

Project Name: Gariep Housing Development				Nature of Impact		Without Mitigation (Baseline)			With Mitigation			With Mitigation Score Impact Assessment	Short Description of some Mitigation Measures / Enhancement Measures						
ENVIRONMENTAL RATING SIGNIFICANCE KEY				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	Short Description of some Mitigation Measures / Enhancement Measures			
ENVIRONMENTAL RATING SIGNIFICANCE KEY				CONSTRUCTION PHASE															
ENVIRONMENTAL RATING SIGNIFICANCE KEY				OPERATION PHASE															
ENVIRONMENTAL RATING SIGNIFICANCE KEY				DECOMMISSIONING AND CLOSURE PHASES															
Negative Impacts	Very Significant	High	+7 to +11	1	Soil	On site erosion due to improper management of stormwater during construction. Exposed platforms and trenches excavated for any pipelines are susceptible to erosion during the construction phase.	-8	-2	-2	-8	-8	-6	-4	-2	-2	-4	-2	-3	
				2	Erosion and safety hazards associated with excavated pipelines which are not backfilled.	-8	-2	-4	-8	-4	-6	-2	-1	-2	-8	-2	-2	-3	
				3	Sedimentation of drainage line due to the uncontrolled stormwater runoff naturally flowing towards the drainage line.	-2	-2	-8	-16	-4	-7	-1	-2	-4	-8	-2	-2	-4	
	Significant	Medium	+3 to +7	4	Watercourse	Contamination of drainage line and irrigation canal due to inappropriate dumping of waste, storage and use of hazardous materials/ substances.	-2	-1	-8	-16	-4	-7	-2	-1	-2	-2	-2	-2	
				5	Insufficient number of toilets and / or inappropriate disposal of sewage generated during the construction phase.	-8	-4	-2	-8	-4	-6	-2	-1	-2	-4	-2	-2	-3	
				6	Temporary increase in waste and litter contaminating the receiving environment (including the Gariep Canal).	-8	-4	-2	-4	-4	-5	-4	-2	-2	-2	-4	-2	-3	
	Increasing Significance	Low	-2 to -4	7	Botanical	Clearance of vegetation from within the Lower Gariep Alluvial (ELA) and Bottoms Area (Grassland) (1).	-8	-2	-8	-8	-4	-6	-8	-2	-2	-4	-4	-4	
				8		Protected & endangered plant species. Potential impact on threatened or protected.	-16	-2	-8	-16	-4	-10	-4	-2	-2	-2	-2	-2	-3
				9		Landuse and cover. Potential impact on protected areas, CEBA's, ESA's or Centre's of Endemism.	-16	-2	-4	-4	-8	-7	-4	-2	-2	-2	-2	-2	-3
	Significance	High	+1 to +3	10		Landuse and cover. Potential impact on socio-economic activities.	-4	-2	-2	-4	-4	-4	0	-2	-1	-4	-4	-3	
				11		Connectivity: Potential loss of ecological migration corridors.	-4	-4	-2	-4	-4	-4	-4	-2	-2	-2	-4	-3	
				12		Encroachment of alien invasive vegetation in disturbed areas during construction activities.	-16	-2	-4	-4	-8	-7	-4	-2	-2	-2	-2	-2	-3
	Increasing Significance	Medium	-4 to -8	13		Veld fire risk: Potential risk of wild fires as a result of the activities.	-4	-2	-2	-4	-4	-4	-4	-2	-2	-2	-2	-4	-3
				14		Cumulative impacts: Cumulative impact associated with proposed activity.	-16	-2	-8	-8	-8	-9	-4	-2	-2	-4	-4	-4	
				15		The "No-Go" option: Potential impact associated with the No-Go alternative.	-16	-4	-8	-8	-8	-9	0	0	0	0	0	0	0
Very Low	Low	-1 to +1	16	Services		Increased demand for services impacting current services capacity (i.e. increased demand for water, electricity, sewage disposal).	-16	-2	-16	-8	-4	-10	-4	-2	-8	-2	-4	-4	
			17	Impact on Cultural, Archaeological, Paleontological, and Heritage		Artefacts may be discovered and/or damaged during the construction phase.	-2	-4	-2	-4	-2	-3	-2	-2	-2	-2	-2	-2	
			18	Loss and/or damage to potential fossils and archaeological and historical sites within the construction footprint.		-2	-4	-2	-4	-2	-3	-2	-2	-2	-2	-2	-2		
Very Low	Low	-1 to +1	19	Health and Safety associated with the Irrigation Canal		Community members, especially minor children, playing in the irrigation canal resulting in injury or drownings.	-8	-8	-8	-16	-8	-10	-2	-2	-2	-8	-2	-4	
			20	Socio-economic		Creation of short-term employment opportunities during the construction phase.	8	2	2	4	2	4	8	2	2	4	2	4	
			21	Dust		Dust will be generated during the construction of the proposed development which may impact drivers and commuters.	-8	-4	-2	-8	-2	-5	-2	-4	-2	-4	-2	-2	-3
Very Low	Low	-1 to +1	22	Visual	Site may be not aesthetic amid natural background.	-16	-2	-16	-4	-2	-8	-16	-2	-2	-1	-2	-5		
			23	Noise	Noise will be generated during the construction phase.	-8	-2	-2	-4	-4	-4	-4	-2	-2	-2	-4	-3		
			24	Unsustainable sourcing of raw materials	Illegal sourcing of raw materials, such as gravel, sand, water etc. promoting illegal mining operations causing significant damage to the environment.	-8	-4	-8	-8	-8	-8	-2	-1	-4	-8	-4	-4		
Positive Impacts	Very High	+12 to +16	25	Sewage Management	Impact on the receiving environment, especially the Orange river and its tributaries, due to the inability of the current sewage disposal method (VIPs) to adequately prevent the contamination of the surrounding environment.	-8	-8	-8	-16	-8	-10	-4	-4	-2	-4	-4	-4		
			26		All existing households within the Gariep Settlement are serviced by Ventilated Improved Pit (VIP) toilets as no bulk sewer infrastructure is present. As per the Engineer's Services Report, a full-borne sewerage system is recommended.	-16	-8	-8	-16	-8	-12	-4	-4	-2	-4	-4	-4		
			27	Water supply	Increased pressure on water source for water supply.	-8	-4	-1	-8	-8	-6	-4	-4	-1	-4	-4	-4		
			28	Botanical	Encroachment of alien invasive vegetation throughout the site.	-4	-2	-4	-8	-4	-5	-2	-2	-4	-4	-1	-3		
Very Low	Low	-1 to +1	29	Waste	Demolition of infrastructure resulting in waste accumulation on site and surrounding area.	-16	-2	-4	-8	-4	-7	-4	-1	-2	-2	-4	-3		
			30	Soil and water	Exposed soil becoming prone to erosion and sedimentation of the drainage line.	-8	-2	-8	-8	-4	-6	-2	-1	-2	-4	-4	-3		