



Industry – Retail

Location	Simonstad, Cape Town
Client	Confidential
Year	2022
Application	Stormwater Treatment
Contaminants	Oil in Water, TSS, Turbidity
Solution	Up-Flow Filters



### Short Overview & Product

#### Description.

The Up-Flow filter is a modular high-rate storm water filtration device designed to capture trash, oil, sediment and remove fine pollutants such as dissolved and articulate metals and nutrients from storm water runoff.

Designed with efficiency, longevity, and upkeep in mind, this high performance, low maintenance filter option that offers higher media life for higher quality storm water for longer periods between servicing.

In general, a minimum of two inspections are required per year to monitor sediment and gross pollution accumulation. Approximately 80% Total Suspended Solids (TSS) removal for the Up-Flow filter, which incorporate the minimum maintenance frequency specified in the maintenance section for replacement of Media pack and removal of accumulated sediment from the sump is mandatory.

#### Application

- Removal of sediment, nutrients, and metals from stormwater runoff.
- Source control for redevelopment or new construction.
- Treatment downstream of Water Quality Volume detention systems.
- High traffic, high pollutant sites such as maintenance yards, parking lots and roads.
- Protection for groundwater recharge systems
- LEED® construction project.

### Advantages

- Sedimentation, screening, and filtration in one structure
- Upflow fluidised bed technology prevents clogging of filter media.
- Drain down initiates a backwash to recharge media between events.
- Includes an integral high flow bypass and trap for oils and trash.
- Engineered media requires minimal head at high filtration rates.
- Economical media bag replacement process requires neither heavy lifting equipment nor purchase of entirely new cartridge.

Table 1: results achieved from the Up-Flow filter.

RESULTS			
Parameter	Influent (Ave)	Target	Result
Oil in water (mg/l)	82	<5	<4
pH	6.8	6.5-7.5	6.6
Iron (mg/l)	81.2	<10	0.7
Turbidity (Ntu)	246	<5	3.7
ORP (mv)	-92.3	200-300	281

**\*Lab results are not indicative of what the system does, only the reduction from the bench test, as an illustration as per a client request.**