

ALTERNATIVE (NOT-PREFERRED): BONATHABA DAM: THE PROPOSED DEVELOPMENT OF AN INSTREAM DAM ON PORTIONS 2 AND 3 OF FARM NO. 1100, BONATHABA, MALMESBURY, WESTERN CAPE															
Nature of Impact			Without Mitigation (Baseline)					With Mitigation					Proposed Mitigation		
Number	Aspect	Impact	Probability (Likelihood)	Extent	Duration (Frequency)	Magnitude (Intensity/Severity)	Receiving Environment (Consequence)	Without Mitigation Score (Baseline)	Probability (Likelihood)	Extent	Duration (Frequency)	Magnitude (Intensity/Severity)		Receiving Environment (Consequence)	With Mitigation Score (Impact Assessment)
CONSTRUCTION PHASE															
1		Loss of Swartland State Renosterveld (CR)	-16	-2	-16	-8	-8	-10	-8	-2	-4	-4	-4	-5	Implementation of the EMPr: "A suitably qualified ECO must be appointed." Environmental Awareness training to be conducted with all workers; " Ensure construction activities are restricted to the demarcated footprint, strictly prohibit any vehicles or construction related activities outside of the demarcated footprint area " Access roads to the dam should be limited to a single circular route in and out. Ensure construction vehicles stay on existing roads and erect signs to remind workers not to deviate from the roads.
2	Botanical	Loss of ESAs	-8	-2	-8	-8	-4	-6	-2	-1	-2	-8	-2	-3	Implementation of the EMPr: "Ensure construction activities are restricted to the demarcated footprint and strictly prohibit any vehicles or construction related activities outside of the demarcated footprint area. Mitigation measures would include selecting the preferred alternative location / layout.
3		Soil Contamination	-4	-2	-4	-2	-8	-4	-2	-1	-2	-4	-2	-3	" Implementation of the EMPr: "Ensure construction activities are restricted to the demarcated footprint and strictly prohibit any vehicles or construction related activities outside of the demarcated footprint area. "Concrete mixed on site as per the EMPr and surplus must be disposed of in the correct manner. " Inspect all vehicles daily for the early detection of deterioration or leaks. " The contractor should ensure drip trays are placed under stationary vehicles. " Spill kits must be available. Workers should be trained how to use spill kits to rectify a spill immediately. Records must be kept of any spills. " Portable toilets must be placed no less than 32m from any watercourse/ stream and serviced regularly in order to prevent leakage/spillage.
4		Loss of Riparian Habitat	-2	-2	-8	-8	-4	-5	-1	-2	-2	-2	-2	-2	" Ensure construction activities and vehicles are restricted to the demarcated areas to prevent further degradation. Access roads to the dam should be limited to a singular route in and out; " Vehicles will not be permitted to drive through the streams; " Ensure construction footprint is kept as small as possible.
5		Alteration of Hydrology of the drainage line	-2	-2	-8	-8	-4	-5	-2	-1	-2	-2	-2	-2	" Ensure construction activities are restricted to the demarcated footprint and strictly prohibit any vehicles or construction related activities outside of the demarcated footprint area. " No concrete will be mixed on site and surplus must be disposed of in the correct manner. " Construction should be limited to the dry season " Ensure no building material allowed to wash down stream " Line the spillway with natural stone rather than concrete; " Ensure construction footprint is kept as small as possible;
6	Freshwater	Impact on downstream users.	-2	-4	-8	-8	-4	-6	-2	-1	-2	-4	-2	-3	Drainage lines are transformed "Ensure conditions stipulated in the Water Use Right (Appendix 9) are complied with. " Watercourses outside of the proposed construction area must be demarcated as "no-go" zones. " Areas outside of proposed construction footprint "Conserve as much biodiversity (e.g. reeds) within the previously transformed drainage lines as possible (reduces erosion potential of water entering transformed drainage lines) "Ensure construction activities are restricted to the demarcated footprint and strictly prohibit any vehicles or construction related activities outside of the demarcated footprint area. " No concrete will be mixed on site and surplus must be disposed of in the correct manner. " Construction should be limited to the dry season " Ensure no building material allowed to wash down stream " Line the spillway with natural stone rather than concrete. " Ensure construction footprint is kept as small as possible
7		Surface water & ground water contamination	-2	-2	-8	-8	-4	-5	-2	-1	-2	-2	-2	-2	" Implementation of the EMPr: "Ensure construction activities are restricted to the demarcated footprint and strictly prohibit any vehicles or construction related activities outside of the demarcated footprint area. "Concrete mixed on site as per the EMPr and surplus must be disposed of in the correct manner. " Inspect all vehicles daily for the early detection of deterioration or leaks. " The contractor should ensure drip trays are placed under stationary vehicles.
8		Loss of Agricultural Land	-8	-2	-4	-4	-4	-5	-4	-2	-2	-2	-2	-3	Mitigation measures include impacting the minimal extent of agricultural area.
9	Dust	Dust from site (topsoil removal, construction, rehabilitation)	-2	-1	-2	-2	-2	-2	-2	-1	-2	-2	-2	-2	Dust will be monitored. If dust becomes a problem, dust will be controlled by means of water spray vehicles. No over watering of the site area or roads surfaces should occur. Speed limits must be enforced in all areas to limit the levels of dust pollution. Max speed of 40km/h must be maintained. Protect stockpiled topsoil using tarp or erosion blankets. Stockpile topsoil within an area where no stormwater runoff is expected. The alternative location would be further from the public road and therefore, out of visual site.
10	Visual	Negative visual impact of the proposed development	-2	-1	-2	-2	-2	-2	-2	-1	-2	-2	-2	-2	Construction related activities should remain within the demarcated footprint