Α.	Impact Rating: Pre- Construction	Darling Brug & Waaboomsrivier Irrigation Boards: Water division structure, Pipelines, Canal Rehab	WI	THOU	T MI	TIGA	TION	N		V	VITH	MITIG	iATI	ON		
No.	ASPECT	IMPACT	Probability	Extent	Duration	Magnitude	Т.		Without Mitigation Score (Baseline)	Probability	Extent	Duration	Magnitude		With Mitigation Score (Impact assessment)	Short Description of Mitigation Measures
		Potential loss vulnerable or endagred vegetation (Breede Shale Fynbos- Least Threatened) and associated habitat	-4	-2	-4	-4	-1	1	δ	-1	-2	-2	-3	-1	-1,8	No loss of Breede Shale Fynbos is expected as the area is distubred *A suitably qualified ECO must be appointed; *All efforst 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.

1	Botanical	Loss of CBAs/ESA's	-4	-2	-4	-4	-1	-3	-1	-2	-2	-3	-1	-1,8	CBA/ESA are already highly compromised in the area; Before any work is done physically demarcate the footprint of the proposed development & access routes and strictly prohibit any vehicles or construction related activities outside of the demarcated footprint area; * Ensure signs are put up reminding workers to stay on the existing roads/ in the construction footprint; *Indiscriminate cleaning of areas must be avoided; * Environmental Awareness training to be conducted with all workers; *All efforst 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; *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.
		Soil contamination from vehicles on site	-2	-2	-2	-2	-1	-1,8	-1	-2	-1	-1	-1	-1,2	* 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 or ectify a spill immediately. * Records must be kept of any spills.* Portable toilets must be located at least 32m from the boundary of the any streams must be serviced regularly in order to prevent leakage/spillage.* No cement mixing on site.

		Destablisation of river banks from site prep and alien clearing	-4	-2	-4	-8	-2	-4	-2	-2	-2	-2	-2	-2	Indiscriminate cleaning of areas must be avoided; * Environmental Awareness training to be conducted with all workers; *All efforts must be made to protect the remaining buffer zone and its vegetation next to the stream; *All alien invasive plant species within the footprint must be removed. In the riparian zone alien vegetation must be removed by hand, leaving the root system intact so that it can still bind the soil. However, where necessary the correct chemicals must be used to ensure that the alien invasive plant will die. *All efforst 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; *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.
2	Water	Loss of riparian habitat	-4	-2	-4	-8	-2	-4	-2	-1	-4	-4	-2	-2,6	The riparian habitats are already considered to be disturbed/deneutralised. To mitigate further disturbance: *Before any work is done physically demarcate the footprint. & access routes and strictly prohibit any vehicles or construction related activities outside of the demarcated footprint area. *Ensure signs are put up reminding workers to stay on the existing roads. *Indiscriminate cleaning of areas must be avoided; *Environmental Awareness training to be conducted with all workers; *As a precautionary measure, importance must be given to emergency preparedness with regards to any spillages or leakage of hydrocarbons/ concrete on site; *Ready-mix concrete is proposed. *All efforst 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; *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.

		Alternation of hydrology/ aquatic environment	-4	-2	-4	-2	-2	-2,8	-2	-1	-2	-1	-2	-1,6	.Environmental Awareness training to be conducted with all workers: * A suitably qualified ECO must be appointed; * Before any work is done physically demarcate the footprint of the proposed dam & 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 and not to enter any streams: * Portable toilets must be located at least 32m from the boundary of the any streams must be serviced regularly in order to prevent leakage/spillage; * No cement mixing on site.
3	Heritage	Loss of heritage resources	-2	-1	-1	-1	-1	-1,2	-1	-1	-1	-1	-1	-1	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.
4	Dust	Potential dust from ground clearing and topsoil removal	-4	-1	-1	-1	-1	-1,6	-1	-1	-1	-1	-1	-1	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 at 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
ŗ	Visual		-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	Construction related activities should remain within the demarcated footprint
6	Noise		-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	No noise to be expected