

Nature and Consequences of impact	Duration / Frequency of activity likely to cause impact	Geographical Extent	Severity (level of damage caused) if impact were to occur	Probability of impact without mitigation	Significance before application of Mitigation Measures	Will activity cause irreplaceable loss of resources?	Mitigation	Probability of impact after mitigation	Significance after application of Mitigation Measures
The following table rates impacts after the application of mitigation measures and operates on a scale of 0-14. A score of between 1 and 5 is rated as low. A score of between 6 and 10 is rated as medium. A score of between 11 and 14 is rated as high.	0 = No impact 1 = short term / once off 2 = medium term / during operation 3 = long term / permanent	0 = No impact 1 = point of impact / restricted to site 2 = local / surrounding area 3 = regional	0 = No impact 1 = minor; 3 = medium 5 = major	0 = No impact 1 = Low 2 = Medium 3 = High	1 - 5 = low. 6 - 10 = medium. 11 - 14 = high.	10 = Yes = No	0 = No impact - 5 = can be fully mitigated - 3 = can be partially mitigated - 1 = unable to be mitigated	0 = No impact 1 = Low 2 = Medium 3 = High	1 - 5 = low. 6 - 10 = medium. 11 - 14 = high.
	A	B	C	D	Significance	E	F	G	Significance
1. Dusty conditions generated during construction and by construction vehicles.	1	1	1	2	5	0	-3	1	3
2. Construction vehicles and personnel creating a nuisance to the surrounding area and businesses.	1	2	3	2	8	0	-3	0	5
3. Impact on existing services i.e. power lines, water pipes, infrastructure, etc.	1	2	3	1	7	0	-3	0	4
4. Damage to properties, fencing and subsistence farming plots during laying of pipework.	2	2	3	1	8	0	-3	0	5
5. Deposition of eroded material into water bodies when laying pipe across the 72 watercourses impacting water quality (increased turbidity, reduction of dissolved oxygen).	1	2	5	2	10	0	-5	1	6
6. Physical damage to wetland areas associated with the rivers and tributaries during excavation, resulting in the loss of wetland.	1	2	5	2	10	0	-5	0	5
7. Temporary increase in waste and litter due to the construction process.	1	2	1	2	6	0	-3	1	4
8. Insufficient number of toilet facilities on site resulting in the contamination of the environment.	2	1	3	2	8	0	-3	0	5
9. Contamination of the receiving environment due to inappropriate storage and usage of hazardous materials and substances (cement, fuel etc.).	2	1	2	2	7	0	-4	1	4
10. Erosion of exposed soil prior to the rehabilitation of the construction area (i.e. trenches).	3	2	3	2	10	0	-5	0	5
11. Trenches remaining open for long periods of time, causing them to collapse, creating an erosion and safety hazard.	1	1	3	2	7	0	-3	1	5
12. Incorrect filling of trenches on completion creating points of erosion, especially on slopes and near watercourses.	2	1	3	2	8	0	-3	0	5

13. Excavations within the area impacting on features with heritage value (i.e. graves).	1	1	3	1	6	0	-5	0	1
14. Clearing of indigenous vegetation during the laying of the pipeline and temporary access points in a threatened ecosystem type.	1	1	3	3	8	0	-3	1	6
15. Encroachment of alien vegetation into disturbed areas during construction.	3	1	2	2	8	0	-4	1	5
16. Loss of riparian vegetation during excavation for pipework crossings on watercourses, leading to erosion and damage to stream banks.	1	2	2	3	8	0	-4	1	5
17. Clearance of vegetation from within the pipe footprint area.	2	2	1	2	7	0	-5	1	3
18. Upgrading and constructing the water supply to the local area.	0	0	0	0	0	0	0	0	0
19. Long-term erosion around watercourses and damage to watercourse banks where pipe crossings have been placed.	3	2	2	2	9	0	-5	1	5
20. Placement of pipes in the beds of watercourses impacting the flow regime of the rivers.	3	1	2	1	7	0	-4	1	4
21. Water pipes bursting resulting in localised flooding and erosion.	1	2	3	2	8	0	-4	1	5
22. Illegal connections resulting in damage to pipework, flooding, erosion and loss of water supply.	1	1	3	1	6	0	-5	0	1
Decommissioning									
23. Rubble, soil and material left on site and in close proximity to the watercourses.	1	1	3	2	7	0	-5	0	2
Cumulative									
24. General pollution and sedimentation within the catchment.	2	2	1	2	7	0	-5	0	2
25. Pressure on water resources in the Middeldrift area.	1	2	1	2	6	0	-4	1	3
26. Improved service delivery to the local area.	0	0	0	0	0	0	0	0	0
Alternative 2 (alt)									
1. All general construction related impacts remain the same for the preferred and alternative technology alternatives.	See "Nature and Consequences of Impact" for more information.								
2. Impacts No.5 and 6 remain the same for both technology alternatives	3	2	3	3	11	0	-5	2	8
3. Having a raised pipe above the surface level would expose the pipe to flood damage and consequential ongoing maintenance and service disruption.	3	2	3	3	11	0	-5	3	9
4. Decommissioning impacts remain the same for both the preferred and alternate crossing techniques.	See "Nature and Consequences of Impact" for more information.								
5. Cumulative impacts remain the same for both the preferred and alternate layouts.	See "Nature and Consequences of Impact" for more information.								