

B.		Impact Rating: Construction Phase	Darling Brug & Waaboomsrivier Irrigation Boards: Water division structure, Pipelines, Canal Rehab												
			WITHOUT MITIGATION					WITH MITIGATION							
No.	ASPECT	IMPACT	Probability	Extent	Duration	Magnitude	Receiving Environment	Without Mitigation Score (Baseline)	Probability	Extent	Duration	Magnitude	Receiving Environment	With Mitigation Score (Impact assessment)	Short Description of Mitigation Measures
1	Botanical	Potential loss vulnerable or endagred vegetation (Breede Shale Fynbos- Least Threatened) and associated habitat	-4	-2	-4	-4	-1	-3	-1	-2	-2	-3	-1	-1,8	No loss of vulnerable or endangered vegetation is expected as the area is distubred *A suitably qualified ECO must be appointed; *All effortst must be made to protect remaining buffer zone and its vegetation next to the stream; *When working in any remaining natural veld and next to the river, natural veld and riparian vegetation must be demarcated and access routes pre-determined;* Before any work is done physically demarcate the footprint of the proposed development & access routes route and strictly prohibit any vehicles or construction related activities outside of the demarcated footprint area - This can be done with danger tape, which should be removed once the construction activities have been completed; *Ensure signs are put up reminding workers to stay on the existing roads; Indiscriminate cleaning of areas must be avoided; * All alien plants to be removed within the construction footprint and immediate surroundings; * An intergrated waste plan to be agreed upon and implemented;* Environmental Awareness training to be conducted with all workers; *Alien invasive plants to be removed in the footprint. In the riparian zone, alien vegetation must be done by had, leaving the root system intact so that it can still bind the soil, the correct chemicals must be used to ensure the alien plant will die.
		Loss CBA/ESA	-4	-2	-4	-4	-1	-3	-1	-1	-1	-1	-1	-1	-1

Soil contamination from vehicles/ concrete/ portable toilets	-2	-2	-2	-2	-1	-1,8	-1	-2	-1	-1	-1	-1,2	<p>* Ensure construction activities are restricted to the demarcated footprint and strictly prohibit any vehicles or construction related activities outside of the demarcated footprint area.</p> <p>* No concrete will be mixed on site and surplus must be disposed of in the correct manner. * Inspect all vehicles daily for the early detection of deterioration or leaks.</p> <p>* The contractor should ensure drip trays are placed under stationary vehicles.</p> <p>* 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. No portable toilets to be placed in watercourse 1 where the weir it to be rehabilitated.</p>
Destabilisation of the river banks and erosion	-4	-2	-4	-8	-2	-4	-2	-2	-2	-2	-2	-2	<p>* Ensure construction activities and vehicles are restricted to the demarcated areas; Vehicles will not be permitted to drive through the streams;</p> <p>* Ensure construction footprint is kept as small as possible. * Placing of riprap mattresses in river bed;</p> <p>*When working next to the river, the pipeline must be placed as far away from the riverbank as possible in order to minimise the risk of riverbank destabilisation.</p>
Loss of riparian habitat	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	<p>Riparian habitats are already considered disturbed</p> <p>* Ensure construction activities and vehicles are restricted to the demarcated areas to prevent further degradation. Access roads to the site should be limited to a singular route in and out;</p> <p>* Vehicles will not be permitted to drive through the streams;</p> <p>* Ensure construction footprint is kept as small as possible; *When working next to the river, the pipeline must be placed as far away from the riverbank as possible in order to minimise the risk of riverbank destabilisation.</p>

2	Water	Alteration of hydrology	-4	-2	-4	-2	-2	-2,8	-2	-1	-2	-1	-2	-1,6	<p>* Ensure construction activities are restricted to the demarcated footprint and strictly prohibit any vehicles or construction related activities outside of the demarcated footprint area.</p> <p>* No concrete will be mixed on site and surplus must be disposed of in the correct manner.</p> <p>* Construction should be limited to the dry season</p> <p>* Ensure no building material stockpiled allowed to wash down stream</p> <p>* Ensure construction footprint is kept as small as possible; Should water be present during construction (as in the case with the rehabilitation of the existing weir of which the canal will be rehabilitated), the stream and surface water should be collected and diverted through or around the construction site by way of a combination of temporary works including cut-off and bypass channels, a small coffer dam, temporary pumps if necessary, etc, to collect and contain the water in order to ensure safe and acceptable working conditions. The outlet pipe will be installed early in order to be used as bypass when and if further construction takes place in the stream bed.</p>
3	Heritage	Loss of Heritage resources	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	<p>In the case that any heritage resources, including evidence of graves and human burials, archaeological material and paleontological material be discovered during the execution proposed project, all works must be stopped immediately and Heritage Wstern Cape must be notified without a delay.</p>
4	Dust	Potential dust from construction activities	-2	-1	-1	-1	-1	-1,2	-1	-1	-1	-1	-1	-1	<p>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</p>
5	Visual	Potential visual impact from construction	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	<p>Construction related activities should remain within the demarcated footprint</p>
6	Noise	Potential noise from construction	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	<p>* Construction noise is expected to be minimal</p> <p>* Construction should take place during daylight hours.</p>