

APPENDIX J – IMPACT TABLES

GEOGRAPHICAL AND PHYSICAL-SOIL EROSION AND DUST

Alternative 1: Construction of Reservoir (PREFERRED)	Geographical and Physical Impacts
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	Soil erosion and dust
Nature of impact:	Disturbance to soil which is caused during the construction of the reservoir may lead to erosion of the site and surrounds.
Extent and duration of impact:	Extent 1 (footprint) & Duration 1 (0-1 years)
Consequence of impact or risk:	Clearing and excavation activities can result in erosion and dust.
Probability of occurrence:	2 (Improbable: some possibility, but low likelihood)
Degree to which the impact may cause irreplaceable loss of resources:	2-Resource may be partly destroyed (PR)
Degree to which the impact can be reversed:	Completely reversible (R)
Indirect impacts:	Disturbance to surface area can result in erosion and dust generation
Cumulative impact prior to mitigation:	Exposing soil may lead to erosion and dust generation if not mitigated.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	14 - Low
Degree to which the impact can be avoided:	High
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	1-Completely mitigatable (CM)
Proposed mitigation:	<ul style="list-style-type: none"> • The natural vegetation cover should be disturbed as little as possible during the construction of the reservoir • Access to roads and other areas must be controlled to avoid disturbance of areas outside the development footprint. Personnel should be restricted to the immediate construction areas only. • Monitor construction areas frequently for signs of erosion and if signs of erosion are detected implement repair and preventative measures immediately. • Rehabilitate or stabilise eroded areas immediately to prevent increase in erosion.
Residual impacts:	It is not anticipated that the impact will be high if the mitigation measures are adhered to.
Cumulative impact post mitigation:	It is not anticipated that the impact will be high if the mitigation measures are adhered to.
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	7 - Low
OPERATIONAL PHASE	
Potential impact and risk:	Not applicable to operational phase.
DECOMMISSIONING AND CLOSURE PHASE	
Potential impact and risk:	Same as construction but decommissioning not foreseeable/highly unlikely – reservoir established residential community.

BOTANICAL

Alternative 1: Construction of Reservoir (PREFERRED)	Botanical impact
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	Vegetation
Nature of impact:	Loss of terrestrial indigenous vegetation (2500m²)
Extent and duration of impact:	Extent: 2 Duration: 5 (Permanent) Removal/clearance of vegetation during construction of the reservoir. Vegetation permanently removed.
Consequence of impact or risk:	Loss of vegetation (2500m²)
Probability of occurrence:	5 (Definite)
Degree to which the impact may cause irreplaceable loss of resources:	2-Resource may be partly destroyed (PR)
Degree to which the impact can be reversed:	Irreversible (IR) – vegetation removed and a reservoir erected.
Indirect impacts:	Loss of indigenous vegetation
Cumulative impact prior to mitigation:	Habitat fragmentation, loss of ecological connectivity. Least threatened vegetation type and classified as Other natural area. Although in moderate condition, only 2500m² will be removed.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	55 – Medium
Degree to which the impact can be avoided:	Low
Degree to which the impact can be managed:	Medium
Degree to which the impact can be mitigated:	2- Partly Mitigatable
Proposed mitigation:	Restrict development to impact area throughout construction phase, ensuring that no areas outside of the proposed development footprint area are further disturbed. Top soil of disturbed areas must be spread over exposed areas and vegetation (branches of surrounding shrubs) must be cut and spread over the exposed areas. Erosion must be monitored and the area rehabilitated and stabilized as soon as signs of erosions occur.
Residual impacts:	Loss of vegetation
Cumulative impact post mitigation:	Loss of vegetation
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	32 – Medium
OPERATIONAL PHASE	
Potential impact and risk:	Vegetation
Nature of impact:	Not applicable to operational phase. During operation of the reservoir no further impacts on vegetation are anticipated.
DECOMMISSIONING AND CLOSURE PHASE	
Potential impact and risk:	Same as construction but decommissioning not foreseeable/highly unlikely – reservoir established residential community.

SOCIO-ECONOMIC-INCREASE IN JOBS

Alternative 1: Construction of Reservoir (PREFERRED)	Socio-Economic Impacts
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	Increased jobs
Nature of impact:	Temporary construction jobs will be created. The locals may not have sufficient skills to utilize the employment opportunities and “others (work force and job seekers)” may be employed from outside the community.
Extent and duration of impact:	Extent 2 (On site or within 100 m of the site) & Duration 1 (0 – 1 years)
Consequence of impact or risk:	Influx of contract workers due to lack of skills. Influx of job seekers due to jobs created. Littering.
Probability of occurrence:	4 (most likely)
Degree to which the impact may cause irreplaceable loss of resources:	NA – Positive
Degree to which the impact can be reversed:	NA – Positive
Indirect impacts:	NA – Positive
Cumulative impact prior to mitigation:	NA – Positive
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	8 – Low (positive)
Degree to which the impact can be avoided:	NA – Positive
Degree to which the impact can be managed:	NA – Positive
Degree to which the impact can be mitigated:	NA – Positive
Proposed mitigation:	Local contractors, employing or seeking to employ local (historically disadvantaged individuals (HDIs) from the region who are suitably qualified, should get preference. The local community and local community organizations should be informed of the project and potential job opportunities.
Residual impacts:	NA – Positive
Cumulative impact post mitigation:	NA – Positive
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	8 – Low (positive)
OPERATIONAL PHASE	
Potential impact and risk:	Not applicable to operational phase.
DECOMMISSIONING AND CLOSURE PHASE	
Potential impact and risk:	Same as construction but decommissioning not foreseeable/highly unlikely - reservoir for established residential community.

NOISE

Alternative 1: Construction of Reservoir (PREFERRED)	Socio-Economic Impacts
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	Noise due to construction machinery
Nature of impact:	Noise due to construction machinery during the construction/development phase. Construction machinery may cause noise disturbance to the directly adjacent land users/ owners. It is not anticipated that the noise will be considerable and will only be temporary. Noise due to construction activities is unlikely to cause a nuisance to adjacent residential areas.
Extent and duration of impact:	Extent 2 (On site or within 100 m of the site) & Duration 1 (0 – 1 years)
Consequence of impact or risk:	Nuisance
Probability of occurrence:	1 (Very improbable (VP))
Degree to which the impact may cause irreplaceable loss of resources:	1-Resource will not be lost (R)
Degree to which the impact can be reversed:	Completely reversible (R) - This will not be a long-term impact nor will it have an impact on the natural processes. It is thus 100% reversible.
Indirect impacts:	Nuisance
Cumulative impact prior to mitigation:	Nuisance
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	9 – Low
Degree to which the impact can be avoided:	High
Degree to which the impact can be managed:	High
Degree to which the impact can be mitigated:	1- Completely mitigatable (CM)
Proposed mitigation:	Machinery and vehicles should be regularly maintained to prevent excessive noise. All machinery and work activities must adhere to the requirements of the noise regulations.
Residual impacts:	Nuisance
Cumulative impact post mitigation:	Nuisance
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	7 - Low
OPERATIONAL PHASE	
Potential impact and risk:	Not applicable to operational phase.
DECOMMISSIONING AND CLOSURE PHASE	
Potential impact and risk:	Same as construction but decommissioning not foreseeable/highly unlikely - reservoir for established residential community.