

Impact Assessment Calculations

IMPACT DESCRIPTION			PRE - MITIGATION							POST - MITIGATION											
Impact	Alternative	Phase	Nature	Extent	Duration	Magnitude	Reversibility	Probability	Pre-mitigation ER	Nature	Extent	Duration	Magnitude	Reversibility	Probability	Post-mitigation ER	Confidence	Cumulative Impact	Irreplaceable loss	Priority Factor	Final score
Job Creation	Alternative 1	Planning	1	1	2	2	1	3	4.5	1	1	2	2	1	3	4.5	High	1	1	1.00	4.50
Job Creation	Alternative 1	Construction	1	1	2	2	1	3	4.5	1	1	2	2	1	3	4.5	High	1	1	1.00	4.50
Job Creation	Alternative 1	Operation	1	1	2	2	1	3	4.5	1	1	2	2	1	3	4.5	High	1	1	1.00	4.50
Job Creation	Alternative 1	Decommissioning	1	1	2	2	1	3	4.5	1	1	2	2	1	3	4.5	High	1	1	1.00	4.50
Job Creation	Alternative 1	Rehab and closure	1	1	2	2	1	3	4.5	1	1	2	2	1	3	4.5	High	1	1	1.00	4.50
Impact on Air quality from dust	Alternative 1	Construction	-1	2	1	1	2	3	-4.5	-1	1	1	1	2	2	-2.5	High	1	1	1.00	-2.50
Generation and disposal of waste	Alternative 1	Construction	-1	1	1	2	2	4	-6	-1	1	1	2	2	3	-4.5	High	1	1	1.00	-4.50
Noise	Alternative 1	Construction	-1	1	2	1	2	3	-4.5	-1	1	2	1	2	2	-3	High	1	1	1.00	-3.00
Damage/destruction of graves: Burial Grounds and Graves (KF001, KF002, KF005, KF006, KF007, KF010))	Alternative 1	Planning	-1	1	5	5	5	3	-12	-1	1	4	2	4	2	-5.5	High	2	3	1.38	-7.56
Damage/destruction of graves: Burial Grounds and Graves (KF001, KF002, KF005, KF006, KF007, KF010))	Alternative 1	Construction	-1	1	5	5	5	4	-16	-1	1	4	2	4	2	-5.5	High	2	3	1.38	-7.56
Damage/destruction of graves: Burial Grounds and Graves (KF001, KF002, KF005, KF006, KF007, KF010))	Alternative 1	Operation	-1	1	5	5	5	4	-16	-1	1	4	2	4	2	-5.5	High	2	3	1.38	-7.56
Damage/destruction of graves: Burial Grounds and Graves (KF001, KF002, KF005, KF006, KF007, KF010))	Alternative 1	Decommissioning	-1	1	5	5	5	4	-16	-1	1	4	2	4	2	-5.5	High	2	3	1.38	-7.56
Damage/destruction of graves: Burial Grounds and Graves (KF001, KF002, KF005, KF006, KF007, KF010))	Alternative 1	Rehab and closure	-1	1	5	5	5	3	-12	-1	1	4	2	4	2	-5.5	High	2	3	1.38	-7.56
Damage/destruction to structures: Historical structures- Klip Power & Springfield Colliery (KF009, KF011, KF012, KF013)	Alternative 1	Planning	-1	1	5	3	5	3	-10.5	-1	1	3	3	3	2	-5	High	2	2	1.25	-6.25
Damage/destruction to structures: Historical structures- Klip Power & Springfield Colliery (KF009, KF011, KF012, KF013)	Alternative 1	Construction	-1	1	5	3	5	4	-14	-1	1	3	3	3	2	-5	High	2	2	1.25	-6.25
Damage/destruction to structures: Historical structures- Klip Power & Springfield Colliery (KF009, KF011, KF012, KF013)	Alternative 1	Operation	-1	1	5	3	5	4	-14	-1	1	3	3	3	2	-5	High	2	2	1.25	-6.25
Damage/destruction to structures: Historical structures- Klip Power & Springfield Colliery (KF009, KF011, KF012, KF013)	Alternative 1	Decommissioning	-1	1	5	3	5	4	-14	-1	1	3	3	3	2	-5	High	2	2	1.25	-6.25

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Impact	Alternative	Phase	Nature	Extent	Duration	Magnitude	Reversibility	Probability	Pre-mitigation ER	Nature	Extent	Duration	Magnitude	Reversibility	Probability	Post-mitigation ER	Confidence	Cumulative Impact	Irreplaceable loss	Priority Factor	Final score
Damage/destruction to structures: Historical structures- Klip Power & Springfield Colliery (KF009, KF011, KF012, KF013)	Alternative 1	Rehab and closure	-1	1	5	3	5	3	-10.5	-1	1	3	3	3	2	-5	High	2	2	1.25	-6.25
Damage/destruction of structures: Farmstead (KF008)	Alternative 1	Planning	-1	1	5	4	5	3	-11.25	-1	1	5	5	5	2	-8	High	2	2	1.25	-10.00
Damage/destruction of structures: Farmstead (KF008)	Alternative 1	Construction	-1	1	5	4	5	4	-15	-1	1	5	5	5	2	-8	High	2	2	1.25	-10.00
Damage/destruction of structures: Farmstead (KF008)	Alternative 1	Operation	-1	1	5	4	5	4	-15	-1	1	5	5	5	2	-8	High	2	2	1.25	-10.00
Damage/destruction of structures: Farmstead (KF008)	Alternative 1	Decommissioning	-1	1	5	4	5	4	-15	-1	1	5	5	5	2	-8	High	2	2	1.25	-10.00
Damage/destruction of structures: Farmstead (KF008)	Alternative 1	Rehab and closure	-1	1	5	4	5	3	-11.25	-1	1	5	5	5	2	-8	High	2	2	1.25	-10.00
Damage/destruction of site :Redan Archaeological Site (KF004)	Alternative 1	Planning	-1	1	5	5	5	4	-16	-1	1	4	3	5	2	-6.5	High	3	3	1.50	-9.75
Damage/destruction of site :Redan Archaeological Site (KF004)	Alternative 1	Construction	-1	1	5	5	5	5	-20	-1	1	4	3	5	3	-9.75	High	3	3	1.50	-14.63
Damage/destruction of site :Redan Archaeological Site (KF004)	Alternative 1	Operation	-1	1	5	5	5	5	-20	-1	1	4	3	5	3	-9.75	High	3	3	1.50	-14.63
Damage/destruction of site :Redan Archaeological Site (KF004)	Alternative 1	Decommissioning	-1	1	5	5	5	5	-20	-1	1	4	3	5	3	-9.75	High	3	3	1.50	-14.63
Damage/destruction of site :Redan Archaeological Site (KF004)	Alternative 1	Rehab and closure	-1	1	5	5	5	4	-16	-1	1	4	3	5	2	-6.5	High	3	3	1.50	-9.75
Safety and security risks to landowners and lawful occupiers	Alternative 1	Operation	-1	2	1	2	3	3	-6	-1	2	1	2	3	2	-4	High	1	1	1.00	-4.00
Safety and security risks to landowners and lawful occupiers	Alternative 1	Construction	-1	2	1	2	3	3	-6	-1	2	1	2	3	2	-4	High	1	1	1.00	-4.00
Interference with existing land uses	Alternative 1	Construction	-1	2	2	1	2	4	-7	-1	1	1	1	2	4	-5	High	1	1	1.17	-5.85
Deterioration and damage to existing access roads and tracks	Alternative 1	Construction	-1	2	1	2	3	4	-8	-1	1	1	1	2	4	-5	High	1	1	1.00	-5.00
Temporary disturbance of wildlife due to increased human presence and possible use of machinery and/or vehicles.	Alternative 1	Planning	-1	3	4	4	4	4	-15	-1	1	3	2	2	2	-4	High	1	2	1.13	-4.50
Destruction, further loss and fragmentation of the vegetation community	Alternative 1	Construction	-1	4	4	4	5	4	-17	-1	2	2	2	2	3	-6	High	2	2	1.25	-7.50
Loss of CBA and ESA, sections of area classed as moderate and highest biodiversity importance as well as portions of an area classed as a protected area.	Alternative 1	Construction	-1	4	4	4	5	5	-21.25	-1	2	2	3	2	2	-4.5	Medium	3	2	1.38	-6.19

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Impact	Alternative	Phase	Nature	Extent	Duration	Magnitude	Reversibility	Probability	Pre-mitigation ER	Nature	Extent	Duration	Magnitude	Reversibility						Probability	Post-mitigation ER
Introduction of alien species, especially plants	Alternative 1	Construction	-1	3	4	4	3	4	-14	-1	2	2	2	2	2	-4	High	2	2	1.25	-5.00
Erosion due to storm water runoff and wind	Alternative 1	Construction	-1	3	3	4	4	4	-14	-1	2	3	2	3	3	-7.5	High	2	2	1.25	-9.38
Displacement of faunal community due to habitat loss, direct mortalities and disturbance (road collisions, noise, light, dust, rock chips, vibration and poaching).	Alternative 1	Construction	-1	4	4	4	4	4	-16	-1	2	3	2	2	3	-6.75	High	2	2	1.25	-8.44
Potential leaks, discharges, pollutant from drilling machines and storage leaching into the surrounding environment	Alternative 1	Construction	-1	3	3	4	4	4	-14	-1	2	2	2	2	2	-4	High	2	2	1.25	-5.00
Continued encroachment of an indigenous and EN vegetation community by alien invasive plant species as well as erosion due to disturbed soils	Alternative 1	Decommissioning	-1	3	4	4	4	4	-15	-1	2	2	2	3	3	-6.75	Medium	2	2	1.25	-8.44
Continued displacement and fragmentation of the faunal community (including threatened or protected species) due to ongoing anthropogenic disturbances (noise, dust and vibrations) and habitat degradation/loss (litter, road mortalities and/or poaching).	Alternative 1	Decommissioning	-1	4	4	3	4	4	-15	-1	2	2	2	3	3	-6.75	Medium	2	2	1.25	-8.44
Erosion due to improper rehabilitation	Alternative 1	Rehab and closure	-1	2	3	3	3	4	-11	-1	2	3	2	3	3	-7.5	Medium	2	2	1.17	-8.75
Pollution of Soils	Alternative 1	Construction	-1	1	1	1	3	3	-4.5	-1	1	1	1	2	2	-2.5	High	1	1	1.00	-2.50
Pollution of Soils	Alternative 1	Decommissioning	-1	1	1	1	3	3	-4.5	-1	1	1	1	2	2	-2.5	High	1	1	1.00	-2.50