

IMPACT ASSESSMENT TABLE: WESTRIDING RESERVOIR PIPELINE PROJECT

Impact	Pre-mitigation:							Recommended Mitigation	Post-mitigation:						
	Duration 1,2,3,4	Extent 1,2,3,4,5,6	Severity -3,-2,-1,0,1,2,3	Impact on irreplaceable resources 0,1	Consequence (Dur+Ext+Irr) x Sev	Probability 0,1,2	Significance -66 to +66		Duration 1,2,3,4	Extent 1,2,3,4,5,6	Severity -3,-2,-1,0,1,2,3	Impact on irreplaceable resources 0,1	Consequence (Dur+Ext+Irr) x Sev	Probability 0,1,2	Significance -66 to +66
<b>CONSTRUCTION PHASE</b>															
<b>Direct Impacts</b>															
Degradation of soils and soil erosion from excavation of trenches for the laying of the pipeline.	3	2	-2	1	-12	2	-24	1. Topsoil to be removed prior to construction and stockpiled for rehabilitation during decommissioning. 2. Soil storage areas must be located further than 50 meters from any water body or water source.	2	2	-1	1	-5	1	-5
Contamination/Pollution of groundwater from leaks/spillages from hydrocarbons	3	3	-2	0	-12	1	-12	1. Provide drip-trays / or use other methods to reduce leaking of standing machinery/plant. 2. The machinery on site is not to be refuelled or serviced near natural areas. 3. Spillages of fuels, oils and other potentially harmful chemicals	2	2	-2	1	-10	1	-10
Contamination/Pollution of surface water from leaks/spillages from hydrocarbons	3	3	-2	0	-12	1	-12	1. Provide drip-trays / or use other methods to reduce leaking of standing machinery/plant. 2. The machinery on site is not to be refuelled or serviced near natural areas. 3. Spillages of fuels, oils and other potentially harmful chemicals	2	2	-2	1	-10	1	-10
Destruction and loss of vegetation and habitat as result of site clearance	2	2	-1	1	-5	2	-10	1. Limit the removal of vegetation to the construction footprint. Remove all invasive species on site. 2. Ensure employees have been educated in minimizing environmental impacts. 3. No bulldozers must be used in bush clearing. 4. Avoid indigenous vegetation where possible.	1	2	-1	0	-3	1	-3
Noise impact as a result of the use of construction machinery on site and within the residential areas	3	2	-1	0	-5	2	-10	1. Limit the amount of construction vehicles on site. 2. Maintain construction vehicles and machinery in good working order to reduce the noise on site 3. Equipment should be fitted with noise reduction devices.	2	2	-1	0	-4	1	-4
Loss of fauna as a result of site clearance.	2	3	-1	1	-6	2	-12	1. Where rare fauna (vertebrate and invertebrate) stands to be lost, every effort should be made to minimise the impact. 2. Prohibit / control access to portions of the property that is to remain undeveloped; and ensure that animals are not impacted on (e.g. illegal poaching). 3. Clear the site in a logical sequence and manner that allows mobile species to escape. 4. Maintain any habitat corridors effectively.	2	2	-1	1	-5	1	-5
Increased job opportunities for unskilled labour	3	3	2	0	12	2	24	1. Meet the requirements of the government policies for procurement and employment, as are applicable to local government, to take care of and avoid potential conflict between people in the immediate surroundings seeking employment and those from elsewhere.	3	3	3	0	18	2	36
Increased dust emissions as a result of construction machinery moving material to and from the site	3	3	-2	0	-12	2	-24	1. Control the amount of construction vehicles on site. 2. Exposed soil must be dampened to prevent wind action from causing dust plumes. 3. Machinery and vehicles must be in good working conditions so as to emit minimal air pollution.	2	3	-1	1	-6	1	-6
<b>Indirect impacts</b>															
Siltation/Sedimentation of watercourses as a result of excavation of trenches	3	3	-2	0	-12	1	-12	1. Reduce the disturbance generated by construction vehicles on site, reducing dust emissions. 2. Adequate levelling and compaction during construction activities so to reduce the wind blow pollution. 3. Adequate stockpiling of topsoil, away from prevalent winds and high gradient slopes. 4. Sedimentation control devices, such as berms, must be temporarily installed in order to prevent sedimentation. 5. Soil storage areas must be located further than 50 meters from any water body or water source.	2	2	-1	1	-5	1	-5
Impact of improper waste management on site	3	3	-2	0	-12	1	-12	1. Identify disposal sites for the various categories of waste likely to be generated on site. 2. Make sure general cleanliness on site 3. Reduce, recycling and reuse of waste must occur whenever possible. 4. Recycling bins must be separate and clearly marked according to material 5. Waste must be stored safely away from employees' and residents' exposure. 6. Construction debris is not to be buried on site. 7. No burning of waste will occur on site, unless to remove alien seeds from storage sites.	2	2	-1	1	-5	1	-5
Potential impact on heritage resources and artefacts as a result of excavation of trenches	3	3	-2	1	-14	1	-14	1. AMAFA should be contacted if any graves are identified during earth moving activities and all development should cease until further notice. 2. No structures other than sixty years are allowed to be demolished, altered or destroyed without a permit from AMAFA.	2	2	-2	1	-10	1	-10
<b>Cumulative Impacts</b>															
Increase in alien vegetation	4	2	-3	0	-18	1	-18	1. Any exotic vegetation (trees and plants) encountered should be removed from the site and properly disposed of. 2. All bare surfaces across the construction site must be checked for alien plants at the end of every week and alien plants removed by hand pulling and adequately disposed. 3. Monitor the route for a one year period afterwards, at six month intervals, and destroy any alien species that establish within the construction footprint. Best practice will involve herbicide treatment or herbicide treatment following cutting of stumps or frilling of non-herbaceous alien plants, not cutting alone. 4. Where construction encroaches into open space areas, destroy all alien species within 30 metres of the footprint during or by the end of construction and allow follow up annually for two years. However, due to the difficulty and hazard (including to members of the public) in dealing with the very tall Eucalyptus grandis trees in open space area 5, cutting down or frilling and herbiciding of the trees can be omitted.	2	2	-1	0	-4	1	-4
<b>OPERATIONAL PHASE</b>															
<b>Direct Impacts</b>															
Soil erosion as a result of Scouring of the pipeline during testing, maintenance and operation	3	2	-2	1	-12	2	-24	1. Topsoil to be removed prior to construction and stockpiled for rehabilitation during decommissioning. 2. Soil storage areas must be located further than 50 meters from any water body or water source.	2	2	-1	1	-5	1	-5
Increased noise generation during maintenance of the pipeline	2	1	-2	0	-6	2	-12	1. Limit the amount of construction vehicles on site. 2. Maintain construction vehicles and machinery in good working order to reduce the noise on site 3. Equipment should be fitted with noise reduction devices.	2	2	-1	0	-4	1	-4
<b>Indirect impacts</b>															

Establishment of alien vegetation in areas disturbed during construction	4	2	-2	0	-12	2	-24	1	2	-1	0	-3	1	-3							
<b>Cumulative Impacts</b>																					
None identified																					
<b>DECOMMISSIONING PHASE</b>																					

1. Monitor the route for a one year period afterwards, at six month intervals, and destroy any alien species that establish within the construction footprint. Best practice will involve herbicide treatment or herbicide treatment following cutting of stumps or frilling of non-herbaceous alien plants, not cutting alone.

2. Where construction encroaches into open space areas, destroy all alien species within 30 metres of the footprint during or by the end of construction and allow follow up annually for two years. However, due to the difficulty and hazard (including to members of the public) in dealing with the very tall Eucalyptus grandis trees in open space area 5, cutting down or frilling and herbiciding of the trees can be omitted.