

**Project Name: Gariep Housing Development**

ENVIRONMENTAL RATING SIGNIFICANCE KEY			
Negative Impacts	Very Significant	Very High	Final rating score / value range >11 to -16
	Significant	High	>-7 to -11
	Increasing Significance	Medium	>-4 to -7
Positive Impacts	Insignificant	Low	-2 to -4
	Significant	High	10 to 16
	Increasing Significance	Medium	4 to <10
Insignificant	Low	1 to <4	

Number	Aspect	Nature of Impact	Without Mitigation (Baseline)					Without Mitigation Score (Baseline)	With Mitigation					With Mitigation Score (Impact Assessment)
			Probability (Likelihood)	Extent	Duration (Frequency)	Magnitude (Intensity/Severity)	Receiving Environment (Consequence)		Probability (Likelihood)	Extent	Duration (Frequency)	Magnitude (Intensity/Severity)	Receiving Environment (Consequence)	
<b>CONSTRUCTION PHASE</b>														
1	Soil	On site erosion due to improper management of stormwater during construction. Exposed platforms and trenches excavated for any pipeline 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	-3
3	Watercourse	Sedimentation of drainage line due to the uncontrolled stormwater runoff naturally flowing towards the drainage line.	-2	-2	-8	-16	-4	-7	-1	-2	-2	-8	-2	-3
4		Contamination of drainage line due to inappropriate storage and use of hazardous materials/ substances.	-2	-1	-8	-16	-4	-7	-2	-1	-2	-2	-2	-2
5		Contamination of drainage line with sewage due to spillages associated with the existing WWTW.	-16	-4	-16	-8	-4	-10	-2	-2	-2	-2	-2	-2
6	Waste	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	-3
7		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	-3
8	Botanical	Clearance of vegetation from within the Bushmanland Arid Grassland.	-16	-2	-8	-16	-4	-10	-8	-2	-2	-4	-4	-4
9		Impact on existing protected flora.	-16	-2	-8	-8	-4	-8	-8	-2	-2	-2	-2	-4
10		Encroachment of alien invasive vegetation in disturbed areas during construction activities.	-16	-2	-4	-4	-8	-7	-4	-2	-2	-2	-2	-3
11		No-Go (site will remain as is. Alien invasive plant species encroachment will increase).	0	-2	-1	-2	0	-1	0	-2	-1	-2	0	-1
12	Biodiversity	Loss of area within the CBA	-16	-2	-8	-16	-4	-10	-16	-2	-2	-2	-2	-5
13	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
14	Impact on Cultural, Archaeological, Palaeontological 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
15		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
16	Socio-economic	Creation of short-term employment opportunities during the construction phase.	8	2	2	4	2	4	8	2	2	4	2	4
17	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	-3
18	Visual	Site may be not aesthetic amid natural background.	-16	-2	-16	-4	-2	-8	-16	-2	-2	-1	-2	-5
19	Noise	Noise will be generated during the construction phase.	-8	-2	-2	-4	-4	-4	-4	-2	-2	-2	-4	-3
20	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
<b>OPERATION PHASE</b>														
21	Inadequate capacity and/or failure of the Wastewater Treatment Works (WWTW).	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 (Mitigation includes the construction of the recommended WWTW).	-16	-8	-4	-16	-4	-10	-4	-4	-2	-8	-4	-5
22		Maintenance of WWTW resulting in contamination of receiving environment (Mitigation includes the construction of the recommended WWTW).	-16	-8	-4	-16	-4	-10	-4	-4	-2	-8	-4	-5
23	Water supply	Increased pressure on water source for water supply.	-8	-4	-1	-8	-8	-6	-4	-4	-1	-4	-4	-4
24	Botanical	Encroachment of alien invasive vegetation throughout the site.	-4	-2	-4	-8	-4	-5	-2	-2	-4	-4	-1	-3
<b>DECOMMISSIONING AND CLOSURE PHASES</b>														
25	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
26	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