

IMPACT DESCRIPTION			PRE - MITIGATION							POST - MITIGATION							IMPACT PRIORITISATION					
Impact	Alternative	Phase	Nature	Extent	Duration	Magnitude	Reversibility	Probability	Pre-mitigation ER	Nature	Extent	Duration	Magnitude	Reversibility	Probability	Post-mitigation ER	Confidence	Public response	Cumulative Impact	Irreplaceable loss	Priority factor	Final score
Safety and security risks to landowners and lawful occupiers	Alternative 1	Planning	-1	3	2	3	4	2	-6.00	-1	2	1	2	2	1	-1.75	Medium	1	2	2	1.33	-2.33
Interference with existing land uses	Alternative 1	Planning	-1	2	1	2	2	3	-5.25	-1	1	1	1	1	2	-2.00	Medium	2	1	1	1.17	-2.33
Safety and security risks to landowners and lawful occupiers	Alternative 1	Construction	-1	2	2	3	5	2	-6.00	-1	1	1	2	3	1	-1.75	Medium	1	2	2	1.33	-2.33
Interference with existing land uses	Alternative 1	Construction	-1	2	2	4	3	3	-8.25	-1	1	1	3	2	2	-3.50	Medium	2	1	1	1.17	-4.08
Ineffective communication channels leading to community unrest	Alternative 1	Construction	-1	3	2	1	1	2	-3.50	-1	2	1	1	1	1	-1.25	Medium	1	1	1	1.00	-1.25
Friction between local residents/landowners and prospecting personnel	Alternative 1	Construction	-1	3	2	2	2	3	-6.75	-1	2	1	1	1	2	-2.50	Medium	2	1	1	1.17	-2.92
Possible boost in short-term local small business opportunities	Alternative 1	Construction	1	4	1	2	2	2	4.50	1	5	2	3	3	3	9.75	Medium	1	2	1	1.17	11.38
Perceptions and expectations	Alternative 1	Construction	-1	3	2	2	1	4	-8.00	-1	2	1	1	1	2	-2.50	Medium	3	1	1	1.33	-3.33
Job creation	Alternative 1	Construction	1	3	1	2	3	3	6.75	1	4	2	3	3	4	12.00	Medium	1	1	1	1.00	12.00
Training of unskilled labourers	Alternative 1	Construction	1	3	1	2	3	3	6.75	1	4	2	3	3	4	12.00	Medium	1	1	1	1.00	12.00
Localised spillages of oils from machinery leading to groundwater contamination	Alternative 1	Construction	-1	2	2	3	4	3	-8.25	-1	1	1	2	3	2	-3.50	Medium	2	1	1	1.17	-4.08
Potential deterioration in water quality due to the potential accidental spillages of hazardous substances	Alternative 1	Construction	-1	3	2	3	4	2	-6.00	-1	2	1	2	3	2	-4.00	Medium	2	2	1	1.33	-5.33
Degradation of wetlands caused by the prospecting and supporting activities	Alternative 1	Construction	-1	2	1	1	1	1	-1.25	-1	2	1	1	1	1	-1.25	High	3	1	1	1.33	-1.67
Degradation of wetland areas due to spills and leaks, failing ablation facilities and pollution from domestic waste and stored chemicals	Alternative 1	Construction	-1	2	1	1	1	1	-1.25	-1	2	1	1	1	1	-1.25	High	3	1	1	1.33	-1.67
Damage/destruction of sites with palaeontological resources	Alternative 1	Construction	-1	2	2	2	4	3	-7.50	-1	1	1	2	3	2	-3.50	High	1	1	3	1.33	-4.67
Possible increase in dust generation as a result of drilling and operation of heavy machinery	Alternative 1	Construction	-1	4	1	3	2	4	-10.00	-1	2	1	2	2	3	-5.25	Medium	1	3	1	1.33	-7.00
Increase in carbon emissions and ambient air pollutants (NO <sub>2</sub> and SO <sub>2</sub> ) as a result of movement of vehicles and operation of machinery/equipment	Alternative 1	Construction	-1	5	3	3	3	4	-14.00	-1	4	2	2	2	3	-7.50	High	1	2	1	1.17	-8.75
Scaring of the landscape as a result of the clearance of vegetation	Alternative 1	Construction	-1	1	2	2	3	3	-6.00	-1	1	2	2	2	2	-3.50	Medium	1	2	1	1.17	-4.08
Visual intrusion as a result of the movement of heavy machinery and the establishment of the required infrastructure	Alternative 1	Construction	-1	2	1	2	1	3	-4.50	-1	2	1	1	1	2	-2.50	High	1	1	1	1.00	-2.50
The use of vehicles and machinery may generate noise in the immediate vicinity	Alternative 1	Construction	-1	2	1	2	1	3	-4.50	-1	1	1	1	1	2	-2.00	Medium	1	2	1	1.17	-2.33
Localised chemical pollution of soils as a result of vehicle hydrocarbon spillages	Alternative 1	Construction	-1	2	3	3	4	3	-9.00	-1	1	2	2	3	2	-4.00	Medium	1	2	1	1.17	-4.67
Localised clearing of vegetation and compaction of the construction footprint will result in the soils being particularly more vulnerable to soil erosion	Alternative 1	Construction	-1	1	2	3	3	4	-9.00	-1	1	1	2	2	3	-4.50	Medium	2	1	1	1.17	-5.25
Increase in traffic volumes as a result of pre-construction activities which may lead to an increase in traffic congestion along the provincial roads and farm tracks around the prospecting area	Alternative 1	Construction	-1	2	1	2	1	3	-4.50	-1	2	1	1	1	2	-2.50	Medium	1	2	1	1.17	-2.92
Safety and security risks to landowners and lawful occupiers	Alternative 1	Operation	-1	2	1	3	4	3	-7.50	-1	1	1	2	3	1	-1.75	Medium	1	2	2	1.33	-2.33
Interference with existing land uses	Alternative 1	Operation	-1	2	2	3	4	4	-11.00	-1	1	1	3	3	3	-6.00	Medium	2	1	1	1.17	-7.00
Job creation	Alternative 1	Operation	-1	4	2	1	1	4	-8.00	-1	3	1	1	1	2	-3.00	Medium	1	1	1	1.00	-3.00
Job creation	Alternative 1	Operation	1	4	1	2	2	4	9.00	1	5	1	3	2	5	13.75	Medium	1	2	1	1.17	16.04
Discovery of economically viable mineral resources	Alternative 1	Operation	1	1	2	5	5	4	13.00	1	3	4	5	5	5	21.25	Medium	1	2	1	1.17	24.79
Training of unskilled labourers	Alternative 1	Operation	1	4	1	3	3	4	11.00	1	5	1	3	3	5	15.00	Medium	1	2	1	1.17	17.50
Pollution of groundwater due to spillage of hydrocarbons from vehicles and machinery during excavation of trenches	Alternative 1	Operation	-1	3	3	3	4	3	-9.75	-1	2	2	2	3	2	-4.50	Medium	2	1	1	1.17	-5.25
Storage of hydrocarbons and chemicals may impact on groundwater as a result of spillages and uncontrolled release	Alternative 1	Operation	-1	3	3	3	4	3	-9.75	-1	2	2	2	3	2	-4.50	Medium	2	1	1	1.17	-5.25

Impact	Alternative	Phase	Nature	Extent	Duration	Magnitude	Reversibility	Probability	Pre-mitigation ER	Nature	Extent	Duration	Magnitude	Reversibility	Probability	Post-mitigation ER	Confidence	Public response	Cumulative Impact	Irreplaceable loss	Priority factor	Final score
Potential leaks, discharges, litter, pollutant from development into the surrounding environment. Thus harming flora and fauna species	Alternative 1	Operation	-1	4	3	4	4	4	-15.00	-1	3	3	2	2	2	-5.00	Medium	2	3	2	1.67	-8.33
Degradation of wetlands caused by the prospecting and supporting activities	Alternative 1	Operation	-1	2	2	1	1	1	-1.50	-1	2	2	1	1	1	-1.50	High	3	1	1	1.33	-2.00
Degradation of wetland areas due to spills and leaks, failing ablation facilities and pollution from domestic waste and stored chemicals	Alternative 1	Operation	-1	2	2	1	1	1	-1.50	-1	2	2	1	1	1	-1.50	High	3	1	1	1.33	-2.00
Soil contamination due to spillage of hydrocarbons	Alternative 1	Operation	-1	1	2	3	4	4	-10.00	-1	1	1	2	3	3	-5.25	Medium	1	1	1	1.00	-5.25
The prospecting operation will require vehicular movement which may result in possible increase in dust generation	Alternative 1	Operation	-1	4	1	3	3	3	-8.25	-1	2	1	2	2	2	-3.50	Medium	1	2	1	1.17	-4.08
Increase in carbon emissions and ambient air pollutants (NO2 and SO2) as a result of movement of vehicles and operation of machinery/equipment	Alternative 1	Operation	-1	5	3	3	3	4	-14.00	-1	4	2	2	2	3	-7.50	Medium	1	2	1	1.17	-8.75
The drill rigs and towers used during the drilling operations will be visible from the nearby residents and properties	Alternative 1	Operation	-1	2	1	2	1	5	-7.50	-1	1	1	1	1	5	-5.00	Medium	1	1	1	1.00	-5.00
Damage/destruction to local graves in the area	Alternative 1	Operation	-1	1	1	3	3	2	-4.00	-1	1	1	2	3	1	-1.75	High	2	1	2	1.33	-2.33
Damage/destruction of built environment features	Alternative 1	Operation	-1	2	2	2	3	2	-4.50	-1	1	1	2	2	1	-1.50	High	2	1	3	1.50	-2.25
Damage/destruction of sites with palaeontological resources	Alternative 1	Operation	-1	2	2	2	5	2	-5.50	-1	1	1	2	2	1	-1.50	High	1	1	3	1.33	-2.00
The use of vehicles and machinery may generate noise in the immediate vicinity	Alternative 1	Operation	-1	2	1	3	2	4	-8.00	-1	1	1	2	2	3	-4.50	Medium	1	2	1	1.17	-5.25
Impact of drilling ground vibration resulting in possible damage to infrastructure	Alternative 1	Operation	-1	3	2	4	4	3	-9.75	-1	1	1	2	3	2	-3.50	Medium	2	1	2	1.33	-4.67
Removal of equipment from the prospecting sites will require vehicular movement. This will result in the generation of dust by movement of vehicles and due to blowing winds	Alternative 1	Decommissioning	-1	3	1	2	2	3	-6.00	-1	2	1	2	2	2	-3.50	Medium	1	2	1	1.17	-4.08
Noise will be generated during the removal of equipment on-site. This noise is not expected to exceed occupational noise limits and will be short lived	Alternative 1	Decommissioning	-1	1	1	2	2	4	-6.00	-1	1	1	2	2	2	-3.00	Medium	1	1	2	1.17	-3.50
Continued encroachment and displacement of an indigenous and Vulnerable vegetation community by alien invasive plant species	Alternative 1	Decommissioning	-1	3	3	3	3	3	-9.00	-1	2	2	2	2	2	-4.00	Medium	2	3	2	1.67	-6.67
Degradation of wetlands caused by the prospecting and supporting activities	Alternative 1	Decommissioning	-1	2	1	1	1	1	-1.25	-1	2	1	1	1	1	-1.25	High	3	1	1	1.33	-1.67
Degradation of wetland areas due to spills and leaks, failing ablation facilities and pollution from domestic waste and stored chemicals	Alternative 1	Decommissioning	-1	2	1	1	1	1	-1.25	-1	2	1	1	1	1	-1.25	High	3	1	1	1.33	-1.67
Compaction of soil due to vehicles/machinery utilised during site rehabilitation	Alternative 1	Rehab and closure	-1	2	2	2	2	3	-6.00	-1	2	1	2	2	2	-3.50	Medium	1	1	1	1.00	-3.50
Rehabilitation the prospecting sites will require vehicular movement. This will result in the generation of dust by movement of vehicles and due to blowing winds. Vehicles and machinery will also generate diesel or petrol fumes. Generated dust will migrate towards the predominant wind direction and may settle on surrounding properties including nearby vegetation	Alternative 1	Rehab and closure	-1	4	2	3	3	3	-9.00	-1	2	1	2	2	2	-3.50	Medium	1	2	1	1.17	-4.08
Noise will be generated during the rehabilitation of the sites. This noise is not expected to exceed occupational noise limits and will be short lived	Alternative 1	Rehab and closure	-1	2	1	2	2	3	-5.25	-1	1	1	2	2	2	-3.00	Medium	1	1	1	1.00	-3.00
Encroachment and displacement of an indigenous and Vulnerable vegetation community by alien invasive plant species and potential re-establishment of natural species that were removed. The nature of the erosion will depend on the amount of successful vegetation establishment	Alternative 1	Rehab and closure	-1	3	3	3	3	3	-9.00	-1	2	2	2	2	2	-4.00	Medium	2	3	2	1.67	-6.67
Displacement of the faunal community (including threatened or protected species) due to rehabilitation of the anthropogenic disturbances and habitat degradation, rehabilitation resulting in the faunal species potentially re-establishing within the area	Alternative 1	Rehab and closure	-1	3	3	3	3	3	-9.00	-1	2	2	2	2	2	-4.00	Medium	2	3	2	1.67	-6.67
Damage/destruction to local graves in the area	Alternative 1	Rehab and closure	-1	2	2	2	4	2	-5.00	-1	1	1	2	2	1	-1.50	Medium	2	1	2	1.33	-2.00
Damage/destruction of built environment features	Alternative 1	Rehab and closure	-1	2	3	2	4	2	-5.50	-1	1	2	2	3	1	-2.00	Medium	2	1	1	1.17	-2.33
Damage/destruction of sites with palaeontological resources	Alternative 1	Rehab and closure	-1	2	3	2	4	2	-5.50	-1	1	2	2	3	1	-2.00	Medium	1	1	1	1.00	-2.00
Generation and disposal of waste	Alternative 1	Rehab and closure	-1	1	1	2	4	4	-8.00	-1	1	1	2	3	3	-5.25	Medium	3	1	1	1.33	-7.00