, Rehabilitation and Closure of mine areas	**Decommissioning and rehabilitation**	**Soil and land capability**	Soil compaction	Neg	**Pre-mitigation**	3	1	5	2	11	2	1	3	**33**	**Low**	AVOID: Unnecessary surface disturbance of the identified Kimberly/Plooysburg soil forms will be avoided where possible to minimise the intensity of compaction due to their loamy sand texture. MINIMIZE/CONTROL: None. REMEDY: All vehicular traffic should be restricted to the existing service roads and disturbed areas; Disturbed soils will be lightly ripped to at least 25 cm to alleviate soil compaction and subsequently re-vegetated with indigenous grass to alleviate soil compaction and minimize erosion	Decommissioning and rehabilitation phase.	Once off assessment undertaken during EIA phase	n/a		Conservation of Agricultural Resources Act (CARA), 1983 (Act No. 43 of 1983).
				Neg	**Post-mitigation**	3	1	5	1	10	1	1	2	**20**	**Low**						
Decommissioning, Rehabilitation and Closure of mine areas	**Decommissioning and rehabilitation**	**Soil and land capability**	Soil contamination	Neg	**Pre-mitigation**	2	2	4	4	12	3	1	4	**48**	**Mod**	AVOID: Burying of any waste including rubble, domestic waste, empty containers etc. on the site will be strictly prohibited, all construction / demolition rubble waste must be removed to an approved disposal site. Contractors during the decommissioning phase must keep records of waste disposal and make these available to the authorities and Environmental Officer.- Unauthorized discharge of potentially contaminated stormwater should be strictly prohibited on site. MINIMIZE/ CONTROL: None. REMEDY: Contamination prevention measures addressed in this EMP should be implemented and made available and accessible at all times to the contractors and construction crew conducting the works on site for reference; A spill prevention and emergency spill response plan, as well as dust suppression, and fire prevention plans should also be compiled to guide the construction works; An emergency response contingency plan should be put in place to address clean-up measures should a spill and/or a leak occur, as well as preventative measures to prevent ingress; and Contaminated soils can be ameliorated onsite using suitable soil ameliorants determined by a qualified soil scientist after a soil contamination assessment has been conducted. This will potentially reinstate the natural soil chemistry post mine closure, which will therefore allow for current landuse to commence post closure	Decommissioning and rehabilitation phase.	Once off assessment undertaken during EIA phase	n/a		Conservation of Agricultural Resources Act (CARA), 1983 (Act No. 43 of 1983).
				Neg	**Post-mitigation**	3	1	4	3	11	2	1	3	**33**	**Low**						

Activity	Project Phase	Aspect	Impact Description	Status	Mitigation status	Duration	Scale/Extent	Magnitude	Sensitivity	Consequence	Probability	Frequency	Likelihood	SIGNIFICANCE RATINGS (score of 200)		Mitigation measures	Time period of implementation	Monitoring Method (Implementation & Compliance)	Monitoring Frequency	Person(s) Responsible for Monitoring	Compliance with Standards
Decommissioning, Rehabilitation and Closure of mine areas	**Decommissioning and rehabilitation**	**Soil and land capability**	Loss of agricultural land capability	Neg	**Pre-mitigation**	4	2	3	4	13	3	1	4	**52**	**Mod**	AVOID: None MINIMIZE/ CONTROL: Project footprint should be minimised – vehicles / machinery associated with the decommissioning activities will not be allowed to access surrounding areas but will be restricted to approved areas. REMEDY: Disturbed soils will be lightly ripped to at least 25 cm, to alleviate soil compaction and subsequently re-vegetated with indigenous grass to alleviate soil compaction and minimize erosion. The recommended ripping and re-vegetation must be implemented concurrently on the subsections where construction works are complete;	Decommissioning and rehabilitation phase.	Once off assessment undertaken during EIA phase	n/a		Conservation of Agricultural Resources Act (CARA), 1983 (Act No. 43 of 1983).
				Neg	**Post-mitigation**	3	1	3	2	9	2	1	3	**27**	**Low**						
Site clearing (remove soils and vegetation) and construction of infrastructure, roads and stockpiles.	**Construction**	**Soil and land capability**	Soil erosion	Neg	**Pre-mitigation**	2	3	4	3	12	4	1	5	**60**	**Mod**	AVOID: None. MINIMIZE/ CONTROL: The footprint of the proposed mining area and associated infrastructure area should be clearly demarcated to restrict vegetation clearing activities within the infrastructure footprint. - Infrastructure sites should be accessed through existing road network, if feasible. REMEDY: The Overburden must be stockpiled according to the required process and adequate measures will be in place to protect the surrounding environmental receptors. Stockpiled material should not stand for too long to avoid erosion to the downgradient receiving environment Recovered soils should be re-used to rehabilitate the mine footprint concurrently as rollover mining progresses; Cleared vegetation should be protected at a nursery for use during rehabilitation phase; All disturbed areas must be re-vegetated with indigenous vegetation to re-establish a protective cover and to minimize the risk of soil erosion. All disturbed areas can be re-vegetated with indigenous vegetation to re-establish a protective cover, to minimize soil erosion.	Construction Demarcation of site should occur prior to construction commencing	Once off assessment undertaken during EIA phase Demarcation to be visually inspected weekly	n/a Weekly	Soil Specialist ECO	Conservation of Agricultural Resources Act (CARA), 1983 (Act No. 43 of 1983).
				Neg		2	1	4	3	10	2	1	3	**30**	**Low**						
				Neg	**Post-mitigation**	4	2	5	2	13	3	1	4	**52**	**Mod**						
Site clearing (remove soils and vegetation) and	**Construction**	**Soil and land capability**	Soil compaction	Neg	**Pre-mitigation**	4	2	5	2	13	3	1	4	**52**	**Mod**	AVOID: Unnecessary surface disturbance of the identified Kimberly/Plooysburg soil forms must be avoided where possible to minimise the intensity of compaction due to their loamy sand texture.	Construction	Once off assessment undertaken during EIA phase	n/a		Conservation of Agricultural Resources Act (CARA), 1983 (Act No. 43 of 1983).

Activity	Project Phase	Aspect	Impact Description	Status	Mitigation status	Duration	Scale/Extent	Magnitude	Sensitivity	Consequence	Probability	Frequency	Likelihood	SIGNIFICANCE RATINGS (score of 200)		Mitigation measures	Time period of implementation	Monitoring Method (Implementation & Compliance)	Monitoring Frequency	Person(s) Responsible for Monitoring	Compliance with Standards
construction of infrastructure, roads and stockpiles.				Neg	**Post-mitigation**	3	1	5	1	10	2	1	3	**30**	**Low**	MINIMIZE/CONTROL: None. REMEDY: All vehicular traffic should be restricted to the existing service roads as far as practically possible; Vegetation clearance and commencement of construction activities can be scheduled to coincide with low rainfall conditions when soil moisture is anticipated to be relatively low, such that the soils are less prone to compaction; Soil that have been compacted must be ripped up to 25 cm upon rehabilitation of each section.					
Site clearing (remove soils and vegetation) and construction of infrastructure, roads and stockpiles.	**Construction**	**Soil and land capability**	Soil contamination	Neg	**Pre-mitigation**	2	2	4	4	12	3	2	5	**60**	**Mod**	AVOID: Burying of any waste including rubble, domestic waste, empty containers etc. on the site is strictly prohibited, all construction rubble waste must be removed to an approved disposal site. - Unauthorized discharge of potentially contaminated water should be strictly prohibited on site. MINIMIZE/ CONTROL: None. REMEDY: Clean and dirty water area separation must take place in compliance with Regulation GN704 of the NWA; The potentially contaminated surface runoff must be captured in the vicinity of the mining activities and infrastructure areas in compliance with Regulation GN704, to minimise runoff and/or leaching on to the surrounding soils, and to prevent ingress of potentially contaminated water into the drainage lines within the proposed focus area. this EMP should be implemented and made available and accessible at all times to the contractors and construction crew conducting the works on site for reference; A spill prevention and emergency spill response plan, as well as dust suppression, and fire prevention plans should also be compiled to guide the construction works; An emergency response contingency plan should be put in place to address clean-up measures should a spill and/or a leak occur, as well as preventative measures to prevent ingress; and Contaminated soils can be ameliorated onsite using suitable soil ameliorants determined by a qualified soil scientist after a soil contamination assessment has been conducted. This will potentially reinstate the natural soil chemistry post mine closure, which will therefore allow for current land use to commence post	Construction	Once off assessment undertaken during EIA phase	n/a		Conservation of Agricultural Resources Act (CARA), 1983 (Act No. 43 of 1983).
				Neg	**Post-mitigation**	3	1	4	3	11	2	1	3	**33**	**Low**						

Activity	Project Phase	Aspect	Impact Description	Status	Mitigation status	Duration	Scale/Extent	Magnitude	Sensitivity	Consequence	Probability	Frequency	Likelihood	SIGNIFICANCE RATINGS (score of 200)		Mitigation measures	Time period of implementation	Monitoring Method (Implementation & Compliance)	Monitoring Frequency	Person(s) Responsible for Monitoring	Compliance with Standards
																closure. For small spills the contaminated soils are to be removed off site and disposed of as hazardous waste, and replaced with healthy soils at the contractor's cost Small spills- contaminated soils be removed off site and disposed of as hazardous waste, and replaced with healthy soils at the contractor's cost.					
Site clearing (remove soils and vegetation) and construction of infrastructure, roads and stockpiles.	**Construction**	**Soil and land capability**	Loss of agricultural land capability	Neg	**Pre-mitigation**	2	2	4	4	12	3	2	5	**60**	**Mod**	AVOID: Construction during wet season should be avoided where possible. MINIMIZE/ CONTROL: Project footprint should be minimised/ restricted to the approved areas, to ensure that there are sufficient soil resources for the duration of mining activities to support potential grazing REMEDY: Disturbed soils can be lightly ripped to at least 25 cm, where feasible to alleviate soil compaction and subsequently re-vegetated with indigenous grass to alleviate soil compaction and minimize erosion. The recommended ripping and re-vegetation must be implemented concurrently on the subsections where construction works are complete;	Construction	Once off assessment undertaken during EIA phase	n/a		Conservation of Agricultural Resources Act (CARA), 1983 (Act No. 43 of 1983).
				Neg	**Post-mitigation**	2	1	4	2	9	3	1	4	**36**	**Low**						
Mining activities, stockpiling and continued disturbance to soils and surrounding environment.	**Operational**	**Soil and land capability**	Soil erosion	Neg	**Pre-mitigation**	2	3	4	3	12	4	1	5	**60**	**Mod**	AVOID: None. MINIMIZE/ CONTROL: The footprint of the proposed mining area and associated infrastructure area should be clearly demarcated to restrict vegetation clearing activities to within the approved infrastructure footprint. - Infrastructure sites should be accessed through existing road network, if feasible. REMEDY: The materials should be stockpiled as needed according to the required process and adequate measures will be in place to protect the surrounding environmental receptors. Stockpiled material should not stand for too long to minimise the potential for erosion to the downgradient receiving environment Recovered soils should be re-used to rehabilitate the mine footprint following mine closure; Cleared vegetation (SCC/indigenous) should be preserved at a nursery for use during rehabilitation phase; All disturbed areas must be re-vegetated with indigenous vegetation to re-establish a protective cover, to minimize soil erosion.	Continuous or as needed through Operational phase of mine.	Once off assessment undertaken during EIA phase	n/a		Conservation of Agricultural Resources Act (CARA), 1983 (Act No. 43 of 1983).
				Neg	**Post-mitigation**	3	1	4	3	11	2	1	3	**33**	**Low**						

Activity	Project Phase	Aspect	Impact Description	Status	Mitigation status	Duration	Scale/Extent	Magnitude	Sensitivity	Consequence	Probability	Frequency	Likelihood	SIGNIFICANCE RATINGS (score of 200)		Mitigation measures	Time period of implementation	Monitoring Method (Implementation & Compliance)	Monitoring Frequency	Person(s) Responsible for Monitoring	Compliance with Standards
Mining activities, stockpiling and continued disturbance to soils and surrounding environment.	**Operational**	**Soil and land capability**	Soil compaction	Neg	**Pre-mitigation**	4	2	5	2	13	3	1	4	**52**	**Mod**	AVOID: Unnecessary surface disturbance of the identified Kimberly/Plooysburg soil forms must be avoided where possible to minimise the intensity of compaction due to their loamy sand texture. MINIMIZE/CONTROL: None. REMEDY: All vehicular traffic should be restricted to the existing service roads as far as practically possible; Disturbed soils should be lightly ripped to at least 25 cm, where feasible to alleviate soil compaction and subsequently re-vegetated with indigenous grass to alleviate soil compaction and minimize erosion	Continuous or as needed through Operational phase of mine.	Once off assessment undertaken during EIA phase	n/a		Conservation of Agricultural Resources Act (CARA), 1983 (Act No. 43 of 1983).
				Neg	**Post-mitigation**	3	1	5	1	10	2	1	3	**30**	**Low**						
Mining activities, stockpiling and continued disturbance to soils and surrounding environment.	**Operational**	**Soil and land capability**	Soil contamination	Neg	**Pre-mitigation**	4	2	4	4	14	3	2	5	**70**	**Mod**	AVOID: Burying of any waste including rubble, domestic waste, empty containers etc. on the site will be strictly prohibited, all operational waste must be removed to an approved disposal site. - Unauthorized discharge of potentially contaminated stormwater should be strictly prohibited on site. MINIMIZE/ CONTROL: None. REMEDY: Clean and dirty water area separation must take place in compliance with Regulation GN704 as it pertains to the NWA; The potentially contaminated surface runoff must be captured in the vicinity of the mining activities and infrastructure areas in compliance with Regulation GN704 as it pertains to the NWA, to minimise runoff and/or leaching on to the surrounding soils, and to prevent ingress of potentially contaminated water into the drainage lines within the proposed focus area. Contamination prevention measures contained in this Environmental Management Programme (EMP) for the proposed development should be implemented and made available and accessible at all times to the contractors and construction crew conducting the works on site for reference; A spill prevention and emergency spill response plan, as well as dust suppression, and fire prevention plans should also be compiled to guide the operations; An emergency response contingency plan should be put in place to address clean-up measures should a spill and/or a leak occur, as well as preventative measures to prevent ingress; and Contaminated soils must be ameliorated onsite using suitable soil ameliorants	Continuous or as needed through Operational phase of mine.	Once off assessment undertaken during EIA phase	n/a		Conservation of Agricultural Resources Act (CARA), 1983 (Act No. 43 of 1983).
				Neg		4	1	4	3	12	2	1	3	**36**	**Low**						
					Post-mitigation																

Activity	Project Phase	Aspect	Impact Description	Status	Mitigation status	Duration	Scale/Extent	Magnitude	Sensitivity	Consequence	Probability	Frequency	Likelihood	SIGNIFICANCE RATINGS (score of 200)		Mitigation measures	Time period of implementation	Monitoring Method (Implementation & Compliance)	Monitoring Frequency	Person(s) Responsible for Monitoring	Compliance with Standards
																determined by a qualified soil scientist after a soil contamination assessment has been conducted. This will potentially reinstate the natural soil chemistry post mine closure, which will allow for current landuse to commence post closure					
Mining activities, stockpiling and continued disturbance to soils and surrounding environment.	**Operational**	**Soil and land capability**	Loss of agricultural land capability	Neg	**Pre-mitigation**	4	2	4	4	14	3	2	5	**70**	**Mod**	AVOID: none MINIMIZE/ CONTROL: Project footprint should be minimised, where feasible, to ensure that there are sufficient soil resources for the duration of mining activities to support potential grazing REMEDY: Disturbed soils should be lightly ripped to at least 25 cm, to alleviate soil compaction and subsequently re-vegetated with indigenous grass to alleviate soil compaction and minimize erosion. The recommended ripping and re-vegetation will be implemented concurrently on the subsections where construction works are complete;	Continuous or as needed through Operational phase of mine.	Once off assessment undertaken during EIA phase	n/a		Conservation of Agricultural Resources Act (CARA), 1983 (Act No. 43 of 1983).
				Neg	**Post-mitigation**	2	1	3	2	8	2	1	3	**24**	**Low**						
Decommissioning, Rehabilitation and Closure of mine areas	**Decommissioning and rehabilitation**	**Soil and land capability**	Soil erosion	Neg	**Pre-mitigation**	2	3	4	3	12	4	1	5	**60**	**Mod**	AVOID: None. MINIMIZE/ CONTROL: - The footprint of the proposed mining area and associated infrastructure area should be clearly demarcated to restrict vegetation clearing activities within the infrastructure footprint. - Infrastructure sites should be accessed through existing road network, if feasible. REMEDY: Recovered soils should be re-used to rehabilitate the mine footprint following mine closure; Vegetation from the nursery should be used during the rehabilitation phase; All disturbed areas must be re-vegetated with indigenous vegetation to re-establish a protective cover, to minimize soil erosion.	Decommissioning and rehabilitation phase.	Once off assessment undertaken during EIA phase	n/a		Conservation of Agricultural Resources Act (CARA), 1983 (Act No. 43 of 1983).
				Neg	**Post-mitigation**	2	1	4	3	10	2	1	3	**30**	**Low**						
Decommissioning, Rehabilitation and Closure of mine areas	**Decommissioning and rehabilitation**	**Soil and land capability**	Soil compaction	Neg	**Pre-mitigation**	3	1	5	2	11	2	1	3	**33**	**Low**	AVOID: Unnecessary surface disturbance of the identified Kimberly/Plooysburg soil forms will be avoided where possible to minimise the intensity of compaction due to their loamy sand texture. MINIMIZE/CONTROL: None. REMEDY: All vehicular traffic should be restricted to the existing service roads and disturbed areas; Disturbed soils will be lightly ripped to at least 25 cm to alleviate soil compaction and subsequently re-vegetated with indigenous grass to alleviate soil compaction and minimize erosion	Decommissioning and rehabilitation phase.	Once off assessment undertaken during EIA phase	n/a		Conservation of Agricultural Resources Act (CARA), 1983 (Act No. 43 of 1983).
				Neg	**Post-mitigation**	3	1	5	1	10	1	1	2	**20**	**Low**						
Decommissioning, Rehabilitation and	**Decommissioning and rehabilitation**	**Soil and land capability**	Soil contamination	Neg	**Pre-mitigation**	2	2	4	4	12	3	1	4	**48**	**Mod**	AVOID: Burying of any waste including rubble, domestic waste, empty containers etc. on the site will be strictly prohibited, all construction / demolition rubble waste must be removed to an approved disposal	Decommissioning and rehabilitation phase.	Once off assessment undertaken during EIA phase	n/a		Conservation of Agricultural Resources Act (CARA), 1983 (Act No. 43 of 1983).

Activity	Project Phase	Aspect	Impact Description	Status	Mitigation status	Duration	Scale/Extent	Magnitude	Sensitivity	Consequence	Probability	Frequency	Likelihood	SIGNIFICANCE RATINGS (score of 200)		Mitigation measures	Time period of implementation	Monitoring Method (Implementation & Compliance)	Monitoring Frequency	Person(s) Responsible for Monitoring	Compliance with Standards
Closure of mine areas				Neg	**Post-mitigation**	3	1	4	3	11	2	1	3	**33**	**Low**	site. Contractors during the decommissioning phase must keep records of waste disposal and make these available to the authorities and Environmental Officer.- Unauthorized discharge of potentially contaminated stormwater should be strictly prohibited on site. MINIMIZE/ CONTROL: None. REMEDY: Contamination prevention measures addressed in this EMP should be implemented and made available and accessible at all times to the contractors and construction crew conducting the works on site for reference; A spill prevention and emergency spill response plan, as well as dust suppression, and fire prevention plans should also be compiled to guide the construction works; An emergency response contingency plan should be put in place to address clean-up measures should a spill and/or a leak occur, as well as preventative measures to prevent ingress; and Contaminated soils can be ameliorated onsite using suitable soil ameliorants determined by a qualified soil scientist after a soil contamination assessment has been conducted. This will potentially reinstate the natural soil chemistry post mine closure, which will therefore allow for current landuse to commence post closure					
Decommissioning, Rehabilitation and Closure of mine areas	**Decommissioning and rehabilitation**	**Soil and land capability**	Loss of agricultural land capability	Neg	**Pre-mitigation**	4	2	3	4	13	3	1	4	**52**	**Mod**	AVOID: None MINIMIZE/ CONTROL: Project footprint should be minimised – vehicles / machinery associated with the decommissioning activities will not be allowed to access surrounding areas but will be restricted to approved areas. REMEDY: Disturbed soils will be lightly ripped to at least 25 cm, to alleviate soil compaction and subsequently re-vegetated with indigenous grass to alleviate soil compaction and minimize erosion. The recommended ripping and re-vegetation must be implemented concurrently on the subsections where construction works are complete;	Decommissioning and rehabilitation phase.	Once off assessment undertaken during EIA phase	n/a		Conservation of Agricultural Resources Act (CARA), 1983 (Act No. 43 of 1983).
				Neg	**Post-mitigation**	3	1	3	2	9	2	1	3	**27**	**Low**						
Site clearing (remove soils and vegetation) and	**Construction**	**Flora**	Impact on floral SCC, floral habitat and species diversity in the Intact Vygieveld	Neg	**Pre-mitigation**	2	4	4	4	14	5	3	8	**112**	**High**	AVOID: Harming/destroying vegetation without reason MINIMIZE/ CONTROL: Footprint area must be kept to the smallest possible area. Floral SCC that will be affected by surface infrastructure must be	Design and Construction phase. However, measures are	Inspections of areas ear marked with SCC Inspections of SCC	Ongoing Monthly	EAP/ECO Botanist	Threatened or Protected Species (TOPS) Regulations (GN 255 of 2015) under Section 56 (1) of the National Environmental

Activity	Project Phase	Aspect	Impact Description	Status	Mitigation status	Duration	Scale/Extent	Magnitude	Sensitivity	Consequence	Probability	Frequency	Likelihood	SIGNIFICANCE RATINGS (score of 200)		Mitigation measures	Time period of implementation	Monitoring Method (Implementation & Compliance)	Monitoring Frequency	Person(s) Responsible for Monitoring	Compliance with Standards
construction of infrastructure, roads and stockpiles.				Neg	**Post-mitigation**	2	2	3	4	11	5	1	6	**66**	**Mod**	marked and avoided where possible, or relocated to suitable habitat under the required permits (or kept in a nursery) surrounding the disturbance footprint. REMEDY: SCC to be kept in a nursery (removal from natural habitat may only be done under the required permits) and used for rehabilitation as areas are closed and rehabilitated.	continued throughout LOM.	relocation/nursery			Management: Biodiversity Act, 2004 (Act 10 of 2004) and the Northern Cape Nature Conservation Act, 2009 (Act 9 of 2009).
Site clearing (remove soils and vegetation) and construction of infrastructure, roads and stockpiles.	**Construction**	**Flora**	Impact on floral SCC, floral habitat and species diversity in the Overgrazed Vygieveld	Neg	**Pre-mitigation**	2	4	4	3	13	5	3	8	**104**	**High**	AVOID: Harming/destroying vegetation without reason MINIMIZE/ CONTROL: Footprint area must be kept to the smallest possible area. Floral SCC that will be affected by surface infrastructure must be marked and avoided where possible, or relocated to suitable habitat under the required permits (or kept in a nursery) surrounding the disturbance footprint. REMEDY: SCC to be kept in a nursery (removal from natural habitat may only be done under the required permits) and used for rehabilitation as areas are closed and rehabilitated.	Design and Construction phase. However, measures are continued throughout LOM.	Inspections of areas ear marked with SCC Inspections of SCC relocation/nursery	Ongoing Monthly	EAP/ECO Botanist	TOPS GN 255, NEMA:BA & NCNC
				Neg	**Post-mitigation**	2	3	3	3	11	5	1	6	**66**	**Mod**						
Site clearing (remove soils and vegetation) and construction of infrastructure, roads and stockpiles.	**Construction**	**Flora**	Impact on floral SCC, floral habitat and species diversity in the Ephemeral Drainage Lines	Neg	**Pre-mitigation**	2	2	3	3	10	5	3	8	**80**	**Mod**	AVOID: Harming/destroying vegetation without reason MINIMIZE/ CONTROL: Footprint area must be kept to the smallest possible area. Floral SCC that will be affected by surface infrastructure must be marked and where possible, relocated to suitable habitat (or kept in a nursery) surrounding the disturbance footprint. Permits needed for relocation. REMEDY: SCC to be kept in a nursery	Design and Construction phase. However, measures are continued throughout LOM.	Inspections of areas ear marked with SCC Inspections of SCC relocation/nursery	Ongoing Monthly	EAP/ECO Botanist	TOPS GN 255, NEMA:BA & NCNC
				Neg	**Post-mitigation**	2	1	2	3	8	5	1	6	**48**	**Mod**						
Mining activities, stockpiling and continued disturbance to soils and surrounding environment.	**Operational**	**Flora**	Impact on floral SCC, floral habitat and species diversity in the Intact Vygieveld	Neg	**Pre-mitigation**	4	3	4	4	15	5	2	7	**105**	**High**	AVOID: Further degradation and potential loss of floral SCC outside of the proposed project footprint area. MINIMIZE/ CONTROL: Footprint area must be kept to the smallest possible area. Floral SCC that will be affected by surface infrastructure must be marked and relocated to suitable habitat (or kept in a nursery) surrounding the disturbance footprint (removal to be done under the required permits). REMEDY: SCC to be kept in a nursery and used in rehabilitation of mined areas as trenches are backfilled and rehabilitated with the rollover mining method.	Continuous or as needed through Operational phase of mine.	Inspection of SCC relocations/nursery	Quarterly	Botanist	TOPS GN 255, NEMA:BA & NCNC
				Neg	**Post-mitigation**	2	3	3	4	12	3	1	4	**48**	**Mod**						
Mining activities, stockpiling and continued	**Operational**	**Flora**	Impact on floral SCC, floral habitat and species diversity in the	Neg	**Pre-mitigation**	4	3	4	3	14	5	2	7	**98**	**High**	AVOID: Further degradation and potential loss of floral SCC outside of the proposed project footprint area. MINIMIZE/ CONTROL: Footprint area must be kept to the smallest possible area. Floral SCC that	Decommissioning and rehabilitation phase.	Inspection of SCC relocations/nursery	Quarterly	Botanist	TOPS GN 255, NEMA:BA & NCNC

Activity	Project Phase	Aspect	Impact Description	Status	Mitigation status	Duration	Scale/Extent	Magnitude	Sensitivity	Consequence	Probability	Frequency	Likelihood	SIGNIFICANCE RATINGS (score of 200)		Mitigation measures	Time period of implementation	Monitoring Method (Implementation & Compliance)	Monitoring Frequency	Person(s) Responsible for Monitoring	Compliance with Standards
disturbance to soils and surrounding environment.			Overgrazed Vygieveld	Neg	**Post-mitigation**	4	2	3	3	12	4	1	5	**60**	**Mod**	will be affected by surface infrastructure must be marked and where possible, relocated to suitable habitat (or kept in a nursery) surrounding the disturbance footprint. REMEDY: SCC to be kept in a nursery and used in concurrent rehabilitation activities.					
Mining activities, stockpiling and continued disturbance to soils and surrounding environment.	**Operational**	**Flora**	Impact on floral SCC, floral habitat and species diversity in the Ephemeral Drainage Lines	Neg	**Pre-mitigation**	4	2	3	3	12	4	2	6	**72**	**Mod**	AVOID: Further degradation and potential loss of floral SCC outside of the proposed project footprint area. Demarcate the approved mining area clearly and ensure that activities to dot affect areas beyond the approved footprint (such as the drainage lines) MINIMIZE/ CONTROL: Footprint area must be kept to the smallest possible area. Floral SCC that will be affected by surface infrastructure must be marked and relocated to suitable habitat under the required permits (or kept in a nursery) surrounding the disturbance footprint. REMEDY: SCC to be kept in a nursery and used for rehabilitation in mined out areas, concurrently with mining.	Design and Construction phase. However, measures are continued throughout LOM.	Inspection of SCC relocations/nursery	Quarterly	Botanist	TOPS GN 255, NEMA:BA & NCNC
				Neg	**Post-mitigation**	4	1	2	3	10	2	1	3	**30**	**Low**						
Rehabilitation and Closure of mine areas.	**Decommissioning**	**Flora**	Impact on floral SCC, floral habitat and species diversity in the Intact Vygieveld	Neg	**Pre-mitigation**	2	4	3	4	13	4	1	5	**65**	**Mod**	Concurrent rehabilitation should be undertaken with mining activities. Rehabilitation of natural vegetation should proceed in accordance with a rehabilitation plan compiled by a suitable specialist.	Decommissioning	Ongoing monitoring of: AIPs, Wetlands and Rehabilitated areas.	Annually.	Wetland / Ecological specialist.	TOPS GN 255, NEMA:BA & NCNC
				Neg	**Post-mitigation**	2	1	2	2	7	1	1	2	**14**	**Low**						
Rehabilitation and Closure of mine areas.	**Decommissioning**	**Flora**	Impact on floral SCC, floral habitat and species diversity in the Overgrazed Vygieveld	Neg	**Pre-mitigation**	2	4	3	3	12	4	1	5	**60**	**Mod**	Concurrent rehabilitation should be undertaken with mining activities. Rehabilitation of natural vegetation should proceed in accordance with a rehabilitation plan compiled by a suitable specialist.	Decommissioning	Monitoring of: Wetlands and Rehabilitated areas.	Biannually for three years post-closure. Thereafter annually or as required for closure.	Wetland / Ecological specialist.	TOPS GN 255, NEMA:BA & NCNC
				Neg	**Post-mitigation**	2	2	2	3	9	3	1	4	**36**	**Low**						
Rehabilitation and Closure of mine areas.	**Decommissioning**	**Flora**	Impact on floral SCC, floral habitat and species diversity in the	Neg	**Pre-mitigation**	2	2	3	3	10	3	1	4	**40**	**Mod**	Concurrent rehabilitation should be undertaken with mining activities. Rehabilitation of natural vegetation should proceed in accordance with a	Decommissioning	Inspection that wetlands are designated correctly as no-go areas.	Once off inspection of designated wetlands.	Wetland specialist.	TOPS GN 255, NEMA:BA & NCNC

Activity	Project Phase	Aspect	Impact Description	Status	Mitigation status	Duration	Scale/Extent	Magnitude	Sensitivity	Consequence	Probability	Frequency	Likelihood	SIGNIFICANCE RATINGS (score of 200)		Mitigation measures	Time period of implementation	Monitoring Method (Implementation & Compliance)	Monitoring Frequency	Person(s) Responsible for Monitoring	Compliance with Standards
			Ephemeral Drainage Lines	Neg	Post-mitigation	2	1	2	3	8	2	1	3	24	Low	rehabilitation plan compiled by a suitable specialist.		Monitoring of construction activities and potential residual impacts.			
Site clearing (remove soils and vegetation) and construction of infrastructure, roads and stockpiles.	**Construction**	**Fauna**	Impact on faunal SCC, faunal habitat and species diversity in the Intact Vygieveld	Neg	Pre-mitigation	2	4	4	4	14	4	4	8	112	High	AVOID: Speeding as this could increase mortality rate of fauna (speed of 40 km/h). Ensure no hunting or trapping unless trapping to relocate causing no harm. MINIMIZE/ CONTROL: Footprint area must be kept to the smallest possible area. REMEDY: Brinckiella arboricola, this species lays its eggs within the ground or plant stems, with only one egg laying event per year and adults usually living for a year. As such, it is highly recommended that prior to vegetation clearing activities a search be conducted to locate and move adults out of the area to be cleared. Furthermore, cleared vegetation must be stored for a period of a year in order to allow for any eggs to hatch. Should any small scorpion species, insects and harmless reptiles be observed in the construction site during clearing and construction activities, they are to be carefully and safely moved to an area of similar habitat outside of the disturbance footprint. For larger venomous snakes, a suitably trained mine official should be contacted to effect the relocation of the species, should it not move off on its own.	Design and Construction phase. However, measures are continued throughout LOM.	Inspection for faunal species/eggs	As per clearing schedule, before clearing	EAP	National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA); National Water Act, 1998 (Act 36 of 1998) (NWA); General Notice 509 as published in the Government Gazette 40229 of 2016 as it relates to the NWA (Act 36 of 1998); and Requirements of the Government Notice 704 in Government Gazette 20119.
				Neg	Post-mitigation	2	3	3	4	12	3	4	7	84	High						
Site clearing (remove soils and vegetation) and construction of infrastructure, roads and stockpiles.	**Construction**	**Fauna**	Impact on faunal SCC, faunal habitat and species diversity in the Overgrazed Vygieveld	Neg	Pre-mitigation	2	2	3	3	10	4	4	8	80	Mod	AVOID: Speeding as this could increase mortality rate of fauna (speed of 40 km/h). Ensure no hunting or trapping unless trapping to relocate causing no harm. MINIMIZE/ CONTROL: Footprint area must be kept to the smallest possible area. REMEDY: Brinckiella arboricola, this species lays its eggs within the ground or plant stems, with only one egg laying event per year and adults usually living for a year. As such, it is highly recommended that prior to vegetation clearing activities a search be conducted to locate and move adults out of the area to be cleared. Furthermore, cleared vegetation must be stored for a period of a year in order to allow for any eggs to hatch. Should any small scorpion species, insects and harmless reptiles be observed in the construction site during clearing and construction activities, they are to be carefully and safely moved to an area of similar habitat outside of the disturbance	Design and Construction phase. However, measures are continued throughout LOM.	Inspection for faunal species/eggs	As per clearing schedule, before clearing	EAP	National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA); National Water Act, 1998 (Act 36 of 1998) (NWA); General Notice 509 as published in the Government Gazette 40229 of 2016 as it relates to the NWA (Act 36 of 1998); and Requirements of the Government Notice 704 in Government Gazette 20119.
				Neg	Post-mitigation	2	1	2	3	8	3	4	7	56	Mod						

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																footprint. For larger venomous snakes, a suitably trained mine official should be contacted to effect the relocation of the species, should it not move off on its own.					
Site clearing (remove soils and vegetation) and construction of infrastructure, roads and stockpiles.	**Construction**	**Fauna**	Impact on faunal SCC, faunal habitat and species diversity in the Ephemeral Drainage Lines	Neg	**Pre-mitigation**	2	2	3	3	10	2	4	6	**60**	**Mod**	AVOID: Speeding as this could increase mortality rate of fauna (speed of 40 km/h). Ensure no hunting or trapping unless trapping to relocate causing no harm. MINIMIZE/ CONTROL: Footprint area must be kept to the smallest possible area. REMEDY: Brinckiella arboricola, this species lays its eggs within the ground or plant stems, with only one egg laying event per year and adults usually living for a year. As such, it is highly recommended that prior to vegetation clearing activities a search be conducted to locate and move adults out of the area to be cleared. Furthermore, cleared vegetation must be stored for a period of a year in order to allow for any eggs to hatch. Should any small scorpion species, insects and harmless reptiles be observed on the construction site during clearing and construction activities, they are to be carefully and safely moved to an area of similar habitat outside of the disturbance footprint. For larger venomous snakes, a suitably trained mine official should be contacted to effect the relocation of the species, should it not move off on its own.	Design and Construction phase. However, measures are continued throughout LOM.	Inspection for faunal species/eggs	As per clearing schedule, before clearing	EAP	National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA); National Water Act, 1998 (Act 36 of 1998) (NWA); General Notice 509 as published in the Government Gazette 40229 of 2016 as it relates to the NWA (Act 36 of 1998); and Requirements of the Government Notice 704 in Government Gazette 20119.
				Neg		2	1	2	3	8	1	4	5	**40**	**Mod**						
Mining activities, stockpiling and continued disturbance to soils and surrounding environment.	**Operational**	**Fauna**	Impact on faunal SCC, faunal habitat and species diversity in the Intact Vygieveld	Neg	**Pre-mitigation**	4	3	4	4	15	3	2	5	**75**	**Mod**	AVOID: Speeding as this could increase mortality rate of fauna (speed of 40 km/h). Ensure no hunting or trapping unless trapping to relocate causing no harm. MINIMIZE/ CONTROL: Footprint area must be kept to the smallest possible area. REMEDY: Brinckiella arboricola, this species lays its eggs within the ground or plant stems, with only one egg laying event per year and adults usually living for a year. As such, during <u>operation</u> it is highly recommended that prior to vegetation clearing activities a search be conducted in order to locate and move adults out of the area to be cleared. Furthermore, cleared vegetation must be stored for a period of a year in order to allow for any eggs to hatch. Should any small scorpion species, insects and harmless reptiles be observed on site, they are to be carefully and safely moved to an area of similar habitat outside of the disturbance footprint. For larger venomous snakes, a	Continuous or as needed through Operational phase of mine.	Inspection for faunal species/eggs	As per trenching schedule, before trenches are excavated	EAP	National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA); National Water Act, 1998 (Act 36 of 1998) (NWA); General Notice 509 as published in the Government Gazette 40229 of 2016 as it relates to the NWA (Act 36 of 1998); and Requirements of the Government Notice 704 in Government Gazette 20119.
				Neg	**Post-mitigation**	4	3	3	4	14	2	2	4	**56**	**Mod**						

Activity	Project Phase	Aspect	Impact Description	Status	Mitigation status	Duration	Scale/Extent	Magnitude	Sensitivity	Consequence	Probability	Frequency	Likelihood	SIGNIFICANCE RATINGS (score of 200)		Mitigation measures	Time period of implementation	Monitoring Method (Implementation & Compliance)	Monitoring Frequency	Person(s) Responsible for Monitoring	Compliance with Standards
																suitably trained mine official should be contacted to effect the relocation of the species, should it not move off on its own.					
Mining activities, stockpiling and continued disturbance to soils and surrounding environment.	**Operational**	**Fauna**	Impact on faunal SCC, faunal habitat and species diversity in the Overgrazed Vygieveld	Neg	**Pre-mitigation**	4	2	3	3	12	3	2	5	**60**	**Mod**	AVOID: Speeding as this could increase mortality rate of fauna (speed of 40 km/h). Ensure no hunting or trapping unless trapping to relocate causing no harm. MINIMIZE/ CONTROL: Footprint area must be kept to the smallest possible area. REMEDY: Brinckiella arboricola, this species lays its eggs within the ground or plant stems, with only one egg laying event per year and adults usually living for a year. As such, during <u>operation</u> it is highly recommended that prior to vegetation clearing activities a search be conducted in order to locate and move adults out of the area to be cleared. Furthermore, cleared vegetation must be stored for a period of a year in order to allow for any eggs to hatch. Should any small scorpion species, insects and harmless reptiles be observed on site, they are to be carefully and safely moved to an area of similar habitat outside of the disturbance footprint. For larger venomous snakes, a suitably trained mine official should be contacted to effect the relocation of the species, should it not move off on its own.	Decommissioning and rehabilitation phase.	Inspection for faunal species/eggs	As per trenching schedule, before trenches are excavated	EAP	National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA); National Water Act, 1998 (Act 36 of 1998) (NWA); General Notice 509 as published in the Government Gazette 40229 of 2016 as it relates to the NWA (Act 36 of 1998); and Requirements of the Government Notice 704 in Government Gazette 20119.
				Neg	**Post-mitigation**	4	1	2	3	10	2	2	4	**40**	**Mod**						
Mining activities, stockpiling and continued disturbance to soils and surrounding environment.	**Operational**	**Fauna**	Impact on faunal SCC, faunal habitat and species diversity in the Ephemeral Drainage Lines	Neg	**Pre-mitigation**	4	2	3	3	12	3	2	5	**60**	**Mod**	AVOID: Speeding as this could increase mortality rate of fauna (speed of 40 km/h). Ensure no hunting or trapping unless trapping to relocate causing no harm. MINIMIZE/ CONTROL: Footprint area must be kept to the smallest possible area. The ephemeral drainage line is outside of the demarcated mining footprint and no activity should be allowed in those areas. REMEDY: Should any small scorpion species, insects and harmless reptiles be observed in the construction site during clearing and construction activities, they are to be carefully and safely moved to an area of similar habitat outside of the disturbance footprint. The ephemeral drainage line is not within the footprint and should be avoided. For larger venomous snakes, a suitably trained mine official should be contacted to effect the relocation of the species, should it not move off on its own.	Design and Construction phase. However, measures are continued throughout LOM.	Inspection for faunal species/eggs	As per trenching schedule, before trenches are excavated	EAP	National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA); National Water Act, 1998 (Act 36 of 1998) (NWA); General Notice 509 as published in the Government Gazette 40229 of 2016 as it relates to the NWA (Act 36 of 1998); and Requirements of the Government Notice 704 in Government Gazette 20119.
				Neg	**Post-mitigation**	4	1	2	3	10	1	2	3	**30**	**Low**						

Activity	Project Phase	Aspect	Impact Description	Status	Mitigation status	Duration	Scale/Extent	Magnitude	Sensitivity	Consequence	Probability	Frequency	Likelihood	SIGNIFICANCE RATINGS (score of 200)		Mitigation measures	Time period of implementation	Monitoring Method (Implementation & Compliance)	Monitoring Frequency	Person(s) Responsible for Monitoring	Compliance with Standards
Rehabilitation and Closure of mine areas.	**Decommissioning**	**Fauna**	Impact on faunal SCC, faunal habitat and species diversity in the Intact Vygieveld	Neg	**Pre-mitigation**	2	4	3	4	13	3	1	4	**52**	**Mod**	Concurrent rehabilitation should be undertaken with mining activities so that the fauna will be able to return.	Continuous or as needed through Operational phase of mine.	Inspection of rehabilitated areas to ensure that previous habitat is recreated for the fauna to recolonize the area	Continuous	EAP	National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA); National Water Act, 1998 (Act 36 of 1998) (NWA); General Notice 509 as published in the Government Gazette 40229 of 2016 as it relates to the NWA (Act 36 of 1998); and Requirements of the Government Notice 704 in Government Gazette 20119.
				Neg	**Post-mitigation**	2	2	2	4	10	2	1	3	**30**	**Low**						
Rehabilitation and Closure of mine areas.	**Decommissioning**	**Fauna**	Impact on faunal SCC, faunal habitat and species diversity in the Overgrazed Vygieveld	Neg	**Pre-mitigation**	2	2	3	3	10	3	1	4	**40**	**Mod**	Concurrent rehabilitation should be undertaken with mining activities so that the fauna will be able to return.	Decommissioning and rehabilitation phase.	Inspection of rehabilitated areas to ensure that previous habitat is recreated for the fauna to recolonize the area	Continuous	EAP	National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA); National Water Act, 1998 (Act 36 of 1998) (NWA); General Notice 509 as published in the Government Gazette 40229 of 2016 as it relates to the NWA (Act 36 of 1998); and Requirements of the Government Notice 704 in Government Gazette 20119.
				Neg	**Post-mitigation**	2	1	2	3	8	2	1	3	**24**	**Low**						
Rehabilitation and Closure of mine areas.	**Decommissioning**	**Fauna**	Impact on faunal SCC, faunal habitat and species diversity in the Ephemeral Drainage Lines	Neg	**Pre-mitigation**	2	2	3	3	10	3	1	4	**40**	**Mod**	Concurrent rehabilitation should be undertaken with mining activities so that the fauna will be able to return.	Design and Construction phase. However, measures are continued throughout LOM.	Inspection of rehabilitated areas to ensure that previous habitat is recreated for the fauna to recolonize the area	Continuous	EAP	National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA); National Water Act, 1998 (Act 36 of 1998) (NWA); General Notice 509 as published in the Government Gazette 40229 of 2016 as it relates to the NWA (Act 36 of 1998); and Requirements of the Government Notice 704 in Government Gazette 20119.
				Neg	**Post-mitigation**	2	1	2	3	8	1	1	2	**16**	**Low**						
Site clearing (remove soils and vegetation) and	**Construction & Operation**	**Heritage**	Heritage site discovered and potentially destroyed	Neg	**Pre-mitigation**	4	5	5	5	19	2	1	3	**57**	**Mod**	AVOID: Areas that could have heritage significance such as grave sites if any are discovered on or around the site. MINIMIZE/ CONTROL: None. REMEDY: Immediately contact a qualified	Throughout life of mine / as relevant if / when potential sites of heritage	Official monitoring will not occur but as a site is come across an	Official monitoring will not occur if a site is	If heritage site is discovered an	National Heritage Resources Act (Act 25 of 1999)

Activity	Project Phase	Aspect	Impact Description	Status	Mitigation status	Duration	Scale/Extent	Magnitude	Sensitivity	Consequence	Probability	Frequency	Likelihood	SIGNIFICANCE RATINGS (score of 200)		Mitigation measures	Time period of implementation	Monitoring Method (Implementation & Compliance)	Monitoring Frequency	Person(s) Responsible for Monitoring	Compliance with Standards
construction of infrastructure, roads and stockpiles. Mining activities, stockpiling and continued disturbance to soils and surrounding environment.				Neg	**Post-mitigation**	4	2	2	2	10	1	1	2	**20**	**Low**	archaeologist if there is any suspicion that a heritage site may have been uncovered. 'Chance find Procedure' should be followed: ▪ Upon finding any archaeological or historical material all work at the affected area must cease. ▪ The area should be demarcated to prevent any further work there until an investigation has been completed. ▪ An archaeologist should be contacted immediately to provide advice on the matter. ▪ If needed the necessary permit will be applied for with SAHRA. This will be done in conjunction with the appointed archaeologist. ▪ The removal of such archaeological material will only be done by the archaeologist in lieu of the approval given by SAHRA, including any conditions stipulated by the latter. ▪ Work on site will only continue after the archaeologist/ SAHRA has agreed to such continuance.	significance are uncovered	archaeologist will be contacted	identified / suspected an archaeologist will be contacted	archaeologist will assess	
Site clearing (remove soils and vegetation) and construction of infrastructure, roads and stockpiles. Mining activities, stockpiling and continued disturbance to soils and surrounding environment.	**Construction & Operation**	**Paleontological**	Loss of fossils found in gypsum	Neg	**Pre-mitigation**	4	1	1	5	11	1	1	2	**22**	**Low**	Based on the lack of any previously recorded fossils from the area, it is extremely unlikely any fossils would be identified in the proposed site.	N/A	N/A	N/A	N/A	National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA); NHRA
				Neg	**Post-mitigation**	4	2	2	2	10	1	1	2	**20**	**Low**						
Site clearing (remove soils and vegetation) and construction of infrastructure, roads and stockpiles. Mining	**Construction, Operation & Decommissioning**	**Safety & Security**	Crime & security/safety incidences	Neg	**Pre-**	4	2	2	2	10	2	2	4	**40**	**Mod**	AVOID: None MINIMIZE/ CONTROL: Sign in upon entering site. Breathalyzer tests to be given to all entering site. Complaints register to be available at security. Visitors to be inducted before going on site. Mine and dangerous areas to be fenced off for safety. All employees and visitors to wear PPE on site. REMEDY: None	Throughout life of mine	Monitoring of complaints register and if complaints have been addressed. Monitoring to ensure that fences are all intact and that visitors are undergoing	Weekly/monthly inspections of complaints register and mine fencing Ongoing inspections of PPE	Internal ECO undertaking inspections EAP undertaking annual EMP audit	Mine Health and Safety Act (Act 29 of 1996) as amended
				Neg	**Post-mitigation**	4	1	1	2	8	2	1	3	**24**	**Low**						

Activity	Project Phase	Aspect	Impact Description	Status	Mitigation status	Duration	Scale/Extent	Magnitude	Sensitivity	Consequence	Probability	Frequency	Likelihood	SIGNIFICANCE RATINGS (score of 200)		Mitigation measures	Time period of implementation	Monitoring Method (Implementation & Compliance)	Monitoring Frequency	Person(s) Responsible for Monitoring	Compliance with Standards
activities, stockpiling and continued disturbance to soils and surrounding environment. Rehabilitation and Closure of mine areas.																		induction. Monitoring to ensure that all employees and visitors are wearing PPE. Monitoring to ensure that all employees and visitors are wearing PPE.	being worn on site Annual internal EMP audit Ongoing inspections of PPE being worn on site Annual internal EMP audit Annual external EMP audit		
Site clearing (remove soils and vegetation) and construction of infrastructure, roads and stockpiles. Mining activities, stockpiling and continued disturbance to soils and surrounding environment. Rehabilitation and Closure of mine areas.	**Construction, Operation & Decommissioning**	**Noise**	Noise pollution and damage of hearing to workers near loud machinery	Neg	**Pre-mitigation**	4	2	2	2	10	3	1	4	**40**	**Mod**	AVOID: Use of loud machinery at night- latest operating hours are until 7pm. MINIMIZE/ CONTROL: Sound mufflers to be used on vehicles. Reverse beeping to have a reverse flashing light if vehicles used at night. Workers to wear PPE (ear plugs) when near loud machinery. REMEDY: None	Throughout life of mine	Inspection of usage of PPE	Ongoing inspections of PPE being worn on site	Internal ECO	Mine Health and Safety Act (Act 29 of 1996) as amended
				Neg	**Post-mitigation**	4	1	2	2	9	2	1	3	**27**	**Low**						
Non-mineral waste management	**Construction, Operation & Decommissioning**	**Waste**	Pollution	Neg	**Pre-mitigation**	1	2	2	2	7	3	5	8	**56**	**Mod**	AVOID: Littering MINIMIZE/CONTROL: Waste to be separated and hazardous waste to be disposed of at a licensed hazardous waste service provider REMEDY: Weekly inspections of littering/hazardous spills	Continuous or as needed through Operational phase of mine.	Monitoring of site to ensure no hazardous spills or littering Inspections that there are safety disposal certificates	Weekly	ECO	National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA); National Water Act, 1998 (Act 36 of 1998) (NWA); General Notice 509 as published in the Government Gazette 40229 of 2016 as it relates to the NWA (Act 36 of 1998); and Requirements of the Government Notice 704 in Government Gazette 20119.
				Neg	**Post-mitigation**	1	1	1	2	5	2	3	5	**25**	**Low**						