LittaTrap™

Medical Plastics

Stormwater360®

A LittaTrap™ was installed at a plastic manufacturer in Auckland, New Zealand and monitored over a 12-month period.

Plastics New Zealand have been running the global Operation Clean Sweep programme for a number of years in New Zealand. The programme recommends changes to manufacturing sites to assist in protecting the waterways from plastic pollution.

A range of solutions is recommended to help manage accidental plastic pellet loss. One of these solutions is the option to retrofit filters inside stormwater catch basins in high-risk areas such as loading/unloading zones, waste skips, and regrind operations, where there are often spills of pellets and other plastic fragments.

Installing a filter into a catch basin prevents any accidentally spilled material from heading down the drain into the local waterway.

It was recommended that Auckland-based Plastic Association member, Medical Plastics Ltd, install a LittaTrap™ in a stormwater drain in their carpark to monitor the effectiveness of its performance in preventing plastic pellet loss.

Medical Plastics is a clean site; however, with all manufacturing sites, there can be a chance of accidental spills.

At this site, the waste and recycling bins are in the same area as the loading and unloading zone, all of which flow to one stormwater drain where the LittaTrap™ was installed.

The LittaTrap™ was monitored and reported on over a 12-month period, providing quantitative and qualitative data on the type and quantity of pollutants captured.

Why the LittaTrap™

The LittaTrap™ is a versatile catch basin insert system. It is easily installed in new or existing catch pits and may be configured to capture sediment or gross pollutants. For this trial, the LittaTrap™ was installed with a Nurdle Performance Liner. The 1000-micron EnviroPod™ Nurdle liner can be incorporated to target specific pollutants smaller than 5mm, such as resin pellets for the manufacturing of plastic goods or other pollutants larger than 1mm.

The LittaTrap™ is hand maintainable, allowing for low-cost and frequent maintenance. Installing a LittaTrap™ will capture both positive and neutrally buoyant materials, including plastic pellets, which are typically washed down a stormwater drain when it rains.

Results:

In the 12 months of sampling, 4.853kg of material was retained in a single LittaTrap™. Apart from the odd cigarette butt and a bit of leaf litter, the majority of material caught was plastic - mainly small plastic pellets. Each of these pellets weighs 0.0221 grams, and with almost 5 kgs of primarily plastic debris, this equals approximately 220,000 pellets captured and retained by one LittaTrap™.

5kg

of resin pellets, sprues and other plastic debris collected since installation

Sample weight (G) over time installed