Treatment Train

Northern Corridor, Unsworth Drive, Auckland

This site required a stormwater system treating 3.4ha of highly trafficked State Highway 18 with more than 30,000 vehicles per day.

A treatment train approach was adapted to cater to the increased sediment load due to high vehicle movement.

The VortCapture™ system was installed upstream of the StormFilter™ to remove litter, floatables, and coarse sediments. The StormFilter™ then treats the fine and dissolved contaminant.

The StormFilter™ has been designed using ZPG media which is a combination of Zeolite, Perlite, and Activated Carbon to target fine sediment, particulate, and dissolved metals. This innovative system is designed to improve the quality of stormwater runoff before it enters receiving waterways, using customisable filter media that removes non-point source pollutants. The StormFilter™ consists of a vault or manhole structure that houses rechargeable, media-filled filter cartridges. These cartridges are designed to absorb and retain the most challenging pollutants from stormwater runoff, including total suspended solids, hydrocarbons, nutrients, soluble heavy metals, and other common pollutants. The result is efficient, effective stormwater treatment.

The treatment train configuration increases the period between maintenance for the StormFilter™ which reduces the whole lifecycle cost.

The system was designed to be adjacent to the state highway to allow easy access for inspection and maintenance and not require road closures. The grated access cover was used to allow quick inspection without opening excess covers and to allow ventilation to prevent any toxic gas from accumulating.