PROJECT: **Wells Estate - Checkers facility expansion**

RISK ASSESSMENT MATRIX for Section 21 (c) and (i) Water Use activities (Version 2.1.1)

POTENTIALLY AFFECTED WATERCOURSE/S			FIELD-VERIFIED ASSESSMENT RESULTS				
Watercourse number	**Watercourse name**	**Watercourse type**	**PES**	**EI**	**ES**	**EIS**	**Wetland Importance**
(1)	Wetlands._ Pans 500m regulated zone only, however there is no hyrdological connection between this site and the wetland catchment due to being a small pan	Wetland (incl. pans)	C				High
(2)							
(3)							
(4)							
(5)							
(6)							
(7)							
(8)							
(9)							
(10)							

DETAILED PROJECT SPECIFICATIONS:
Include detailed project description, including all proposed control measures to prevent/minimise impacts on watercourses

The primary land-use of the development will be Warehousing with ancillary Offices. Six zones within the property will be established made up of a combination of warehousing/ offices and these will be surrounded by roads, parking, service infrastructure and open spaces. The total development footprint is ± 66 792 m2. Refer to the SDP in Figure 9 below.

Access to the site will be from M Kaulela Street. The internal distribution road will be 11m wide from kerb to kerb consisting of two 4m wide lanes and two 1.5m wide yellow shoulders, with paved walkways on both sides. The main entrance off M Kaulela Street will be four lanes through a security checkpoint. The guardhouse will be set back from the street to allow for stacking of trucks.

Stormwater run-off will be concentrated to low points in the parking areas and marshalling yards, from where the minor portion of runoff will be conveyed via a conventional underground system. The internal roads, marshalling yards, parking areas and channels will act as overland flow routes for major storm events. A new stormwater connection from the existing stormwater canal to the south of the property (crossing the R102 to the site) will be constructed. The pipe route is across municipal land, and it is recommended that the culvert be laid within an 8m wide servitude along the south-western boundary of ERF 8741 (Shoprite Checkers DC).

Two stormwater attenuation facilities/dams will be constructed on the southwestern and south-eastern boundaries, respectively. The attenuation dams will act as dry detention basins, with a combined extended storage available to effectively attenuate up to a 1: 50-year post development flood, to 1:5-year pre-development flood levels. These facilities will effectively manage and convey stormwater run-off of up to 1:100-year rainfall events to minimize the risk of flooding of internal and downstream properties. A minimum combined storage volume of 2038m3 is required. The attenuation dam outlets will be connected to the existing stormwater channel to the south-east of the site, via the new proposed culvert.

Due to the flatness of the area, each of the six zones will have its own sewer collection sump and pump station lifting the sewer and discharging into the existing main sewer pump station. The internal sewer network for the individual sites will consist of a 160mm diameter uPVC Class 34 pipe network and round precast fibre cement manholes.

The proposed internal water reticulation network will consist of a 160mm diameter metered connection splitting into two separate lines: a 160mm diameter uPVC Class 16 for fire and a 110mm diameter uPVC Class 12 for potable water.

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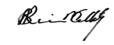
Name of Assessor: Dr Brian Colloty

SACNASP Registration Number: 400268/07

Signature: 

Date of assessment: 24-Feb-26

Risk to be scored for all relevant phases of the project (**factoring in specified control measures**). MUST BE COMPLETED BY SACNASP PROFESSIONAL MEMBER REGISTERED IN AN APPROPRIATE FIELD OF EXPERTISE.

Phase	Activity	Impact	Potentially affected watercourses			Intensity of Impact on Resource Quality					Overall Intensity (max = 10)	Spatial scale (max = 5)	Duration (max = 5)	Severity (max = 20)	Importance rating (max = 5)	Consequence (max = 100)	Likelihood (Probability) of impact	Significance (max = 100)	Risk Rating	Confidence level
						Abiotic Habitat (Drivers)			Biota (Responses)											
			Name/s	PES	Overall Watercourse Importance	Hydrology	Water Quality	Geomorph	Vegetation	Fauna										
CONSTRUCTION	Physical Disturbance of Aquatic Systems	Potential impact on wetlands, however works will only take place within the 500m regulated areas	Wetland_Pans	C	High	0	0	0	0	0	**0**	1	1	**2**	**4**	**8**	20%	**1,6**	**L**	High
	Changes to local hydrological regimes	Impact as a result of concentrated flows due to stormwater runoff	Wetland_Pans	C	High	0	0	0	0	0	**0**	1	1	**2**	**4**	**8**	20%	**1,6**	**L**	High
	Potential impacts on water quality	Increased runoff may result in erosion and downstream sedimentation	Wetland_Pans	C	High	0	0	0	0	0	**0**	1	1	**2**	**4**	**8**	20%	**1,6**	**L**	High
		Accidental spills such as fuels, oils and or chemicals from construction plant or works areas (concrete & cement)	Wetland_Pans	C	High	0	0	0	0	0	**0**	1	1	**2**	**4**	**8**	20%	**1,6**	**L**	High
OPERATIONAL	Changes to local hydrological regimes	Impact as a result of concentrated flows due to stormwater runoff	Wetland_Pans	C	High	0	0	0	0	0	**0**	1	1	**2**	**4**	**8**	20%	**1,6**	**L**	High
	Potential impacts on water quality	Increased runoff may result in erosion and downstream sedimentation	Wetland_Pans	C	High	0	0	0	0	0	**0**	1	1	**2**	**4**	**8**	20%	**1,6**	**L**	High
		Accidental spills such as fuels, oils and or chemicals from construction plant or works areas (concrete & cement)	Wetland_Pans	C	High	0	0	0	0	0	**0**	1	1	**2**	**4**	**8**	20%	**1,6**	**L**	High
DECOMMISSIONING	Physical Disturbance of Aquatic Systems	Potential impact on wetlands, however works will only take place within the 500m regulated areas	Wetland_Pans	C	High	0	0	0	0	0	**0**	1	1	**2**	**4**	**8**	20%	**1,6**	**L**	High
	Changes to local hydrological regimes	Impact as a result of concentrated flows due to stormwater runoff	Wetland_Pans	C	High	0	0	0	0	0	**0**	1	1	**2**	**4**	**8**	20%	**1,6**	**L**	High
	Potential impacts on water quality	Increased runoff may result in erosion and downstream sedimentation	Wetland_Pans	C	High	0	0	0	0	0	**0**	1	1	**2**	**4**	**8**	20%	**1,6**	**L**	High
		Accidental spills such as fuels, oils and or chemicals from construction plant or works areas (concrete & cement)	Wetland_Pans	C	High	0	0	0	0	0	**0**	1	1	**2**	**4**	**8**	20%	**1,6**	**L**	High