

PROJECT:**Zandhoogte Development, Groot Brak****RISK ASSESSMENT MATRIX for Section 21 (c) and (i) Water Use activities - Version 2.1.1****Name of Assessor:** Colin Fordham**SACNASP Registration Number:** 400166/14**Date of assessment:** 03/11/2025

Phase	Activity	Impact	Significance (max = 100)	Risk Rating	Confidence level
CONSTRUCTION	<1> Earthworks, vegetation clearing, topsoil removal, excavations, and stockpiling for construction near small dams	<1a> Habitat loss and disturbance to biota from accidental encroachment and burying of habitat	7,2	L	High
		<1b> Sedimentation/ changes to sediment regime from unconsolidated material being washed into dams	9,6	L	High
	<2> Soil compaction and installation of stormwater infrastructure resulting in changes to stormwater runoff velocity, volume and pathways	<2a> Erosion as a result of hydrological changes in catchments	2,8	L	High
		<2b> Changes to flow regime/ hydroperiod	12	L	High
	<3> Vehicles and machinery, workers, and general construction materials (cement, tar, rubble, imported infill soils, domestic waste, etc.) and activities near watercourses	<3a> Habitat loss from direct, accidental encroachment and disturbance to biota from nearby human activities (such as noise, light, domestic animals, and dust)	5,6	L	High
		<3b> Deterioration of water quality from contaminated stormwater runoff (hydrocarbons, cement, litter, sewage etc.) and turbidity	9,6	L	High
OPERATIONAL	<1> Urban development causing changes to the quality, velocity, volume, and flow paths of stormwater runoff into watercourses	<1a> Erosion as a result of hydrological changes	4	L	High
		<1b> Changes to flow regime/ hydroperiod	19,2	L	High
		<1c> Deterioration of water quality	12	L	High
	<2> 'Edge effects' of urban development near watercourses (such as dumping, footpaths, noise, domestic predators, hunting/ harvesting, and informal encroachment)	<2a> Erosion and sedimentation from land degradation and encroachment	3,6	L	High
		<2b> Direct habitat loss and disturbance to biota	8	L	High
		<2c> Deterioration of water quality	7,2	L	High