

Shongweni Block Diagram

Block	Landfill	Storm Water Storage	Storm Water Treatment	Leachate Storage	Effluent Treatment Plant
Inputs	Permitted waste, ash, treatment chemicals	Contaminated storm water	Contaminated storm water, hydrogen peroxide	Leachate	Leachate, storm water CIP Chemicals
Outputs	Leachate, storm water, landfill gas	Contaminated storm water	Treated contaminated storm water	Leachate	Permeate (RO and NF) and brine
Major Plant and Equipment	Engineered landfill, 6 gas wells, gas drainage pipe, excavators, bull dozer, compactors, TLB	Storm water dam 1 & 2, 1x 2000m ³ tank	Pumps, and peroxide dosing equipment	3x 2000m ³ , 1x 1000m ³ , 10x20m ³ jojo, leachate tanks	Ultrafiltration membrane plant, reverse osmosis/nano filtration membrane plant, pH correction tanks
Potential environmental risks	Landfill gas, leachate, stormwater	Storm water spillage, odours	Spillage	Spillage, odours	Spillage, odours
Mitigation	Landfill gas extraction, treatment and flaring system. Storm water and leachate storage.	Maintain storm water dams below the 1:50 flood level. Can treat dams with biological or chemical additives to control odour if required. Aeration	Activity conducted in the bund area of the tanks or dams.	All tanks have a bund area. Odour producing tanks have been fitted with a gas extraction system and a bio filter.	The ETP is in a bund area. All tanks have been fitted with a gas extraction system and a bio filter.