

# StormFilter™

## Transmission Gully



Te Aranui o Te Rangihaeata – Transmission Gully is a new alignment of SH1 designed to ease congestion and improve safety where SH1 passes through urban areas north of Wellington. Highly trafficked roads such as state highways have higher levels of contaminants in the stormwater runoff, which needs to be treated prior to discharge into the sensitive streams and waterways the new road was crossing.

State highways have much higher sediment loads, up to four times that of typical urban catchments. Additionally, tyre particles and brake dust contribute to elevated particulate and dissolved metal loads. Hydrocarbons also need to be removed.

Much of the 27km motorway was treated by wetlands, using natural processes and land formations to treat stormwater runoff where there was space. However, the Kenepuru interchange is in a tight, existing urban environment. There was no space for a wetland or rain garden with a large footprint, so engineers chose to use a cartridge filtration system, sitting next to the road corridor and underneath a footpath.

The StormFilter™ cartridges used ZPG media – a combination of Zeolite, Perlite and Granular Activated Carbon (GAC). This is a standard specification for NZTA state highways, as the perlite removed a high percentage of sediment and particulate metals, and the zeolite and GAC target dissolved contaminants. The StormFilter™ provides great environmental outcomes while saving space in urban catchments.

