



Car parks are high-contaminant generating areas so stormwater runoff needs treating before it can be discharged to a watercourse or soakage. Those with higher traffic loads have increased sediment loads, and commercial properties might have other things needing treatment such as litter, particulate or dissolved metals, or other chemicals. Biofiltration and rain gardens are excellent way of providing treatment, but the large amount of space needed for a relatively small catchment area often makes them difficult to use.

For this project, engineers originally designed rain gardens but wanted to look at alternative biofiltration solutions to save footprint and meet budget constraints. Stormwater360 were asked to investigate replacing rain gardens with Filterra® units.

Filterra® are a fraction of the footprint of traditional rain gardens, making them easier to fit into tight commercial developments. Stormwater360's supply includes the precast concrete vault, all media, mulch, planting and the first 12 months of maintenance. This makes it an easy solution for contractors to install with minimal fuss.

The first Filterra® supplied in Queenstown, Stormwater360 provided an innovative customised solution to make building the car park easier and cheaper. Surface grading directed flows to a central raised plant bed, where kerbs and channels directed flow to two small Filterra® units at either end of the car park. Peak flow bypass was achieved using a downstream scruffy dome in the planting area, made less visible using gabion rocks.

MAINTENANCE:

Ongoing maintenance will only require replacing the top 75mm mulch layer and the media shouldn't need to be replaced under normal operating conditions.

